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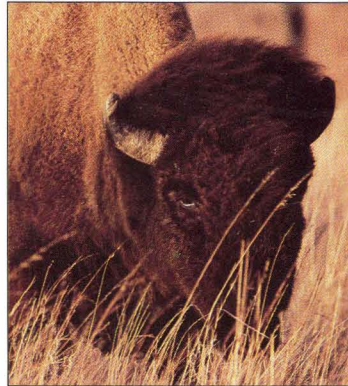
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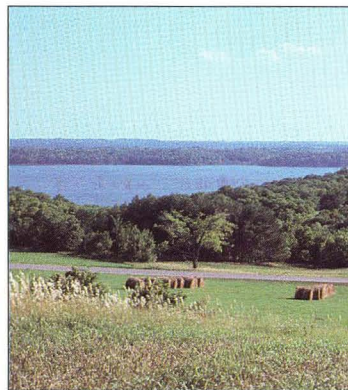
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Front: A woodland orb weaver spider awaits a meal in the cool of a summer night. Mike Blair flashed the scene with a 105mm macro lens, set at f/6 and 1/60 second.

Back: Two Clinton Reservoir wind surfers strain to keep their sails upright. Mike Blair shot the scene with a 400mm lens, set at f/8 and 1/250 second.

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

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Mixed Emotions

As most of you probably know after receiving Paul's farewell issue (March/April), our former editor has gone in search of happiness. Actually his strong family ties drew him home to St. Louis before we at Wildlife and Parks were ready to say goodbye. I am trying to step into Paul's position, but I do so with mixed emotions.

I served under Paul as associate editor for two years. Working in that capacity was excellent preparation for the job I now hold. Paul was a wonderful teacher and friend. It's rare that your boss is a good friend and a respected superior, but Paul was that and more. He was an excellent editor. The level of excellence he brought to KANSAS WILDLIFE & PARKS magazine elevated it to a publication of national respect. I feel somewhat like a young boy trying to fit into his father's galoshes. Paul left some big shoes to fill.

But Paul also left a well organized and established system behind. Taking the magazine from Paul is like getting the baton in a relay race with a full lap lead.

Before this issue went to press, illustrator Pattie Murphy went home to Pennsylvania. Pattie's excellent work has appeared in the magazine since 1986, and, here we go again, we're saying goodbye to her with regrets as well. Like Paul, she felt home strings pulling. The flatlands of Kansas are a long way from the mountains of Pennsylvania. We'll all miss Murph and the K-man and wish them the very best.

Don't worry. Pattie stayed around long enough to acquaint our new illustrator, Dana Eastes, with the job. Dana, who's originally from Andale, has a strong art background and a genuine interest in wildlife and the outdoor resources. And even more recently, J. Mark Shoup of Wichita accepted the position of associate editor. Mark, an avid outdoorsman and native Kansan, has written for us in the past, and I think he'll fit in nicely around here. Mike Blair is still in our darkroom, so expect more spec-



Dana Eastes illustration

tacular wildlife shots. And Rob Manes, Joyce Harmon Depenbusch, Bob Mathews, Mary Kay Spanbauer, Barb Theurer, Bev Aldrich and a host of other Wildlife and Parks personnel will still be featured. Together, we'll keep striving to produce the same top-notch outdoor resource magazine you're accustomed to.

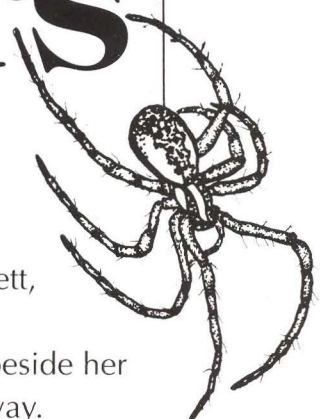
Mike Miller
editor



The Truth About Spiders

Little Miss Muffet sat on a tuffett,
Eating her curds and whey,
Along came a spider and sat down beside her
And frightened Miss Muffet away.

-Nursery Rhyme



text and photos by Mike Blair
staff photographer

From earliest childhood, we learn to fear spiders. We presume them mysterious, lurking in dark corners with foul intent. They're seen as tyrants in their strange webs, waiting to sink fangs into careless victims. To go near a spider is to invite peril.

Superstition has always surrounded spiders. American Indians considered them possessed of special powers.



A cricket's-eye-view of a Carolina wolf spider reveals formidable jaws and six forward eyes. An additional pair of eyes on top of the head allow the spider to see above and behind it. One of Kansas' largest spiders, the wolf lives in a burrow and hunts at night.

The orb web was believed to symbolize the heavens, with the corners of the foundation lines pointing in the four directions from which come the thunders. The spirals of the orb were believed to emanate the mystery and power of the Great Spirit.

Another legend held that the Spider Woman invented weaving and taught Indians the textile arts. But some tribes considered spiders evil and villainous tricksters, lying in wait to ensnare and murder careless men.

Despite misunderstanding, spiders are fascinating creatures. Black widows, brown spiders and tarantulas are widely known at least by name and probably comprise the extent of spider "knowledge" for the average person. But there are actually more than

20,000 species of spiders in the U.S., representing surprising variation in appearance and hunting techniques.

Spiders occupy nearly all habitats, including water. They are present in numbers undreamed of by the casual observer. A single acre of land may contain more than a million spiders under the right conditions.

All spiders are predators. Depending on the size of the hunter and the habitat it lives in, prey items may be as large as minnows, snakes, mammals or birds. However, most spiders stick with a diet of insects, consuming as many as 2,000 during a lifespan of one or two years.

Spiders kill their prey with venomous fangs, which may imply danger to man. However, most spiders'

fangs are too small to penetrate human skin, and many won't try to bite even if handled. Even dangerously poisonous spiders are seldom aggressive, preferring flight to fight. Bites are normally accidental, when the spider is unknowingly crushed against the skin.

There is amazing diversity among hunting techniques. Some spiders live their lives in orb webs spun nightly. Others live in funnel webs, or sheet webs placed in strategic locations. These spiders have poor eyesight, and must literally feel their way to a struggling insect.

Still others are free-living hunters, stalking their prey in the manner of vertebrate predators. These spiders are considered to have excellent eyesight, though they can see sharp images for only 10-12 inches. They are agile, and can jump a distance of 40 times their body length to capture prey. Collectively, this group is known as the hunting spiders.

Bolas spiders are unique in their approach to hunting. They hang from a silken strand near a flower and spin a line weighted with a drop of sticky silk. When an insect approaches, the spider hurls the special line like a lasso and "reels in" the captured prize.

Fisher spiders live in aquatic habitats, actually spending much of their lives beneath the surface. They carry a bubble of air in a woven "basket" attached to their abdomen. In this way, they are at home in water where they feed on aquatic insects and minnows.

Trapdoor spiders are common in Kansas and are among the largest of free-living spiders. They live in specially constructed tunnels which are closed with hinged earthen doors camouflaged with sand or dirt. The spider waits just beneath the door for passing insects. When ground vibrations indicate an arrival, the spider throws open the door and seizes its prey.

Like the wolf spiders that roam open spaces at night, trapdoor spiders have eyes that reflect a beam of light. By aiming a flashlight held close to your eyes, night-hunting spiders often appear as fiery diamonds in the grass.

Spiders are capable of regenera-



The Jumping Spiders are a large group of small, free-living hunters, often brightly colored. Though their eyesight is among the best of invertebrates, their vision's limit is about eight inches. This colorful male is an Apache jumping spider.

tion, the process of growing new structures when old ones are lost. Their legs have a series of stress points allowing clean breaks at predetermined points. If a break occurs any place else, the spider will bleed to death. Otherwise, the appendage is regenerated at the break. When a spider loses a leg, the fluids are immediately sucked from the lost appendage.

Spiders have a mating process unlike any other among the animal kingdom. Special secondary structures in both the male and female are responsible for an indirect fertilization of the eggs. Highly specific courtship rituals are found among all types of spiders. Females are extremely aggressive and often kill and eat the male after mating is

accomplished.

Nearly everyone associates spiders with a silken web, but few realize the creature's full dependence on silk. Even before a spiderling emerges from the eggsac, it has the ability to spin silk. As it strikes out on its own, it strings out dragline threads and attaches them at intervals to whatever it walks on. Throughout its life, the spider is never free of this securing band, unless it's accidentally broken.

The silken dragline appears as a single strand but is actually two or four independent threads laid down together. It serves the same purpose as a climber's rope, securing the spider as it crosses vertical walls or hangs upside down.

Young spiders often travel by "ballooning," throwing out quantities of

silk to be picked up by airborne currents. On fall days, gossamer streamers can often be seen bearing the tiny creatures in the wind. Ballooning spiders have been found 10,000 feet above ground and as far as 200 miles out to sea.

Silk is used by spiders in at least 26 different functions of the life processes. It is used for protection and retreat, protection of young, web structures associated with mating, traps and snares, and bands for binding prey.

Spider silk has amazing strength and elasticity, that can be varied by the spider depending on the speed the silk is withdrawn. The faster the withdrawal, the stronger the thread.

In general, the tensile strength of silk surpasses that of steel but is elas-





The giant fishing spider often hunts underwater as shown above, carrying air in a silvery bubble that adheres to its body. It can stay submerged for more than 20 minutes and preys on aquatic insects and minnows. Even underwater, the silk forms an important security line.

The dolomedes fishing spider (opposite page), more common than the giant, also hunts below the surface if necessary. During the heat of the day, it may rest on vegetation near the water.

Crab spiders often hide in flowers, changing their color to match the petals. Though their jaws are small, they have a potent venom, which can immobilize flies and bees much larger than themselves. This common spider is the wedge-faced flower spider.



tic enough to double in length before breaking. Eighty grams of force are required to break a thread as thin as four-thousandths of an inch.

Depending on purpose, spiders may spin threads as fine as one-millionth of an inch, which are invisible to the naked eye. Many molecules have greater diameters than the width of these strands. It is possible for a spider to spin threads equal to the thickness of its protein molecule, an incredible feat.

Though there are many types of webs spun among the order of spiders, the orb web is probably the most commonly known. It is a two-dimensional snare of geometric beauty but is created strictly through instinctual effort. It is the most highly advanced of all aerial webs.

Orb web spinners work with amazing speed and dexterity, often completing a large web in an hour. When finished, the web serves as a tough



Spider reproduction varies widely among species. Here, newly-hatched nursery web spiderlings explore their silken home before dispersing to solitary lives.



A rabid wolf spider carries her egg sac with her, sometimes in her jaws, sometimes attached by silk to her spinnerettes. The egg sac is a tough cocoon of spun silk, protecting eggs from moisture and the environment. When eggs hatch, the spiderlings climb onto the adult's back for a time before becoming independent.

but yielding trap for flying insects.

The spider constructs the web by creating a strong bridgeline of dry silk, to which it ties a large Y-shaped frame anchored at top and bottom. The fork defines the hub of the snare. The outside boundaries are spun, and the radii are tied from hub to boundaries with dry silk.

When the rays are complete, a scaffolding of dry silk is spiralled outward from the hub. On these lines, the spider is able to produce a tightly spiralling network of sticky silk for entangling insects. The dry scaffolding is then removed.

When complete, the web is a perfect trap. The radiating lines of the web are dry silk, providing the spider unrestricted access to the entire web. Although the spider is covered with a special oil that resists the stickiness of the web, it moves most easily over dry silk. The spiralling strands are sticky and elastic and serve to entrap flying insects.

Orb web spiders are nearly blind, relying on sense of touch to dictate their attacks. They hang upside down at the hub of the web, claws in contact with all radiating lines. At the first vibration, the spider charges down the appropriate line to the insect. If vibrations indicate small prey, the spider immediately seizes and bites it. On large insects, however, the approach is more cautious, and the spider combs swathing bands around the legs of the prey to bring it under control.

Damage to orb webs is frequent, and spiders must respin them every night. It is believed that orb spinners lack the mental process to repair only a small tear in the web and must destroy and respin a new web each time damage occurs. Oddly, a spider eats the old silk each time it destroys a web.

Regardless of type, spiders play an important role in nature. In the food chain, they are both an important biological control of insect populations and source of food for higher predators. As a group, they are beneficial to man. To study them is to discover one of Kansas' most interesting groups of wildlife.





OUTDOOR

ADVENTURE

CAMP



Mike Blair photo

The Kansas Wildlife Federation's outdoor camp teaches youngsters about nature with hands-on experiences. After a successful maiden voyage in 1988, instructors prepare for the second year.

by **B.J. Brighton**
Manhattan

It's a learning experience, and it's just plain fun. It's learning by sight, sound, smell and feel, accompanied by giggles, groans and squeals. For some it's a first. It's nature on the half-shell, served up raw, or so it must seem to those, whose sneaker-clad feet are more accustomed to carpeted floors and concrete. The Kansas Wildlife Federation Outdoor Adventure Camp is designed to give kids a chance to connect with their natural environ-

ment and develop a true understanding of nature through hands-on experiences.

Discussion of a nature-oriented camp for kids began early in 1987 when the Kansas Wildlife Federation Education Committee was searching for a special prize to award winners of the Kansas Wildlife Heritage Month poster contest. No more than a fantasy at first, the idea quickly developed. It generated so much enthusiasm, so

Field trips during the five-day camp acquaint youngsters with big bluestem and burr oak. They also see the fox and hawk from the viewpoint of the white-footed mouse.

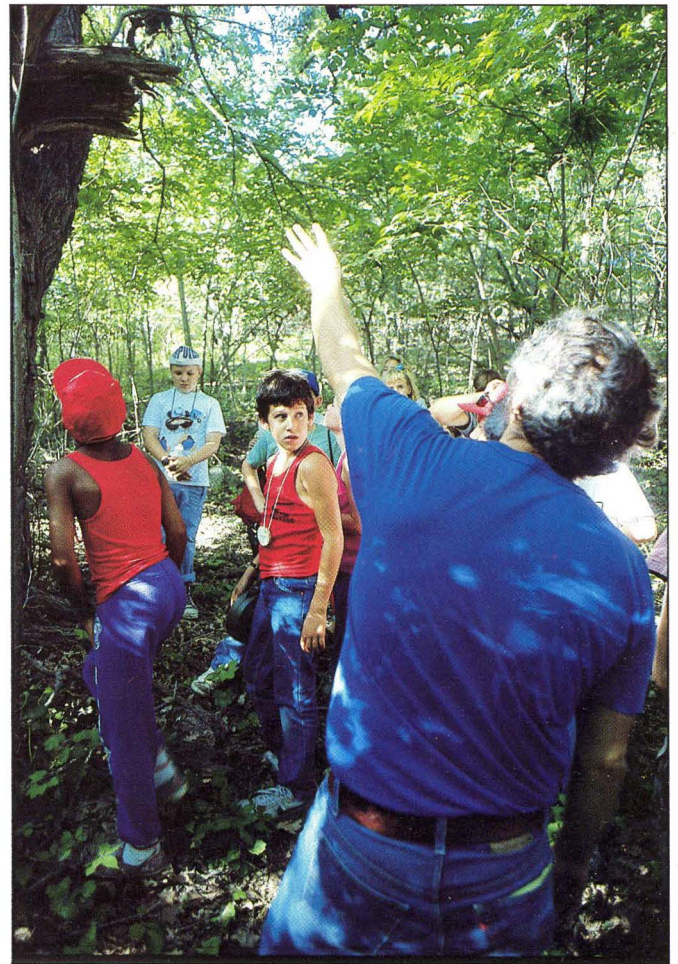
many positive responses and volunteer commitments, that the dream became a reality.

With a crew of four harried counselors and fifteen intrepid instructors, the adventure camp's 1988 maiden voyage hosted 38 excitable youngsters at the Rock Springs 4-H Ranch near Junction City. The 1989 camp will provide the same outdoor opportunities for more than twice as many kids.

Each day of the five-day camp provides new experiences and opportunities for youngsters to learn and understand how the intricate pieces of nature's puzzle fit together. They are full days; full of the hot, dusty smell of the August prairie and the damp, musky odor of decaying vegetation along a small, tree-shaded stream. And there's the unbelievable dry smoothness of a king snake's scaly skin or the quicksilver flash of a school of emerald shiners.

Short field trips acquaint young enthusiasts to big bluestem grass and burr oak trees, and allow them to know the red fox and Swainson's hawk from the viewpoint of the white-footed mouse. The field trips also allow the youngsters to see how they fit into nature's grand scheme.

There are classroom concepts to master such as edge effect and ecosystem, predator and prey relationships and separating fact from fancy. And there are fears to conquer: bats, bugs and unseen things that rustle fallen leaves. It's



Mike Blair photo



Ross Manes photo

There are also classroom concepts and projects taught. Here a volunteer instructor shows students how to make plaster casts of animal tracks. The classroom topics complement the field trips.

a guided metamorphosis from a squeamish, hands-in-pockets attitude of dread, to one of poking, prodding and prying with a shiny new enthusiasm for learning.

There is, of course, free time to swim, swap tales with new friends, catch bucketsfull of crawdads or leisurely investigate the complexities of crayfish anatomy. Rest, for the most part, is the province of the counselors and instructors.

At sunset, the days are far from over. There are owl-prowls, bug trapping, bat watching and frog lighting. The night offers a whole new world of learning.

When it is at last time to slip small, tired bodies into sleeping bags, the windows are opened to let in the summer night breeze, the hoot of the great horned owl and the *burrumph* of the bullfrog. When the last contraband crayfish has been retrieved from the counselor's sleeping bag and plunked back into the bucket, perhaps these young people will sleep and dream new dreams. With luck, their dreams will be touched by the wondrous world of nature. **W&P**

OUTDOOR ADVENTURE CAMP 1989

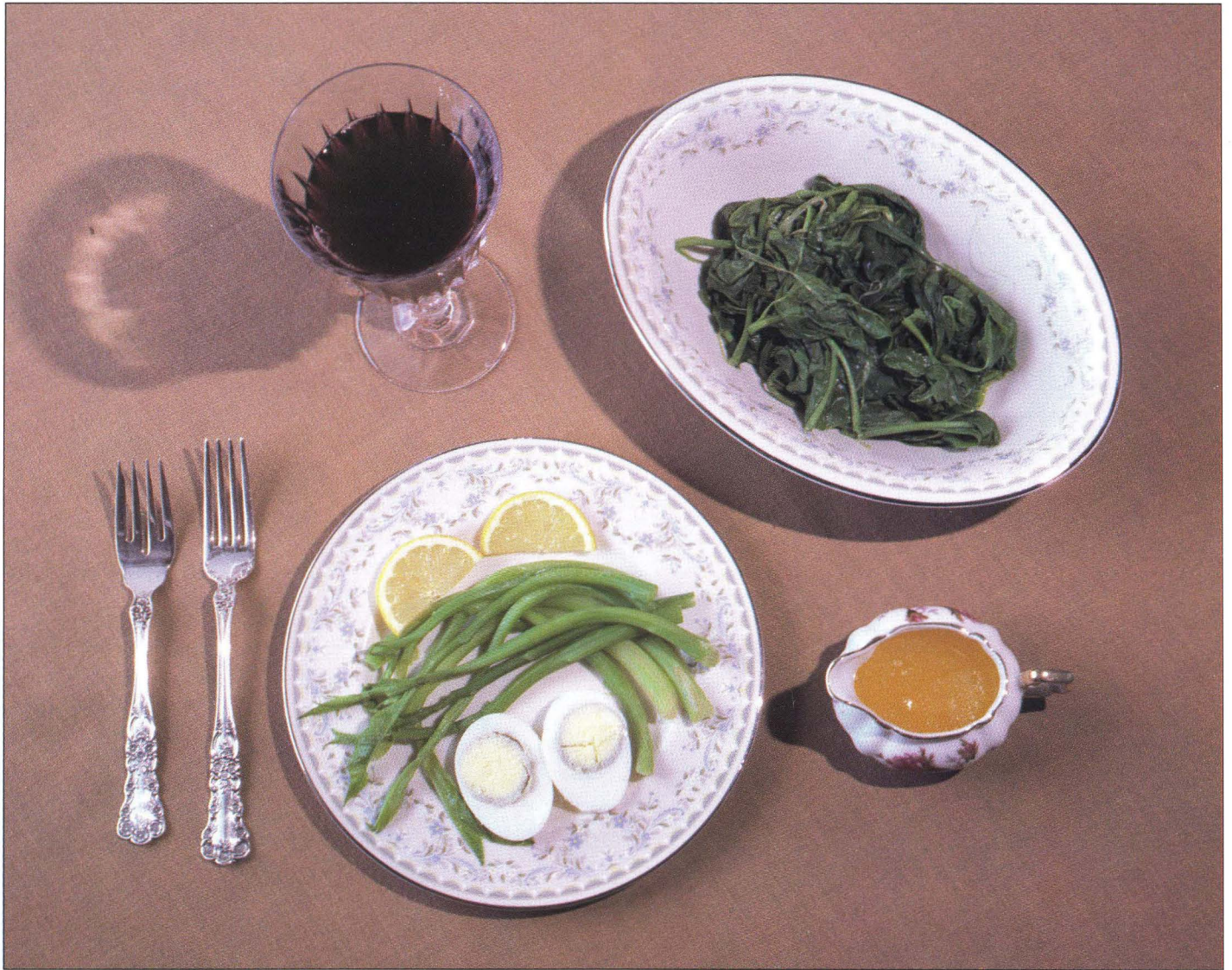
The 1989 Kansas Wildlife Federation Outdoor Adventure Camp is scheduled for July 30-Aug. 4. Informational brochures are available from the Kansas Wildlife Federation, P.O. Box 5715, Topeka, KS 66605, Kansas Department of Wildlife and Parks offices and at all Kansas State University Extension 4-H county offices. The fee for the five-day camp is \$125, which covers all meals, accommodations and activities.

Depending on the number of counselors and instructors available, 60 to 100 applications for the camp will be accepted on a first-come, first-served basis. All counselors and instructors are volunteers. Anyone wishing to volunteer should contact the Kansas Wildlife Federation at the above address, or phone (913) 266-6185. *B.J. Brighton*

There is free time, too. Time for catching crawdads, swimming, making new friends or just sitting on the dock waiting for the fish to bite.



Ross Manes photo



POKEWEED

The year's first mess of poke is as much appreciated around the author's house as a Thanksgiving turkey. Gathering and preparing the greens is an art and an adventure.

by Patricia Maloney
Iuka

photos by Mike Blair

I am hungry for poke. When winter relaxes its grip enough to give us a preview of things to come, I long for spring. The snow may fly again, and the earth will sleep a bit longer, but my taste buds awaken.

Our forefathers would understand my eagerness for the yearly ritual of spring greens better than I do. After all, I have not spent the winter eating salt pork, beans and dried apples. Fresh produce is available in year-round abundance that would astonish my great-grandparents. I can go to the store any day and purchase lettuce, spinach or even strawberries from California.

But trucked-in produce is not the same. I am hungry for poke.

Some folks call it polk, or poke salad or salet, but these greens aren't to be eaten raw. Poke is quite poisonous unless properly prepared. These greens demand respect.

I cook poke right. First twice-boiled and drained, then simmered in an iron skillet with a dab of bacon grease and a chopped boiled egg. The end product, the year's first mess of poke, is as much appreciated as a Thanksgiving turkey at my house. But as much as I enjoy preparing and eating poke, it is only the grand finale. Collecting the greens is an indispensable part of the pleasure. Poke does not grow just any place, nor does it appear for any length of time. You have to know when and where to look for it.

I begin watching for poke to appear in early May. It's usually a waste of time to look for poke until you've had several weeks of 70-degree weather. Poke hunting too early will leave you empty handed. If you're too late, you'll find the poke too large for good eating. The season only lasts two or three weeks, so if you're not on your toes, you'll miss it.

I think poke picking would be difficult to learn from a book. I cannot tell you how to recognize poke. There are books on wild edibles, but not all young poke plants look the same. The mature plant is easily recognized, but by then it's not fit to eat. Poke picking is a skill learned best from veteran poke pickers. My mother-in-law taught me, and I imagine that she learned from her older relatives.

Young poke may be solid green or slightly mottled. The leaves may be smooth or slightly ruffled. Sometimes the top is nicely spread, or it might be bunched up like leaf lettuce. And poke never grows in the middle of an open field or at the end of a conveniently placed path. It grows at the edge of the woods and where bulldozers have piled up earth and logs. It does well on steep slopes and other hard-to-reach places. And it is usually on the opposite side of a barbed-wire fence. Once you've found a patch though, you're virtually assured of an annual supply. It will reappear in the same place each spring, unless a

Young edible poke can take on a variety of appearances. It might be green or slightly mottled. The leaves may be spread or bunched up. The mature plant (inset) is not edible, but finding this plant will tell you where to look next spring.



misguided landowner sprays it with herbicide.

Picking poke is an individual art. Some people pick each leaf, which is time consuming but makes cleaning easier. Others lop off anything growing more than 2 inches above the ground, but this has always seemed a wasteful method to me. It leaves you with a lot of stalk and usually a handful of miscellaneous weeds mixed in with the good stuff. My own method is to cut off the top section. At the top, the leaves and stalk are both tender, and the remaining plant will recover. With this method, I may get a second picking and still allow the plant to reproduce.

I noticed that a small poke patch has started on the back side of our property. I'm glad and hope it thrives, but there isn't much adventure in picking poke from your own backyard. Poke seems to taste best when you have to work for it.



THE ART OF COOKING POKE

1. First wash the tender young poke in cold running water. Leaves and stalk both may be used. *NEVER* eat the berries which begin to form as the plant matures.
2. Then place the greens in a large stainless steel or enamel pot. Fill the pot two-thirds full of water. Poke will reduce down considerably when cooked. Enough poke to fill a Dutch oven will serve four.
3. Bring the water to a full boil and maintain for 15-20 minutes. Note: During this first boiling, the water will foam and may boil over if not closely watched.
4. Now drain the greens, fill pot with clean water and repeat the cooking process. Always boil poke at least twice, as this removes the toxin and makes the greens safe to eat. For a milder flavor, boil the poke a third time.
5. Place drained greens in a skillet (cast iron or stainless steel) with one-fourth cup of cooking oil or bacon drippings. Chop them apart, add 1 teaspoon salt and simmer for 10-15 minutes. Add sliced boiled egg and serve. *Pat Maloney*

Picking poke is an individual art. The author prefers to cut off the tops of plants, where the tender stalks and leaves are both edible. This way, she may get a second picking, and the plant will still reproduce.

the center section

Edited by Mike Miller

LETTERS

BLAIR FAN

Editor:

First, I want to tell you how much I enjoy your excellent magazine. The articles are well written, and the photos are absolutely outstanding.

I especially enjoyed the photo spread on ducks by Mike Blair in the January/February issue. The photos are great! Being a duck hunter and amateur photographer, I can really appreciate the time, skill and persistence it takes to get those "once in a lifetime" shots. Being a photography enthusiast, I would like to see more of the full-page photo essays. Everyone I have talked to has commented on the great pictures.

Mike Blair is truly a great wildlife photographer. I have attended several of his slide shows and have always come away with a greater knowledge of wildlife and renewed enthusiasm for photography.

Tedd J. Kimmel
Hutchinson

HAPPY HUNTER

Editor:

As a hunter who took advantage of the leftover firearms permit process this year, I would like to thank the big-game season planning staff for choosing this option for controlling our deer herd, rather than selling permits to nonresidents. This is what we've been working for — spending time in the field with both a bow and a firearm. This was the most enjoyable deer season I have ever had.

I hope this policy is maintained in the future, even if you have to increase the fee for the second permit. I'm sure other hunters feel as I do. It would be worth the extra money to enjoy hunting Kansas deer all fall and winter instead of traveling out of state, which I can't afford to do anyway.

Dave Leiber
Augusta

POINT OF CORRECTION

Editor:

The reprint of Chris Madson's fine article in the 50th Anniversary issue of **KANSAS WILDLIFE & PARKS** contains one reference that is misleading and erroneous, and probably should be corrected.

Madson lists, among other past and notable hunters, Henry David Thoreau. While Thoreau was indeed a hunter in his youth, as an adult he considered it an offense to the imagination. A necessary, if somewhat untasteful stage of human development. "He goes thither at first as a hunter and fisher," Thoreau wrote, "until at last, if he has the seeds of a better life in him, he distinguishes his proper objects, as a poet or naturalist as it may be, and leaves the gun and fish-pole behind."

In honesty and fairness, it should be pointed out that while he thought hunting and fishing to be childish pastimes, he also recognized them to be invaluable learning experiences for a youngster. ("We cannot but pity the boy who has never fired a gun; he is no more humane, while his educa-

tion has been sadly neglected.") Thoreau asserted that the sentient person would — should — outgrow the allure of blood sports and embrace his/her "pure purpose" for being outdoors. Hunting and fishing were primarily a clarifying process to that end.

If, however, Thoreau were alive today, he would undoubtedly be a nonhunter, rather than an anti-hunter. For he also wrote that "perhaps the hunter is the greatest friend of the animals hunted, *not* excepting the Humane Society." (Italics mine.)

All this nitpicking aside, the 50th Anniversary issue was a joy to read. Especially noteworthy was the reprint of Ross Manes' 1972 piece on channelization and its disastrous effects on our streams and rivers.

Randy Winter
Manhattan

FISHING FACTS

Editor:

I must take time to tell you how much I enjoy your magazine. I spend hours reading the stories and looking over the wonderful photography.

I am a 15-year-old boy and live in Wyandotte County. I would like to know where the best lakes are to catch crappie, bluegill or any type of catfish, and if it's legal to use sunfish or bluegill for bait.

Scott Adair
Bonner Springs

Dear Mr. Adair:

You are lucky, because you live in a part of Kansas that has an abundance of good crappie, bluegill and catfish lakes. Many city, county and state fishing lakes have good bluegill and catfish fishing. The Department of Wildlife and Parks stocks channel

catfish in many of these smaller impoundments annually. Private farm ponds are also excellent places to catch all of the fish you asked about. However, you must first get permission from the landowner before you fish any private waters.

Some of these smaller lakes may also provide crappie fishing, especially the larger farm ponds, but most of the good crappie fishing is in the large federal reservoirs. Several of the best crappie lakes are within driving distance of your home. In the past year, Clinton Reservoir near Lawrence, Perry Reservoir near Topeka, Melvern and Pomona reservoirs near Emporia and Hillsdale Reservoir south of Kansas City, have all provided good to excellent crappie fishing.

It is legal to use bluegill and other sunfishes for bait, provided they are legally caught. You may catch them by hook andline, or baitfish, including the sunfishes (except for black bass), may be seined or caught with a dip or throw net. Check the 1989 Kansas Fishing Regulation brochure for more detailed regulations on baitfish. *Miller*

PITIFUL POACHERS

Editor:

First, I want to say how much my family and I enjoy your magazine. We look forward to its arrival and read it from cover to cover.

Also, I am proud to say my husband is a hunter safety instructor and that my 13-year-old daughter is an assistant instructor. We adhere to game laws because we believe, as do all responsible hunters, that taking game for our own consumption is a privilege not to be abused.

On March 5, television station TBS showed a program titled "Greed, Guns and Wildlife." It was substantially about the black bear of the Smokey Mountains and how its very existence is in jeopardy, however, it did include other big game and migratory waterfowl. I want to applaud the message put forth in this program. Poaching is the theft of our nation's natural resources. As such, it should be dealt with in such a manner as to leave no doubt that it will

not be tolerated.

Poachers are stealing our heritage from us, and all American citizens should be outraged about poaching, especially since 99 percent of it is for profit. Poachers are depriving future generations of their right to observe and enjoy wildlife. Wanton waste is criminal, and to my way of thinking, should be viewed as such.

I do not believe that present sentencing and fines are stiff enough to be a deterrent. I feel that some sort of value should be placed on the poached animals and recompense be made.

Further, I agree with the suspension of hunting privileges. Poachers who do so with profit in mind should not be allowed the privilege of hunting for a minimum of five years.

Poachers handicap state fish and game management agencies and give law-abiding hunters a bad name.

Lew Ann Peck
Lenexa

ON TARGET

Editor:

Congratulations on the 50th anniversary of your excellent publication. As assistant editor of the Izaak Walton League's magazine, *Outdoor America*, I read almost every state conservation magazine, but believe yours is one of the best.

The article, "The Hunter As A Conservationist," by Chris Madson, was right on target. Distinguishing the hunter from the conservationist as opposed to *as a* conservationist is simply disregarding the many millions of dollars and volunteer hours that hunters have invested in wildlife programs and habitat protection. Hunters were also a driving force behind many of the crucial federal wildlife programs such as Wallop-Breaux.

By educating the public through publications like yours and ours, the conservation message will reach its target — those Americans determined to share this country's outstanding natural resources with future generations.

Kristin Merriman
Arlington Va.

EMOTIONAL GIFT

Editor:

My father gave me an excellent Christmas present this year: a subscription to KANSAS WILDLIFE & PARKS magazine. The January/February issue was my first.

My emotions were stirred by John Heron's article "A Plan For The 21st Century." The first paragraph describes feelings which I have experienced myself for the first time this year: extreme desire to hunt and enjoy the countryside, but little time and space to do it.

The second paragraph portrays a very special portion of southeast Comanche County: the area where I first hunted and observed nature, and a place I still call home. The remainder of the article focuses much needed attention on conservation and preservation of our natural resources — an essential, as well as enjoyable, part of our world.

This gift will help me stay in touch with your efforts to carefully protect and manage the beautiful land and animals of Kansas.

Thanks Dad, John and Kansas Wildlife and Parks.

Kevin Scherich
Benbrook, Tex.

PASSING IT ON

Editor:

I have been thinking about buying subscriptions to KANSAS WILDLIFE & PARKS magazine for my sons. They always want my magazine. And the January/February issue is such a nice magazine, I would hate to part with mine.

Both boys have lifetime hunting licenses and come home to hunt with me quite frequently, although my 72 years have slowed me down quite a bit.

I would also like to put in a good word for our local conservation officer, Larry Dawson. He's a no-nonsense person, but very fair, polite, considerate, and I would call him a gentleman.

Ned Whitmer
Goodland

THE LAW

DECOY DEER

It may be one of the most effective wildlife law enforcement techniques ever used in Kansas. The use of "decoy deer" (full-body, taxidermy mounts) has a short but eventful history in the Sunflower State.

Wildlife conservation officers use the stuffed deer in problem areas where road hunting is a chronic problem. The deer is placed so that it is visible from the road. Two or more conservation officers then hide nearby and wait for the inevitable to happen. Once an infraction occurs, they announce themselves . . . and issue a warning or ticket to the offender.

"We wrote 14 tickets before 10 a.m. one day," says Manhattan officer Paul Miller. Most of the charges that result from use of the decoy deer are for shooting from a vehicle and hunting private land without permission. In limited use of the technique, conservation officers netted more than 70 violations.

In southeast Kansas, where the technique was first used in 1987, 12 cases resulted from the decoy operation this past season, compared with nearly 60 last year. Regional supervisor Charley Ward believes the deterrent factor of the technique is the cause for that improvement.

"The word was out," he said. "People were seeing our dummy deer just about everywhere. I overheard one guy in a cafe who said he'd been out driving around and scouting for deer. He said he'd seen one in a field that morning but knew it was that dummy deer, and he wasn't about to get himself in trouble. The thing was, we didn't have the decoy anywhere near there that day."

"We had one guy who shot at the dummy deer three times," said Jim Kellenberger, regional law enforcement supervisor in Dodge City. "He was getting ready to shoot again when my guys let him know they were there."

Can Kansas deer hunters expect to contend with a team of dummy deer in the

future? Kellenberger speaks for his counterparts in other areas of the state with this response: "You can count on it!" *Bob Mathews, assistant chief, Education & Public Affairs*

SPOTLIGHTERS

On the evening of Dec. 10, 1988, two southeast Kansas men decided to cruise a familiar country road to look for deer. One of the pair knew it was a good spot, because he had poached deer there before.

They drove down the road and began to shine a hand-held spotlight across the fields looking for deer. Sighting no deer, they turned around to head back home. This time, though, they were in for a surprise. A local landowner had called conservation officer Mark Johnson to report the pair's suspicious actions. Officer Johnson received help from Linn County sheriff's deputy Bill Vankirk and Kansas Highway Patrol trooper Doug Duncan. The two suspects were arrested and taken to the Linn County Jail. Both men admitted to spotlighting for deer.

One of them was charged with hunting without a license, hunting with the aid of a motor vehicle, hunting with the aid of artificial light, and using an illegal weapon while using an artificial light. He forfeited his bond of \$407.

The other suspect owned the rifle which officer Johnson impounded as evidence. As it turns out, this suspect was already under investigation as a result of an Operation Game Thief call by the landowner. The landowner had earlier called in a car description and reported a deer being shot.

The suspect initially denied being involved with the crime. But Johnson explained that he was going to send the rifle to a laboratory to match firing pin imprints and tool markings with spent shells from the poaching scene. The man then confessed to the crime. The charges: two counts of

illegal possession of deer, hunting with the use of a motor vehicle, hunting with an artificial light, and hunting without written permission. He forfeited his bond of \$1,283. *Bob Mathews*

TRACKING 'EM DOWN

Sunday, Nov. 20, 1988 was a perfect day for hunting in Linn County. Snow had fallen during the night making conditions right for tracking game, and two Missouri men were doing just that. But the men were hunting deer and other game out of season. What they didn't realize was that just as the snow provided them with good tracking conditions, it also provided an easy trail for Pleasanton conservation officer Mark Johnson to follow.

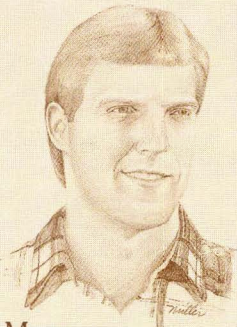
The two men parked their car near an abandoned farm house and walked two miles to a wooded area. Officer Johnson noticed the vehicle and investigated, knowing that it was unusual for anyone to be on the property. Johnson tracked the men through the snow for more than a mile, then backtracked to keep from being seen. As the men returned to their vehicle, they jumped a whitetail buck. One of the men shot the deer three times with 20-gauge slugs. While field dressing the deer, the men noticed the extra set of footprints Johnson had made earlier. They nervously left the deer and headed for their vehicle.

Johnson watched the men leave the farmstead then radioed for help. He and Linn County sheriff's deputy Marvin Stites stopped the suspects. When questioned, the men denied hunting, but had forgotten about one small detail: they were still wearing their hunting clothes, and one of the men was covered with blood. When officer Johnson told the men he had followed their tracks into the area, and then asked about the blood, the two confessed.

The men were arrested and taken to Linn County Jail while Johnson retrieved the poached deer carcass. The men were charged with hunting without a license and possession of an illegal deer. They forfeited the bonds totaling \$1,162 in lieu of appearing in court. The deer was given to a needy family. *Miller*

HUNTING

FOR WHAT IT'S WORTH



by Rob Manes

If you're a hunter, you've probably said it. I have. "Hunting is necessary (justifiable, if you prefer) because it keeps wildlife populations in check, preventing disease and starvation in what would otherwise be their swollen ranks . . . blah . . . blah . . . blah."

Even non-hunting conservationists sometimes spout this erroneous line of thinking. But, with the exceptions of deer, elk and furbearers, such assertions are equally credible to "We're from the government, and we're here to help you."

So how do we justify our burning passion for the hunt? Perhaps the answers can be found in the simple truth that all people kill wild things, some for subsistence, all for pleasure. That's it, plain and simple, and everybody — the hunter, the non-hunting majority and the anti-hunter — does it. We can't help it. Our unalterable position atop the Earth's energy pyramid dictates that we also kill to gain pleasure and quality of life. Everyone's hands are equally bloody.

No human animal survives without a personal responsibility for innumerable wildlife deaths. Only the most primitive subsistence hunter, living without any of life's amenities, can claim minimized savagery against his fellow creatures. Short of unsheltered starvation, no human can claim predatory abstinence.

Every soul who enjoys the First World "good life" makes the wild animal death-for-pleasure trade-off. Yep, non-hunters too

KILLERS

— even those who piously strut non-leather clothing and meatless meals. This is actually evidence of their sad and destructive misunderstanding about what really plagues wildlife. The notion that sportsmen hunt because they're conservationists is equally mistaken. The reciprocal is a stronger truth: hunters are conservationists (via their dollars and concern) because they hunt.

The production of our fine vegetable foods, more than any other human activity, leaves land frighteningly bare of wildlife food and shelter. True, a few species have thus far benefited from agriculture, but most have survived in spite of the plow. Many wild species that manage to avoid starvation and exposure on America's ag lands often die of chemical poisoning. Clearly, everyone who partakes of agriculture's bountiful crops also partakes in the killing.

OK, so you could argue that quality mass-produced foods are not a luxury. Let's talk about our modern, energy hungry homes and cars and the roadways that connect them to our sprawling cities. All were developed at a price that includes the death and suffering of wild animals. My homesite was once the escape, feeding and nesting area for animals that no longer live. Where your favorite restaurant, department store and church are was once wildland, too. The animals that would live there now often die competing elsewhere for tidbits of remaining habitat.

We, whose passion takes us again and again to the hunting field, must know that we hunt for pleasure. Yes, hunting is necessary, but for reasons much more complex than population control.

Hunting finances the war against habitat destruction. It links modern, urbanized man to his ancestry and his natural world, and in so doing affords quality in our otherwise cluttered lives.

SPRING CLEANING

Remember the gun that's sitting in the closet collecting dust? Now's the time to get it out for a little spring cleaning. Many hunters haven't checked their guns since they put them up in January.

Periodic maintenance of a gun can add years to its life and also prevent frustrating jams and misfeeds. During the off-season, guns should be checked and oiled every month or two. Always be certain that the gun is unloaded before any type of cleaning is done. A thin film of oil should be applied to all exterior metal surfaces and the inside of the barrel to prevent rust. It is also advisable to clean the trigger assembly and make sure the safety is working properly. A quality gun cleaning kit will cost about \$12 and will include items such as solvent, oil, a cleaning rod, and instructions on how to properly clean a gun.

Periodic cleanings are worth the small effort they require. A clean gun is also safer and less likely to hang up at that crucial time when a cackling pheasant flushes or a covey of quail scatters. *Marc Murrell, wildlife information representative*

WHERE HUNTERS LIVE

Ten states are home to nearly half the nation's hunters according to the U.S. Fish and Wildlife Service. These ten states accounted for 45 percent of the nation's total resident licenses, tags, permits and stamps purchased. In all states, the resident purchases represented at least 95 percent of the total licenses sold.

No.	State	Licenses, tags, etc.
1	Pennsylvania	2,078,771
2	Michigan	1,445,837
3	Texas	1,416,303
4	Wisconsin	1,359,807
5	New York	1,288,293
6	Minnesota	978,544
7	Missouri	957,680
8	Georgia	947,648
9	Oregon	937,375
10	Tennessee	916,767

In 1987, 176,065 resident hunting licenses were sold in Kansas. *National Shooting Sports Foundation*

FISHING

IT'S WALLEYE TIME

May and June are walleye months in Kansas. As Kansans have become better acquainted with the elusive walleye, they've learned that the toothy perch push up to the dinner table and feed heavily during these two months. It's not that walleye don't eat the rest of the year, but in late spring and early summer, they're easier to find and catch.

The walleye's dinner table consists of mud flats, creek channel ledges and submerged points. Walleye will show up on the shallow flats several weeks after spawning, which occurs in late March and early April. Walleye disappear for a time after spawning, probably holding in deep water. Their arrival on the mud flats is usually preceded by warm weather, which warms the water and probably triggers insect larvae activity on the flats.

Because finding aquatic insect larvae for bait is next to impossible, fishermen substitute night crawlers for bait with excellent results. The most popular method of fishing for walleye is to drift across likely mud flats. Walleye fishermen love the wind. Not only does it quietly propel their boats across their fishing spot, but the wave action it causes also stirs up the lake bottom making insect larvae and baitfish easy prey for walleye. And waves on the surface, give the fishermen cover from the spooky fish.

Walleye tend to be spooky because some of their favorite mud flats are in as little as 4-15 feet of water. When fish are located on a flat, fishermen will drift across the spot, dragging jigs or weighted spinners tipped with nightcrawlers. After drifting clear of the area, the motor is started and the boat is guided around the flat to get upwind and begin another drift.

Wind speeds of 15-20 miles per hour are ideal. It's best to fish the bait just off the bottom. Regulate the depth of the bait with the weight of the jig or spinner and the amount of line let out. During high

winds, a heavy jig and plenty of line will be needed.

If the wind is calm, or the fish have been spooked from the shallow flats by boat traffic, look for them along the creek channels and submerged points. The key is to find some unusual structure along the dropoff in water usually deeper than 15 feet. Use a depth finder and contour map to find things like submerged brush, old bridges, road beds or submerged farmsteads. Position the boat over the structure and fish the bait straight down. It's important to fish right in the structure, because the fish may not move very far to feed.

Some of the better walleye reservoirs for 1989 will be Glen Elder, Wilson, Milford, Webster, Kirwin, Kanopolis and Clinton. Fishermen should be aware that the daily creel limit for walleye has been reduced from eight to five. Also, there's an 18-inch minimum length limit on walleye at Lovewell Reservoir in Jewell County.

Miller

RELEASE 'EM RIGHT

Today's fishermen have had to modify their attitudes about success. Twenty years ago, a successful fishing trip ended with fish on the supper table. Each fish caught was added to the stringer or thrown into a burlap sack. Today, many fishermen still strive to put fish on the table, but many more are fishing for fun and practicing catch-and-release.

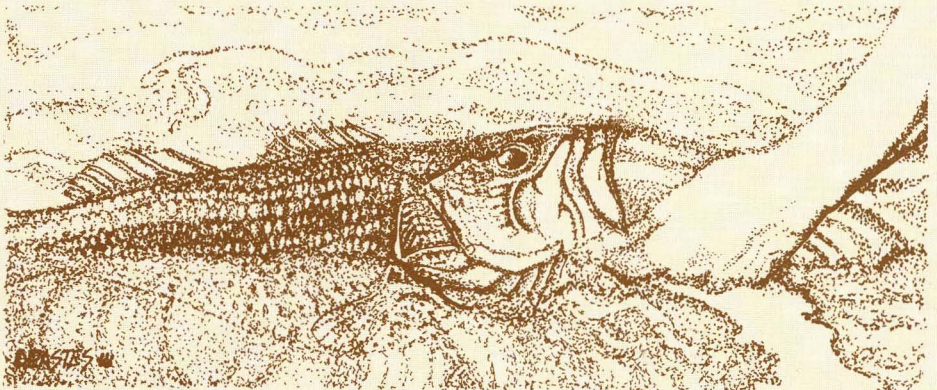
Many fishermen will keep fish such as crappie or white bass for eating and release less prolific species such as black bass. But catch-and-release fishing can be practiced with any species, after you've caught the limit or have all you can use. Catch-and-release is a great way to enjoy fishing to its fullest, while still conserving the resource. But fish must be released properly to ensure they survive the ordeal.

Never play a fish to total exhaustion. The stress may be fatal. Land fish quickly and gently. I've seen many television anglers land fish, hold them by the gills for the camera, drop them in the boat and flip them back into the water to "fight another day." But the truth is a roughly handled fish may not survive. Even though the fish swims away, appearing fine, damage that occurs during the landing may be fatal several days later.

Fish have a protective mucous coating or slime that protects them from fungus. When the skin is damaged and the mucous removed, a fungus may begin that will eventually kill the fish. Also, grabbing a fish around its middle and squeezing too tightly may damage internal organs.

The best way to release a fish is to grab the hook while the fish is still in the water, and remove the hook with a quick jerk. If your lure has treble hooks, land the fish gently. A net may be required for walleye or other toothy fish, but for many species such as black bass, crappie or white bass, you can subdue the fish by grabbing its lower jaw. Keep the fish out of the water for as little time as possible.

Catch-and-release is catching on. Give it a try. If you're worried your buddies won't believe your fish story, carry a small automatic camera and take a quick snap shot of fish before releasing them. *Miller*



POND BALANCE

As spring approaches, visions of trophy bass enter many anglers' heads. Traditionally, this time of year is one of the best for catching largemouth bass and crappie. About 100,000 ponds across the state offer some excellent fishing opportunities. Some of these ponds, however, have little potential for a quality fishing experience. This is often due to poor management or unrestricted harvest of fish, primarily bass. Fortunately, there are some effective strategies to help maintain good fishing in your pond.

In most instances, renovation of the fish population by either pond draining or a complete kill-out of the pond will restore good fishing faster than repeated supplemental stocking. Having accomplished this, fish (normally a bass/bluegill/channel catfish combination) can be acquired from commercial producers or from the Department of Wildlife and Parks. To accelerate initial bass growth rates, 3 pounds of fathead minnows per acre should be stocked as soon as there is water in the pond. To receive fish from the Department, the pond owner must submit an application and an aerial photograph of the pond (available from the county ASCS office) to the Department of Wildlife and Parks operations headquarters in Pratt by July 1. A pond must meet certain criteria to receive fish from the Department. It must be at least one-half acre in size and contain some water at least eight feet deep. Existing fish populations cannot be present, and water quality must be sufficient to sustain fish life.

If complete fish population renovation is not feasible, several other management alternatives can be applied to improve the population. The problem with an unbalanced population is that most of the fish inhabiting the impoundment are too small to appeal to anglers . . . but to large to be used as prey by introduced predators.

If anglers catch mainly 3- to 6-inch bluegills, and few or no bass, it is likely that: (1) bass overharvest has occurred, (2) bass are not present, (3) bass cannot see to feed, or (4) excessive aquatic vegetation has made bluegill unavailable to bass. The first two problems can be rectified by stocking 50 8- to 12-inch bass per acre. After

the intermediate bass have been stocked, bass less than 15 inches long should not be harvested for a three-year period. If the pond is very turbid or contains excessive vegetation, these problems should be addressed before any bass are stocked. When a pond has chronic excessive turbidity, catfish can be stocked along with fathead minnows. Sight-feeding fish such as bass and bluegill do poorly in muddy ponds.

If the pond contains many intermediate bass and few bluegill, 250 4- to 5-inch or larger bluegills should be stocked per acre. If numbers of intermediate bass are excessive, remove 20 pounds of bass per acre by hook and line to reduce competition for available forage. This will allow accelerated growth rates in remaining bass.

In balanced populations, a good rule of thumb is to restrict harvest of bass to 20 pounds/acre/year. Overharvesting can be reduced by keeping annual records of fish harvested, and by encouraging catch-and-release fishing. Protecting certain sizes of fish can also help maintain pond balance. Management techniques can improve farm pond fishing. Understanding and implementing some of these techniques may change your pond from a poor fishery to an excellent one. *Mark Kumberg, hatchery assistant*

HATCHERY FACELIFT

The Kansas Department of Wildlife and Parks' hatchery in Pratt County has a unique and important history. In 1878, the state's first Fish Commissioner, D.B. Long, promoted the idea of a state-operated fish hatchery. It wasn't until 1903 that the State Legislature authorized the current Fish Commissioner to establish a fish hatchery, providing land could be obtained at no cost.

Shortly after this authorization, 12 acres of land along the Ninnescah River were donated to the state. From these humble beginnings, with six ponds in 1904, 70 additional acres were purchased and 106 additional ponds were built by 1925. The Pratt Hatchery was the largest facility of its type in the United States at the time. It was also the first hatchery to artificially propagate channel catfish. Today, the hatchery produces up to five million chan-

nel catfish eggs annually.

After 75 years of raising up to 12 species of fish each year, the Pratt Hatchery has changed very little. But the years of operation, an increased demand for sportfish, and changes in fish culture techniques have limited the effectiveness of the hatchery. As a result, a three-year renovation project has started. The improvements will upgrade fish harvesting capabilities, allow increased fish production and modern extensive management techniques while minimizing operating and maintenance costs.

The renovation will focus on three areas of operation: water supply, harvest catch basins, and pond draining systems.

The water intake structure and supply line were constructed in 1914 and had deteriorated. A new intake structure is being built and will include a vertical bar screen to restrict entry of undesirable fish. The water supply line was replaced in areas where water flow was restricted.

The original clay tile drain pipe system limited pond harvest operations. The two 8-inch lines were replaced with four larger PVC lines. The new draining system will allow personnel to drain as many as three ponds in a 24-hour period. The ability to drain ponds quickly is important, especially with predacious fish such as largemouth bass, which become cannibalistic when natural food is gone. When this happens, the ability to quickly drain and harvest a pond is necessary to minimize losses.

The drain system was also designed to allow installation of catch basins in ponds which produce large numbers of fish. Before the catch basins were constructed, ponds were partially drained and seined to remove as many fish as possible. A stop net across the outlet was used to catch the remaining fish as water drained from the pond. But as the water level became low, fish loss would occur as oxygen levels decreased and sediments in the water increased. The new catch basins are built near the outlets and will catch fish as they move with the draining water. Each catch basin has a supply of fresh water and will hold up to 3,000 pounds of fish.

The renovation is to be complete in 1990. With these improvements, the hatchery will be more efficient in efforts to fill increasing demands for sportfish. *Chris Mammoliti, hatchery assistant*

ISSUES

OZONE

Scientists want to stop the common use of chlorofluorocarbon chemicals because they destroy the ozone in the Earth's atmosphere. Well, what is this ozone thing, and why is it important? Ozone is a gas that consists of three atoms of oxygen bonded together (O₃). The oxygen gas that we breath consists of only two atoms of oxygen bonded together (O₂). Obviously, most animal life (including us humans) need oxygen to survive, yet ozone is somewhat toxic when inhaled. Ozone, however, does have good properties.

The ozone that concerns scientists is what we normally see as blue sky on a clear day. High above us — say, 10 to 30 miles — molecules of oxygen and ozone are continually absorbing ultraviolet light in a chemical equilibrium. (This equilibrium is like a dog chasing its tail, a lot of energy is used up, but nothing is really accomplished.) O₂ is changed to O₃ by one type of ultraviolet light, and another energy level of ultraviolet light then changes the ozone back to the oxygen molecule.

The important part of all this is that ultraviolet light is absorbed so effectively that only small amounts reach us here on the Earth. To make a long story short, without the ozone layer, the only life that could survive on Earth would be that life adapted to water.

Chlorofluorocarbons (CFCs) are man-made chemicals that have been produced since the 1930s. They have been widely used as aerosol propellants; cooling fluids in refrigerators, freezers, and air conditioners; in foam packaging and insulation; as solvents in industry; and in many other uses.

What these people in white coats are trying to tell us is that the chlorine atoms that are released into the upper atmosphere by CFCs act as a catalyst to reduce the amount of ozone. This atmosphere is then unavailable to absorb ultraviolet light. CFC pollution has already caused major damage to our atmosphere. There are now holes

in the ozone layer above both polar regions.

This is serious stuff. Legislation designed to phase out these chemicals is not only good thinking but long overdue. *Gene Brehm, videographer*

CARBOFURAN BAN

After a three-year delay, the Environmental Protection Agency (EPA) has announced plans to cancel the registration of granular carbofuran for all uses.

Carbofuran is an insecticide and nematicide marketed under the name "Furadan." Carbofuran has killed thousands of birds in more than 40 documented incidents across the country since 1972. It has caused the poisoning deaths of at least 10 bald eagles in the Chesapeake Bay region and is suspected in the deaths of as many as 23 bald eagles in the area. EPA reported as far back as 1969 that the pesticide was a threat to eagles.

The formal proposal was published in the *Federal Register* in January. The National Wildlife Federation called for immediate suspension of all carbofuran uses while the cancellation decision was being made.

The comment period ended March 27. Following that, the EPA will make a final proposal. *The Leader, National Wildlife Federation*

TRAPPERS WIN

The Supreme Court of Massachusetts made a decision that will allow trapping to resume in the state. Since 1974, state law has banned the use of steel-jaw leghold traps on land. The court's action in January, affirmed a lower court's ruling that the padded, or Soft Catch, trap differs significantly from the conventional steel-jaw trap.

This precedent-setting ruling has meaning not only for wildlife management in Massachusetts, but in other states as well. The Wildlife Legislative Fund of

America (WLFA) has been working closely with the Massachusetts Trappers Association (MTA) on this issue for a number of years.

WFLA's legal counsel produced a carefully-researched opinion which stated, ". . . the padded trap is significantly different and its use would fall outside the state law which bans conventional leghold traps."

Based on this opinion, the MTA's counsel defended a Massachusetts trapper who had been arrested for using the padded trap. Several animal rights groups including Friends of Animals and the Massachusetts SPCA filed briefs supporting the Department of Fisheries, Wildlife and Environmental Law Enforcement, the state agency prosecuting the case. After a hotly contested proceeding, the lower court ruled in favor of the trapper.

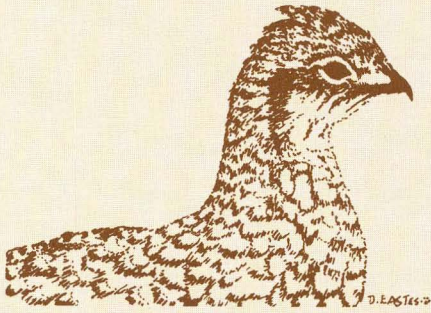
The Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement appealed the case, but before the appellate court could render an opinion, the Supreme Court put the case on its own docket for review.

After a rather speedy review of the case, the Supreme Court upheld the lower court decision. Finally after years of costly proceedings, the sportsmen won. *Wildlife Legislative Fund of America*

WILDLIFE SURVIVAL

The survival of 94 species of animals and 29 species of plants listed under the Endangered Species Act is dependent upon (or at least affected by) wetlands. Disappearing at an alarming rate of approximately 400,000 acres each year in the United States alone, wetlands — and the plants and animals that coexist there — are in danger. These endangered species include: piping plover, whooping crane, Key deer, salt marsh harvest mouse, American crocodile, and others. Ducks Unlimited's Wetlands America program, an expansion of the conservation program begun in Canada in 1937, is providing vital wetland habitat across the United States for some 600 wildlife species. In only four years, Wetlands America has restored or conserved 185,000 management acres. *Ducks Unlimited magazine*

NATURE



RETURN OF A NATIVE

The immigration continues. Another 100-plus sharp-tailed grouse have come to Kansas.

It's all part of a plan to re-establish self-sustaining populations of this prairie grouse species which disappeared from the state in the 1930s. Wildlife biologist Randy Rodgers has released several hundred sharptails — obtained from North Dakota, South Dakota and Nebraska — since 1982.

This year's batch of imported grouse came from southwestern South Dakota. The birds are captured during the winter months by placing baited walk-in traps at strategic locations in their range. It's a technique that works well when snow and cold weather make the birds more susceptible to the baited traps. Rodgers was hoping to receive as many as 200 birds for this year's release in Rooks County but warm, dry weather slowed trapping success.

Once they're in Kansas, the birds are released on bare, sparsely-vegetated knolls—ideal sites for sharptail “dancing grounds”. Like prairie chickens, sharptails gather each spring on these sites for elaborate courtship displays.

To make the released grouse feel more at home, and to keep them from flying off in all directions, Rodgers treats them to visual and audible enticements. A collection of sharptail “decoys” is placed around the release site, and recordings of active sharptail dancing grounds are played continuously until the birds are acclimated to their new surroundings.

Rodgers says the grouse released during the 1980s are “holding their own” in northwest Kansas. Active dancing grounds have been documented in Rawlins and Osborne counties, where the birds were released in previous years. From all appearances, the recent Rooks County release has brought Kansas one step closer to permanently reclaiming a native species that was here when the state's first settlers arrived. *Bob Mathews*

COUNTING COO'S

One of our most popular game birds is the subject of a survey that occurs every year about this time. The mourning dove call-count survey is an example of the variety of wildlife population monitoring systems developed in this country over the years.

Doves are among the most abundant birds in the United States, with estimated fall populations ranging from 350 to 600 million birds. Obviously, counting heads is impractical, so a nationwide monitoring system is undertaken every spring throughout the country to track trends in dove populations.

More than 1,000 mourning dove call-count survey routes are monitored every year in the U.S. Each route is located on lightly-traveled secondary roads and has 20 listening stations established at one-mile intervals. The number of doves heard calling and the number seen, are noted at each stop. In addition, observers document the level of local disturbance (noise) which hampers his or her ability to hear doves. The number of doves seen while driving between stops is also reported.

Counts begin one-half hour before sunrise and continue for two hours. Each route is run one time between May 20 and June 5. If it's windy or raining, the count is postponed to another day within that time period.

When they find conditions to their liking, doves can be extremely prolific. Some

adults will nest up to three times in a summer. Doves hatched in early spring may even nest by late summer of the same year. Apparently, mourning doves like what they have in Kansas, which is always among the top dove-producing states in the country. In fact, the 1988 survey revealed that Kansas was *the top dove state in the U.S.*

For the 85,000-plus dove hunters, that's good news. And the presence of this bountiful species is just one more reason to get outside for a look . . . and a listen . . . in the months of May and June. *Bob Mathews*

STING REMEDIES

One of the more common injuries to backpackers, campers, birdwatchers and fishermen are insect bites and stings. Bees, wasps and ants cause the most discomfort and concern. Here are a few tips for treating insect bites.

If stung by a flying insect, examine the skin for any remaining portion of the stinger. Remove it by gently scraping the skin with the edge of a credit card. Do not squeeze the skin or grasp the stinger, as this may inject the venom. After removing the stinger, wash the area with soap and water.

After the area is clean, apply cold compresses (no longer than an hour at a time) to reduce swelling. After 24-48 hours, when the swelling has subsided, you may switch from cold packs to moist hot packs if the discomfort continues. Hot packs will continue to reduce swelling and help the healing process.

After the initial treatment, it may be helpful to use an oral or topical antihistamine product such as Benadryl to relieve local irritation and itching. Home remedies such as pastes made from meat tenderizers may be of some benefit in reducing local pain if they are applied immediately after the sting has occurred. The tenderizer contains an enzyme called papain, which may help break down protein in the venom. If they are used, the pastes should be applied under the cold packs. Non-prescription pain relievers such as aspirin may also be taken for pain. *Mid-America Poison Control Center, Kansas University Medical Center*

NOTES

FISHING WEEK

June 5-11 has been designated as National Fishing Week. The week's promotions are designed to recognize fishing for the family recreation it provides. This year's theme is "Fishing and friends. It's catching on."

In conjunction with National Fishing Week, the Kansas Department of Wildlife and Parks is offering Free Fishing and Park Entrance Days, June 10 and 11. On those two days you can fish any state waters without a fishing license and get into any state park free. Many state parks will also have special events planned for the weekend, so get the whole family out and enjoy some fishing in one of Kansas' beautiful state parks. *Miller*

KANSAS ELK

The Rocky Mountain Elk Foundation (RMEF), a conservation group dedicated to conserving elk in the U.S., has recently made a contribution to benefit Kansas elk. At RMEF's 1988 banquet, \$4,000 was raised, which will be matched by the U.S. Fish and Wildlife Service and the Department of Wildlife and Parks to make habitat improvements on the Cimarron National Grasslands in Morton County. Wildlife and Parks currently manages a small elk herd on the Grasslands, which has provided limited hunting opportunities in the past two years. *Rocky Mountain Elk Foundation*

SPORTSMEN'S DAY

Sept. 23, 1989, is National Hunting and Fishing Day. That's the day when sportsmen's groups all across the nation take time to recognize the role sportsmen have played in conservation over the years. It's a time to pat the sportsmen and conservation agencies on the back for the enormous contributions they've made to wildlife conservation.

It may seem a little early to be talking about the day now, but it's not too early for sportsmen's groups and conservation organizations to begin thinking about promotions and events. The National Hunting and Fishing Day Headquarters has promotional ideas and materials available for those groups interested. For more information write: National Hunting and Fishing Day, 555 Danbury Rd., Wilton, CT 06897, or call (203) 762-1320. *Miller*

SATELLITE SHOW

Two of Kansas' greatest resources — agriculture and wildlife — will be the focus of a satellite broadcast throughout North America May 15.

The program will summarize the variety of ways people can benefit both wildlife and agriculture production by applying state-of-the-art land management practices. Broadcast is set for 8 p.m. May 15 on Westar 5, Channel 1. Co-sponsors of the broadcast are the Cooperative Extension Service and U.S. Fish and Wildlife Service.

Much of the program is based on an 11-part videotape series available through the Extension Service. The series features a variety of techniques to enhance both agriculture and wildlife production. Subjects covered include the Conservation Reserve Program, grazing management, wetlands restoration, managing streamside woodlands, and more. The series is available on three videotapes, priced at \$25 each. To order or obtain more information, contact your local extension agent or write to: Extension Communications, McCain, Kansas State University, Manhattan, KS 66506. *Bob Mathews*

PHOTO CONTEST

The Kansas Department of Wildlife and Parks is having the fifth annual Chickadee Checkoff Photo Contest. The contest offers a Grand Prize of \$100 for the first place photo, \$50 for the second and \$25

for third. The winning photos will be used to promote the 1989 Chickadee Checkoff Program.

Photo subjects may be any nongame mammal, bird, reptile, fish or invertebrate found in Kansas. Only Kodachrome slides will be accepted. There is no limit of the number of different species you may enter, but no more than six slides of a single species may be submitted. All entries must be received at the Department of Wildlife and Parks Pratt office by July 1, 1989. Slides will be judged according to quality, composition and general appeal. Each slide entered should be labeled with the owner's name and address. All slides will be returned, however, the Department cannot be responsible for any damage. The Department reserves the right to copy and print slides for the purpose of promoting the Chickadee Checkoff Program. Send all entries to: Chickadee Checkoff Photo Contest, Kansas Department of Wildlife and Parks, Rt. 2, Box 54A, Pratt, KS 67124.

The Chickadee Checkoff Program allows Kansas taxpayers to check a box on their state income tax forms to make a tax-deductible donation to the Nongame Program. The donations fund nongame wildlife management programs such as habitat improvement, research and reintroduction. *Miller*

PROTECT WETLANDS

The National Wildlife Federation is offering a 64-page color booklet designed to inform conservationists on how to protect wetlands. *A Citizens' Guide to Protecting Wetlands* is written in easy-to-understand language for individuals and groups fighting to save their wetlands. The guide gives an overview of the many values and functions of wetlands, and it provides a comprehensive list of contacts and resources to help in the effort. It also includes a description of the regulatory and nonregulatory tools that can be used to protect wetlands.

Wetlands are one of our most valuable and one of our most rapidly disappearing habitats. Despite a variety of federal, state and local regulatory programs, it is estimated we lose 350,000-500,000 acres of

wetlands each year.

The booklet sells for \$10.25. For more information contact the National Wildlife Federation, 1400 16th St., NW, Washington, D.C. 20036-2266. *National Wildlife Federation*

CRP FIRE BARRIERS

The Conservation Reserve Program (CRP) will return millions of acres to native grass in Kansas. This large amount of new habitat will be a major benefit to Kansas wildlife. But it can be even better. The Kansas Department of Wildlife and Parks is working with Soil Conservation Service (SCS) offices and enrolled landowners to develop ways of improving wildlife habitat on CRP acres. One excellent improvement can be the planting of food plots on CRP lands.

A food plot strip can work a dual purpose. Not only does it provide food for wildlife, but it can also serve as a fire barrier. One of the major management tools on grasslands is controlled burning. Food plots along the edges can serve as fire guards during maintenance burning, and placed within a CRP planting, the food plot could cut the field in half to facilitate scheduled burns.

For more information on CRP lands and food plots, contact your local SCS office or the Kansas Department of Wildlife and Parks, Wildlife and Fisheries Division
Miller

NEW BOOKS

Hunters and fishermen will be interested in several new books available this year. Fishermen might want to invest in *Fishing Fundamentals: A Complete Guide for Beginning Anglers*, by Wade Bourne. The 256-page book contains more than 200 photographs and drawings to help explain the basics of fishing. Bourne is an outdoor writer who has published more than 800 articles. The book would be a great gift for youngsters interested in learning to fish, or for anyone who wants to improve their fishing skills. The postage-paid price is \$13.50. For more information contact Wade Bourne, 450 Old Trenton Road, Clarksville, TN 37040.

Deer hunters might be interested in the

National Rifle Association's *Whitetail Deer Hunting*. This is the third in the NRA Hunter Skills Series. With 300 pages and 200 photographs and illustrations, the book covers every aspect of the sport, including chapters on meat care and safety. The book sells for \$5 plus \$1.50 for shipping. For more information contact the NRA Sales Department, P.O. Box 96031, Washington, D.C., 20090-6031.

Finally, serious big-game hunters should note that the Boone and Crockett Club has released the 9th Edition of *All-time Big-game Records*. Published in Dec. 1988, this is the Centennial Edition, commemorating the first century of the Club. For more information contact Boone and Crockett Club, P.O. Box 547, Dumfries, VA 22026. *Miller*

STANDARD EQUIPMENT

A 1989 Kansas Fishing Regulation brochure should be standard equipment for all Kansas fishermen. The free brochure is available wherever licenses are sold, county clerks' offices and all Kansas Department of Wildlife and Parks offices. If you plan on fishing this summer, get a copy of the brochure and look through it. There's lots of useful information, including several changes for 1989.

Several daily creel limits were changed by the Wildlife and Parks Commission. The walleye, sauger and saugeye limit (single species or in combination) was reduced from eight to five, as was the daily creel limit for trout. *Miller*

WALK WITH WILDLIFE

Have you ever wanted to get a closer look at those animals that seem to disappear just as you spot them? Well, now you will have the opportunity to see animals up close and personal with "Walk With Wildlife." This annual event is scheduled (rain or shine) for June 3, 1989, from 9 a.m. to 4 p.m. at Chisholm Creek Park Nature Trail, 3238 N. Oliver in Wichita.

The event involves a walk on the nature trail that has 15 stations set up along the way. Each station has a different bird or animal and a local expert from a wildlife agency or other organization to provide in-

formation and answer questions. Visitors will see and learn about owls, turtles, eagles, raccoons, opossums, beavers and many other native animals.

The walk is open to the public and is a great activity for school groups, scout troops and outdoor enthusiasts of all ages. No admission fee or registration is required and the trails are handicapped accessible. Don't miss this opportunity to see and learn about the wildlife around us. Mark June 3 on your calendar and plan to attend. For more information, contact the Wildlife and Parks office in Valley Center at (316) 755-2711 or Wichita Wild at (316) 264-8323. *Marc Murrell*

KANSAS STATE PARKS

The Memorial Day weekend is traditionally the first big weekend at Kansas state parks. Kansans come to state parks in droves to start the camping season. If you're planning a trip to one of our state parks, plan ahead. Campsites are available on a first come, first served basis. Although you can't reserve a site, a call to the park office before you leave will let you know how many sites are available.

KANSAS STATE PARK FEES

One-day temporary vehicle permit	\$3
Annual motor vehicle permit (calendar year)	\$20
Second motor vehicle permit	\$5
Duplicate permit (if original is lost)	\$1
Overnight camping	\$2
Overnight camping with electricity	\$5
Overnight camping with electricity, water and sewer	\$6
Annual camping fee (in lieu of \$2 overnight fee)	\$30
Utility charge for annual camping fee (per night)	\$3
Utility charge for annual camping fee for electricity, water and sewer (per night)	\$4
Shelter reservation	\$25

NATURE'S NOTEBOOK

by Joyce Harmon Depenbusch, Wildlife Education Coordinator

3-D WILDFLOWERS

In the March/April "Nature's Notebook" you learned about several Kansas wildflowers. Now you have a chance to make your own three-dimensional model of the spring beauty, *Claytonia virginica*.

Directions:

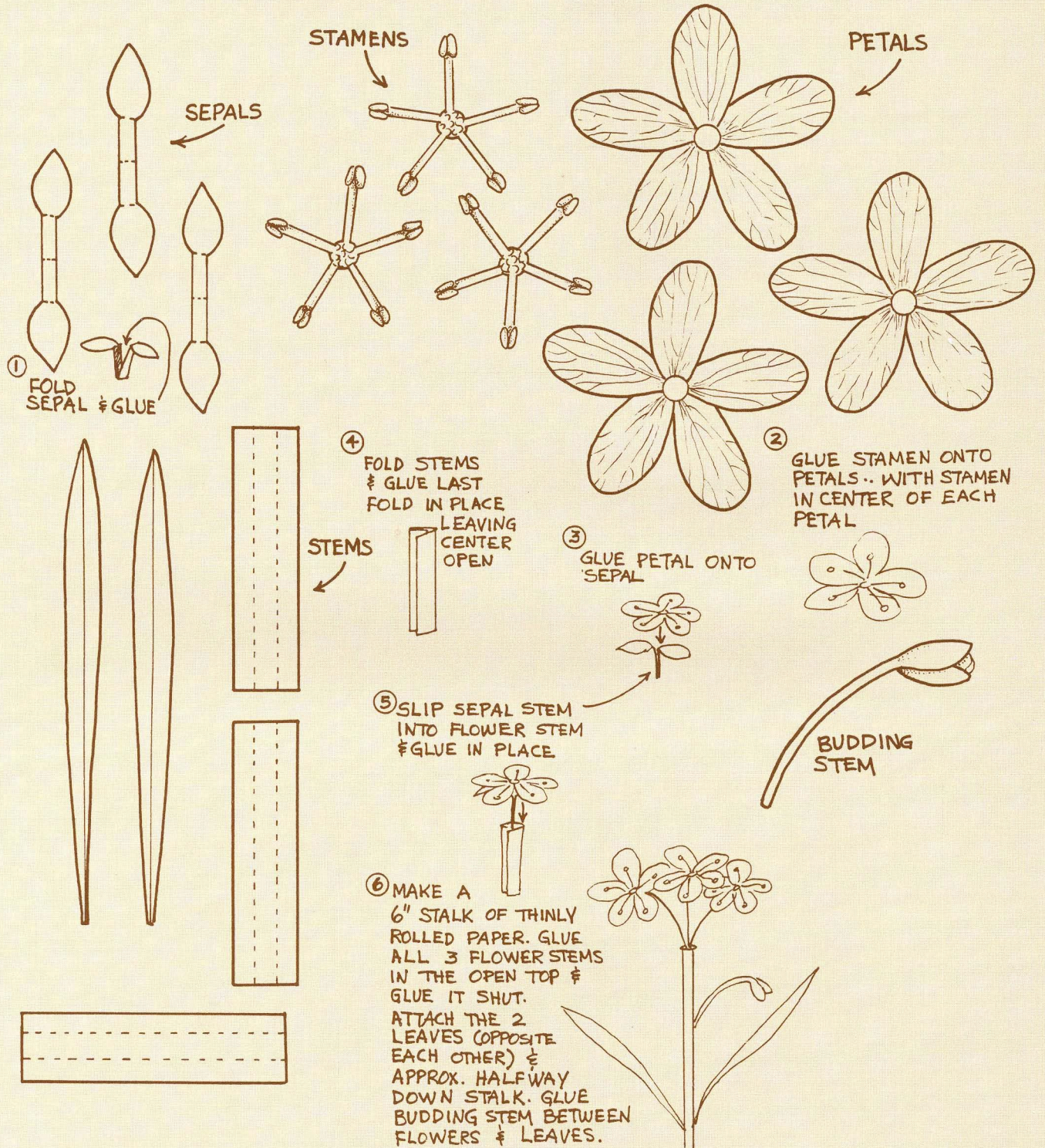
1. Trace or make duplicate copies of the model.
2. Color the model with crayon or marker.
3. Reinforce the back of the model with construction paper if necessary.
4. Fold on all dotted lines, cut on solid lines.
5. Use glue to assemble.

SPRING BEAUTY

Only one species of the dainty spring beauty grows in Kansas. The flowers are white or pale pink, with pink or red veins. This plant blooms from late March to early May in open woods, thickets and on the prairie. The spring beauty is most common in the eastern fourth of the state.



SPRING BEAUTY (CLAYTONIA VIRGINICA)





Gallery

by Mike Blair

WHERE THE BUFFALO ROAM

The bison or buffalo, is not a true buffalo. Its closest relative is the European bison, rather than the true buffaloes of Asia and Africa. The name buffalo evolved through variations of French and English names given to bison in early times.

During the 1700s, bison ranged over a great portion of the North American continent. When their population peaked prior to 1800, there may have been 60-70 million North American bison. They were found as far south as Mexico and eastward nearly to the Atlantic coast. However, the greatest numbers of bison were found on the Great Plains from the Rocky Mountains to the Mississippi and from Great Slave Lake in Canada to central Texas.

Bison belong to the *Bovidae* family of animals, as do domestic cattle and

sheep. There are two subspecies of bison that evolved in North America: the wood bison, *Bison bison athabasca*, which was found primarily in the parklands of the Canadian mountain ranges; and the plains bison, *Bison bison bison*, which was prevalent over the remainder of North America.

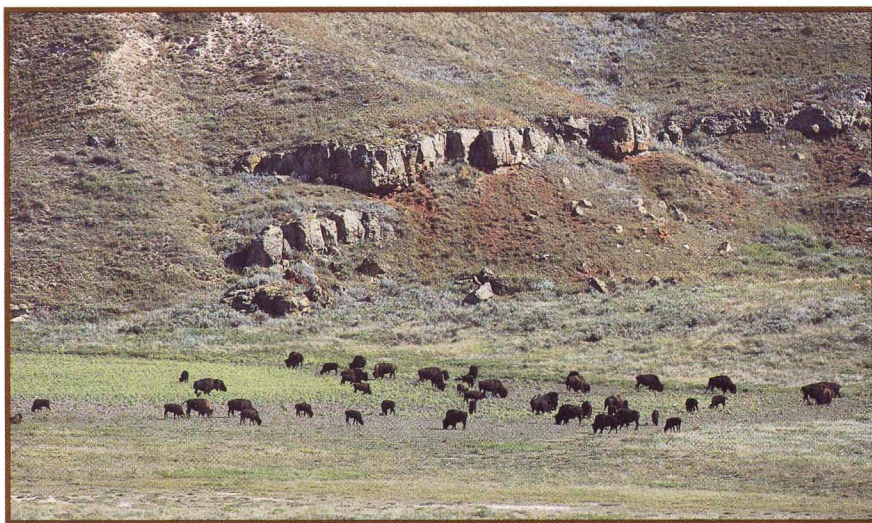
Standing 5-6 feet tall at the shoulder, a mature plains bison bull will weigh 1,600-1,900 pounds. A mature cow will stand 5 feet tall and weigh 900-1,200 pounds. In winter, bison are covered with a woolly coat of dark brown hair that is darker and longer on the head and front quarters. The heavy winter coat is shed in spring and the long dark brown hair remains only on the head, forelegs and hump.

Bison are gregarious, or found generally in small groups or large herds. Early settlers noted observing large

herds that may have held hundreds of thousands of bison.

As the flood of settlers moved west during the 1700s, the seemingly endless bison population was slaughtered away with amazing speed. Naturalist Ernest Thompson Seton estimated that there were 60 million bison in 1800. By 1830, their numbers had been reduced to 40 million, and by 1870 there were about five million left. The last documented bison in Kansas was killed in 1889.

Today the only bison in Kansas are kept in private herds or on refuges owned by the Kansas Department of Wildlife and Parks. The Department maintains bison herds at the Byron Walker Wildlife Area near Kingman, Maxwell Game Refuge near McPherson, Finney Game Refuge near Garden City and a small herd is kept on a portion of the Mined Land Wildlife Area in Crawford County.



Once numbering in the millions, bison now exist in small herds on state preserves and private ownerships. This herd is privately owned near Big Basin Prairie Preserve in Clark County. 400mm, f/8, 1/125

Bison are well equipped to withstand the cold prairie winters with a woolly coat of dark brown hair. The heavy coat is shed in the summer, with the long dark hair remaining only on the head and shoulders. 400mm, f/3.5, 1/60

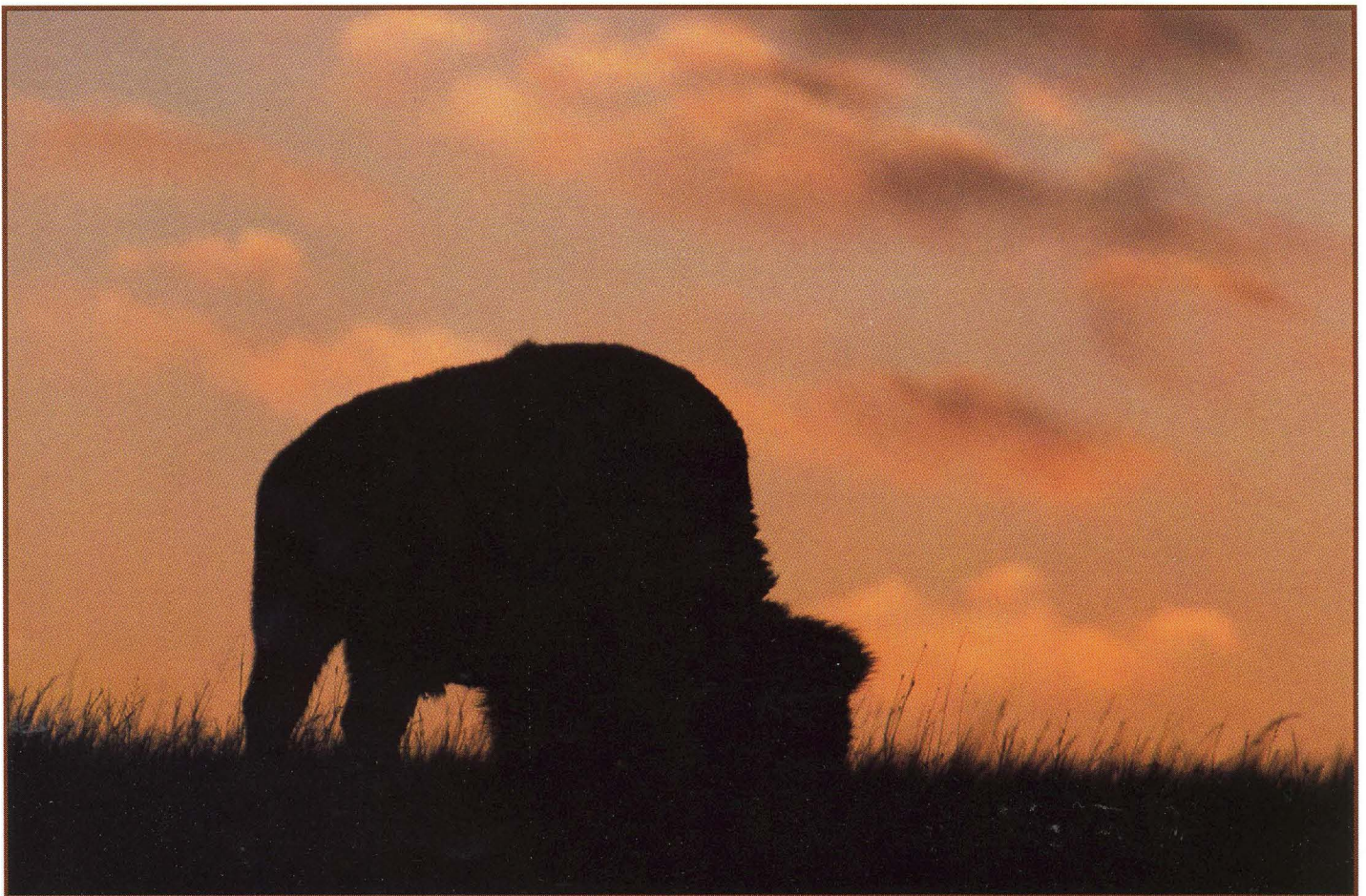


Previous page: Waist high in native grass, a bull bison symbolizes the early history of the plains. 400mm, f/6.7, 1/125



Standing 5-6 feet tall at the shoulder, a mature bull bison may weigh 1,900 pounds. Journals written by early American explorers tell of single herds, numbering in the hundreds of thousands. 400mm, f/6.7, 1/125

A bison grazes in the tallgrass prairie at sundown on the Maxwell Game Refuge near McPherson. The last wild bison documented in Kansas was killed in 1889. 400mm, f/11, 1/60



Clinton State Park



Meet Clinton State Park. Located on the north shore of Clinton Reservoir, Clinton Park is bounded by rolling timberland and Clinton's clear waters. Once controlled by the Kansa Indians, the area is now a playground for all Kansans.

photos by Mike Blair



The early settlers who traveled the Oregon Trail through what is now Kansas never could have envisioned the future paradise they were passing by. Just one mile south of where the Oregon Trail passes through Douglas County, five miles west of Lawrence, now lies Clinton Reservoir and State Park. Surrounded by the rolling woodlands of northeast Kansas, Clinton is a beautiful reservoir with clear water and steep forested shorelines.

The U.S. Army Corps of Engineers constructed Clinton Dam near the confluence of Rock Creek and the Wakarusa River. The reservoir was built for flood control, water supply for the city of Lawrence and recreation. At conservation pool level, 7,000 acres of water cover eight miles of the Wakarusa River Valley. Once controlled by the Kansa Indians, the area is still a prime hunting ground for Kansans. But Clinton Reservoir offers much more.

Clinton State Park is located on the north shore. The park area covers 1,425 acres and includes a variety of facilities. It offers campers 450 campsites, 240 of which have electrical and



Clinton Reservoir provides plenty of water recreation. Facilities include four, four-lane boat ramps and a wind surfer launching area.



You can lie on the beach and soak up the sun or race across waves on a jet ski. Clinton provides beautiful surroundings and ample facilities for a variety of outdoor activities. Organized events are also scheduled throughout the summer.



Crappie are abundant in Clinton's clear waters. Two successful fishermen use a fish cleaning station at the state park to fillet their fish.

Below: The timbered areas around Clinton State Park offer picturesque and peaceful picnic sites.

water hookups. And an undeveloped area is set aside for tent camping. The state park has four, four-lane boat ramps and a wind surfer launching area. A full-service marina is located at the east end of the state park. Other facilities include six shelter houses, a picnic area, six playgrounds, six shower buildings, two comfort stations, six flush toilets, nine pit toilets and two dump stations.

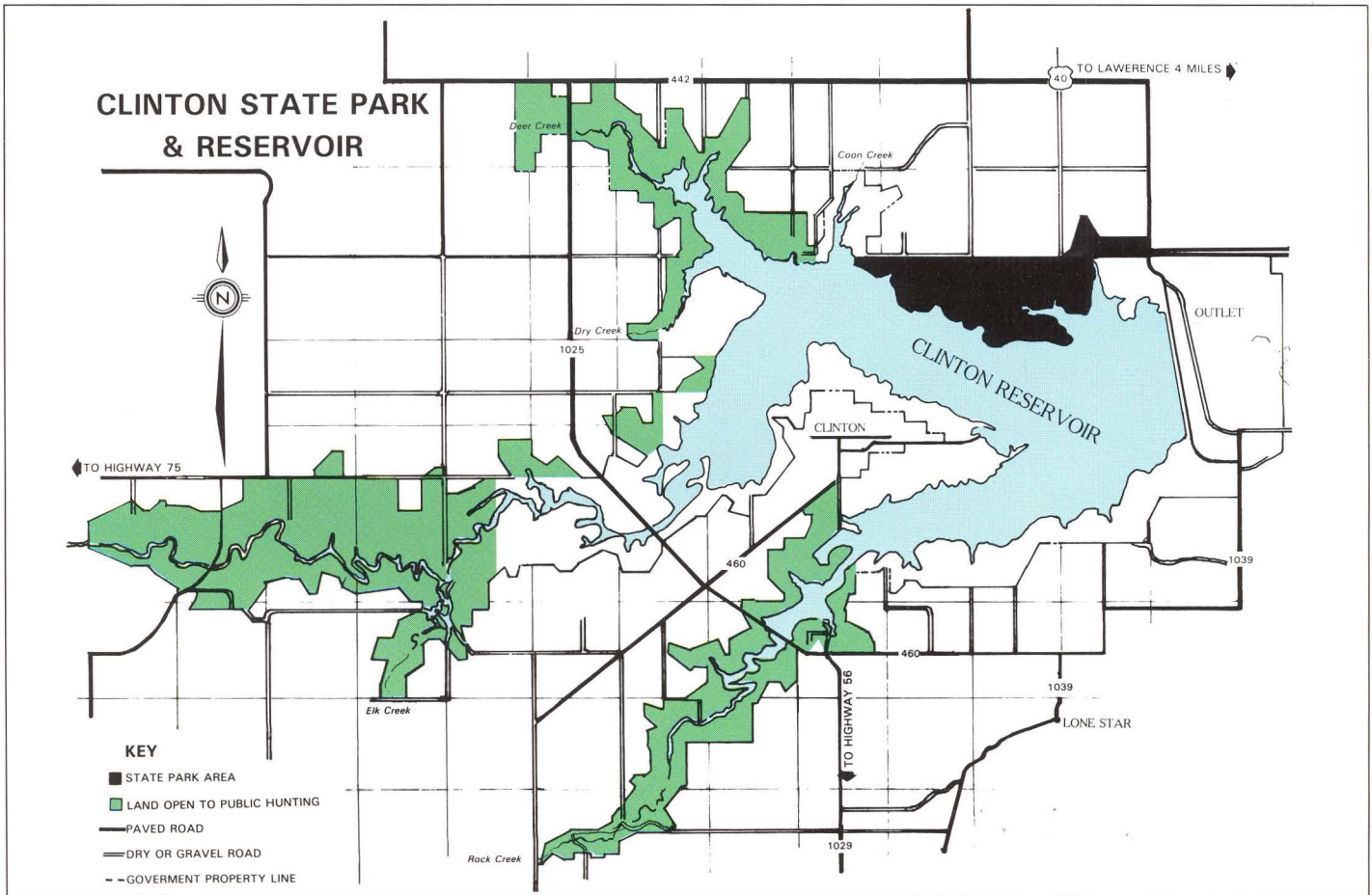
Campers don't have to look far for something to do at Clinton. An eight-mile hiking trail is maintained and there's even a three-mile cross-country ski trail for winter recreationists. Three horse shoe pits and a softball diamond are located near camping areas. The woodland around the park offers campers excellent opportunities to see birds and wildlife, and a bluebird restoration program maintains 75 bluebird nesting boxes.

The reservoir offers fishermen excellent opportunities. The dam was finished in 1977, but the lake was filled during a three-year period to maximize fish production. The lower portion of the reservoir was cleared for boating, but much of the timber was left standing in the upper end, providing ideal fish habitat. Crappie are probably the most popular fish at Clinton, and the clear, timbered





The upper end of Clinton Reservoir is filled with standing timber, which provides ideal fish habitat, especially for bass and crappie.



waters provide some of the best crappie fishing found anywhere.

Clinton is blessed with diverse fish habitat including the standing timber, mud flats, rocky shorelines, steep dropoffs and sheltered coves. This diversity allows for a variety of fishing opportunities. Walleye and channel cat are caught on the mud flats in late spring. Largemouth bass are caught in the standing timber and smallmouth bass are usually found near the rocky shorelines and off the dam. During the summer, white bass

are caught along the dropoffs, where night fishing under lights is particularly productive.

The Department manages 9,200 acres along the upper reaches of Deer Creek, Rock Creek and the Wakarusa River for wildlife. Hunters, trappers, birdwatchers and hikers will find mostly woodland habitat where fox and gray squirrels, white-tailed deer, turkey, bobwhite quail, various songbirds and other small game animals thrive. Furbearers commonly observed on the area in-

clude raccoon, opossum, skunk, muskrat, beaver, mink, bobcat, weasel, badger and coyote.

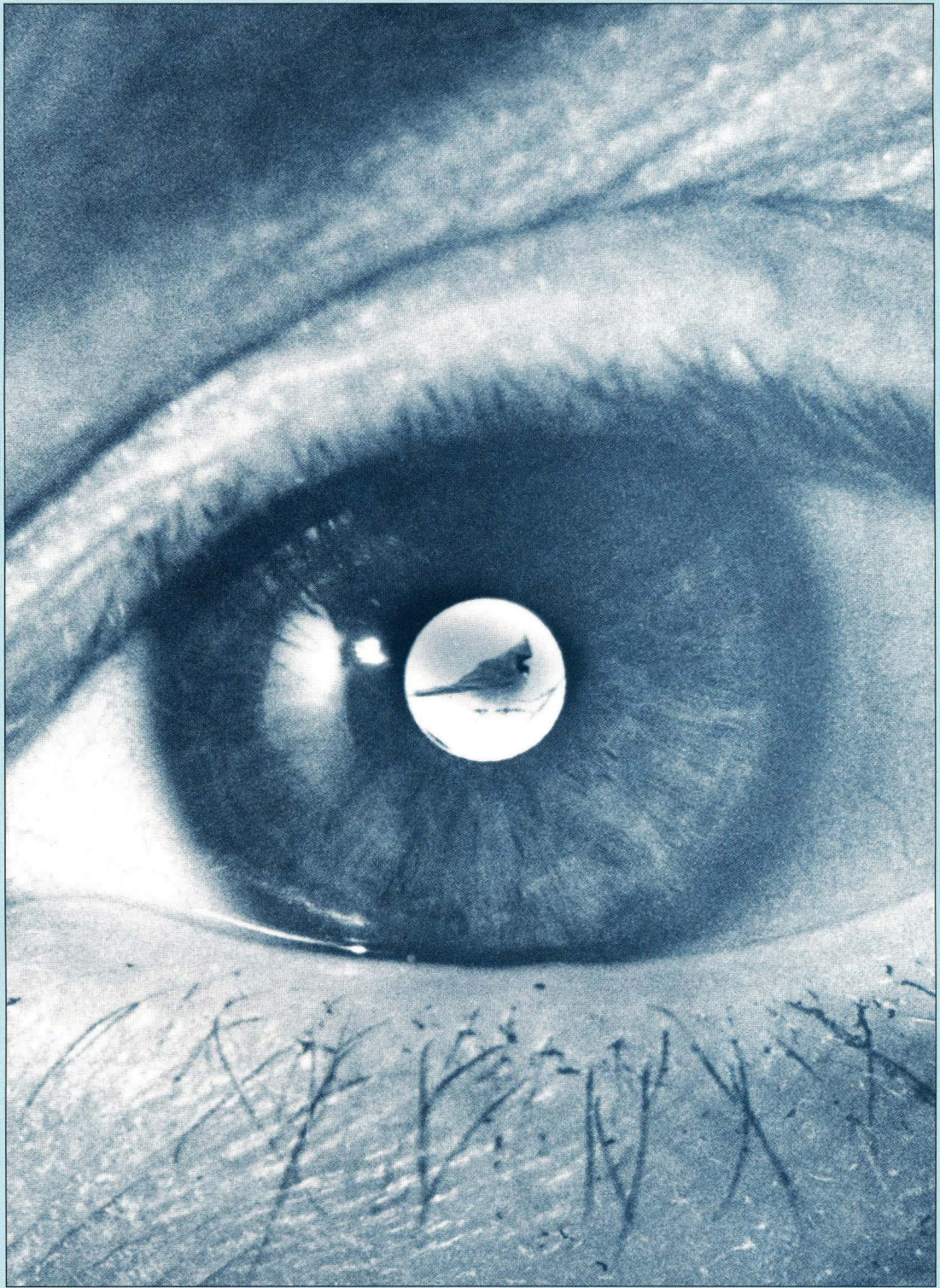
During the fall, dove and waterfowl hunting are popular at Clinton. And birdwatchers will find a wide variety of migratory birds stopping at Clinton during both spring and fall migrations.

On the south shoreline, the U.S. Army Corps of Engineers operates several camping and recreation areas that offer full hookups as well as tent camping facilities.



Clinton's rich variety of wildlife attracts hunters, trappers and birdwatchers. A bluebird trail offers visitors a chance to see an eastern bluebird.





T Bird Therapy



Birdwatching is good therapy for care home residents.

by **Ted T. Cable**

*assistant professor Department of
Forestry, Kansas State University
and*

Linda Huddleston

student, Kansas State University

photos by **Mike Blair**

To some people, birdwatching is just a casual hobby. To others it is an exhilarating pursuit of rare birds. But to Agnes Basinger, a resident of Schowalter Villa Nursing Center in Hesston, birdwatching is a vital part of her everyday life. Although she suffers from multiple scler-

osis and doesn't see well anymore, Basinger says she still likes the sunshine and the birds she can see through the window near her bed.

Basinger is just one of the thousands of Kansas nursing and care home residents who enjoy watching birds and other wildlife. Their en-

joyment is enhanced by a program designed to bring wildlife to people who can't get to wildlife.

Since 1981, the Kansas Department of Wildlife and Parks Nongame Program has been supplying bird feeders and seed to nursing homes in Kansas. In addition, posters and

books are supplied to help residents identify and learn about birds. This innovative program is available in only two other states.

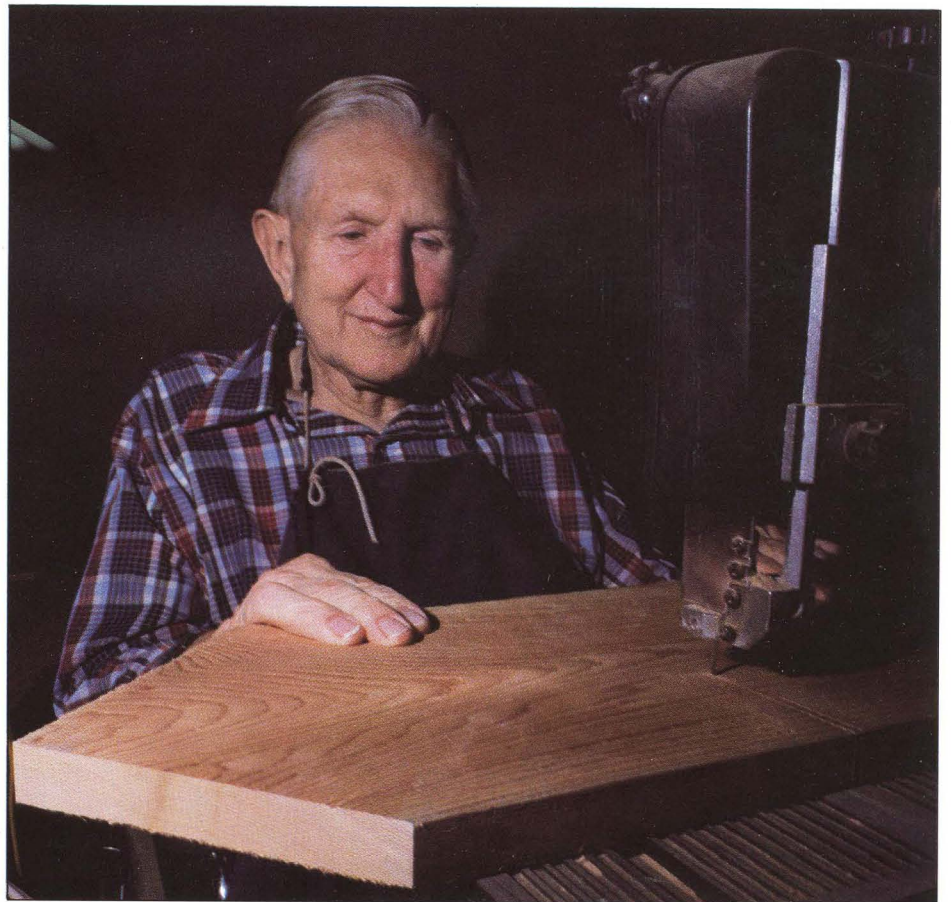
The objectives of the program are to increase awareness and appreciation of wildlife in Kansas and to improve the quality of life for the residents. A recent evaluation of this program found that 53 percent of the nursing home residents in the participating institutions watched birds at the feeders. The time spent watching birds ranged from 15 minutes to five hours each day. A survey of participating home administrators found that all believed the residents received enjoyment from the program. There was also a strong consensus among the administrators that the program has a positive influence on resident morale, and that the residents receive positive therapeutic benefits. According to the administrators, even staff morale is positively influenced by the opportunity to observe birds and other wildlife.

At some health care institutions, the state program is just one aspect of a variety of nature-related activities. Michael Anderson, the activities director for Valley Vista Center in Junction City, said the program is of "great value" to the Center's residents. "We have several activities that encourage involvement with nature," he said. "It is an area that we concentrate on, because it is very contagious. Residents see others out having fun and enjoying the outdoors, and it looks inviting and exciting."

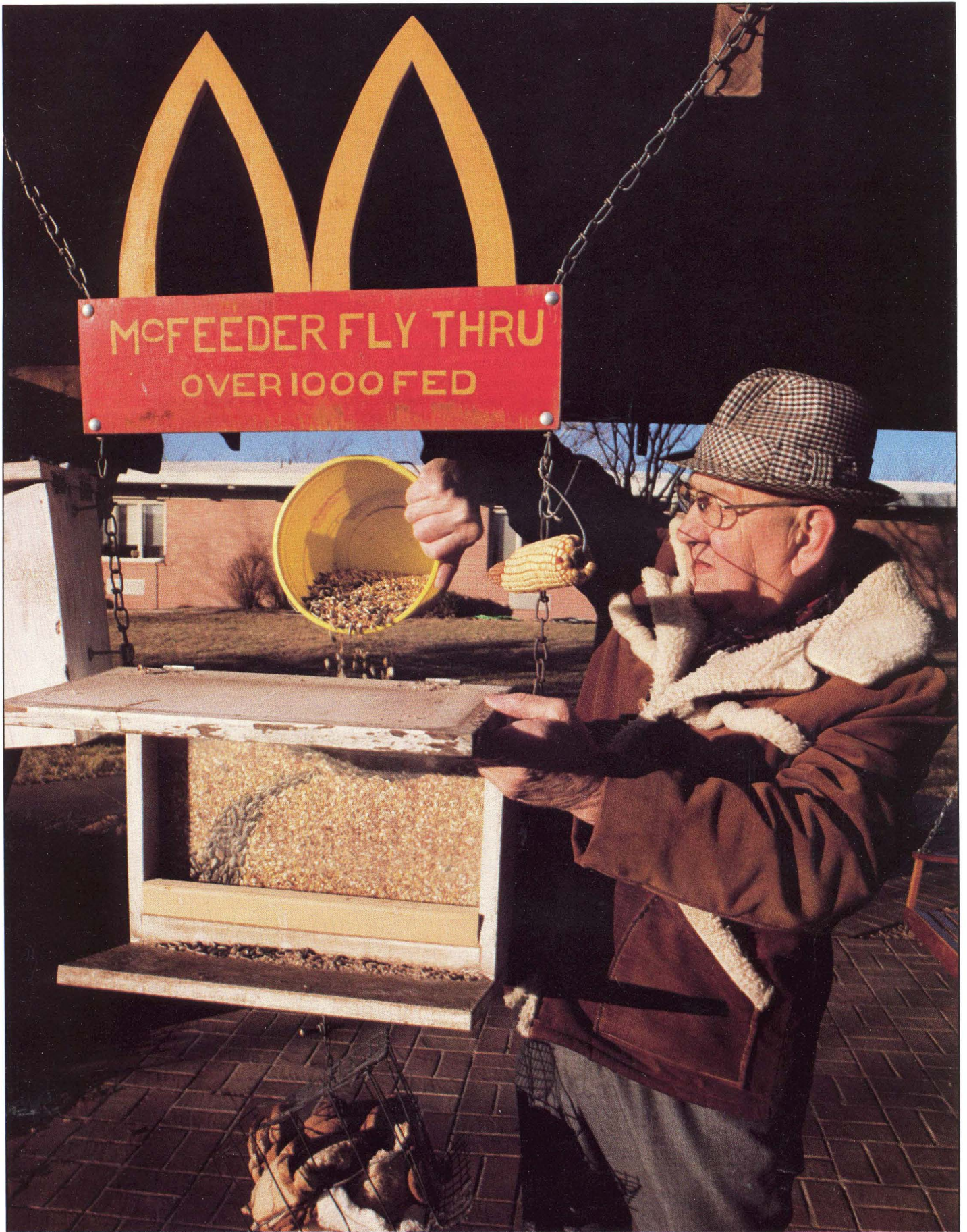
Valley Vista has its own nature trail, and residents are frequently taken to Milford Reservoir where they help water trees, pick up trash in picnic areas and just watch wildlife. "We take field trips to Milford Reservoir to watch the birds," Anderson said. "There is a special great blue heron nesting site that we visit. We stretch out on the grass and just soak up the sun. It feels great, and the residents really enjoy it." In addition to field trips, Valley Vista also has a birdwatching club. Residents take turns filling bird feeders, and members of the Valley Vista Wood Shop Club repair old feeders and make new ones. Each day, residents gather in Anderson's office to drink



Care home activity directors believe residents' morale improves when they can observe birds, such as this red-bellied woodpecker visiting the feeder.



The Valley Vista Center in Junction City has a Wood Shop Club whose members repair old feeders and make new ones. Other residents take turns filling the feeders with seed.



coffee and identify birds at the feeders using the bird book they received through the program. "We use the book to help identify some birds we have never seen before," Anderson said. "We have spotted 23 species visiting our place, and we have also shown every wildlife film we could get our hands on."

Sandra Patterson, the activities director for Schowalter Villa in Heston, also believes the program is beneficial. "All the people here are birdwatchers," she said. "We have residents who race to see who can spot the first robin, finch or whatever they decide upon. Several families have put up bird houses outside of a resident's room so they can enjoy the birds too (when they come to visit)."

Patterson also emphasized the originality of some of the feeders. One resident's husband built a feeder modeled after the arches of a popular fast-food restaurant. "They call it the

'Bird McFeeder Fly Thru,'" Patterson said. "They brag on more than 1,000 served. The humor and creativity on the part of the residents and their families sure make it fun."

Health care institutions in urban areas have also benefited from this program. Vanessa Condrey, activities director for the Lorraine Center in Wichita, said the center's nature programs and activities play a major role in the residents' day. "When residents are outside feeding the birds or working in the garden, they get much needed exercise and pleasure from being outside," she said. "Since we have somewhat limited space outdoors, we try to use indoor activities to learn more about wildlife and nature. We play Scrabble word games using the bird book we received to find names of species of birds." Condrey said they also receive old bread from a local bakery to feed the birds and squirrels. "It gives the residents, especially those affected by Alz-

heimer's and dementia, great pleasure to care for something, whether it's wild or tame," she said. "Tearing up the bread into smaller pieces is also good therapy for stiff arms and fingers."

Another part of the Center's therapy program involves coming in direct contact with different birds. "Our residents sit outside and whistle and sing with the birds," Condrey said. "We also have a lady bring in her tame birds, such as cockatiels and finches, for the residents to hold, talk to or just watch. It is a great involvement activity for everyone."

Most Kansans have friends or family who have lived in a care-providing institution. The Department's Non-game Program has improved the quality of life, and in some cases, possibly even the health of many such people. And the program also fosters a new appreciation for wildlife among the residents, their friends and families.

The program also allows group activities such as using materials provided by Wildlife and Parks to learn more about birds. Other activities include playing Scrabble word games to identify species of birds.



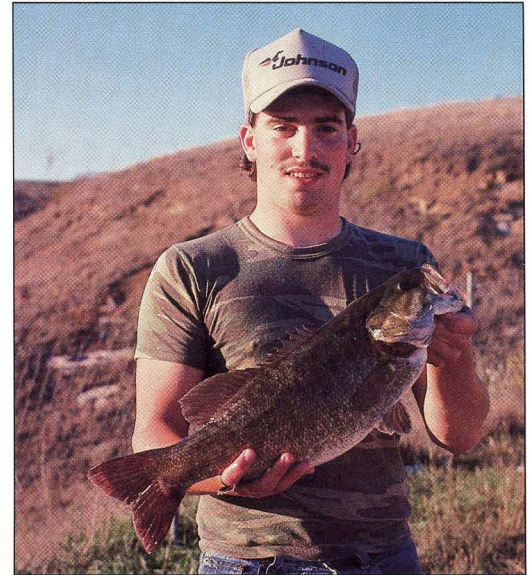
STATE RECORD FISH OF KANSAS

The Kansas Department of Wildlife and Parks recognizes 32 species of sportfish and a few nonsportfish in the state records. The longest standing record is Hazel Fey's black crappie caught in 1957. The big black crappie weighed 4 pounds, 10 ounces and was taken from Woodson State Fishing Lake in Woodson County. The newest record is a 5.56-pound smallmouth bass. On Oct. 9, 1988, Rick O'Bannon of Westfall (pictured at right) caught the huge smallmouth at Wilson Reservoir. The previous record was caught in 1987 at El Dorado Reservoir and weighed 4.9 pounds.

Other records that seem to be broken with regularity include the wiper and striped bass. Biologists aren't sure just how big either of these fish will get in Kansas, but stripers of nearly 50 pounds have been taken in nets. The wiper (white bass/striped bass hybrid) is a newcomer to Kansas waters. In other states, it has reached a weight of nearly 20 pounds.

If you do catch a potential state record fish, weigh the fish on certified scales as soon as possible. Fish lose valuable weight after they're caught, so prompt weighing is important. Most grocery stores and butcher shops have certified scales. Have two people witness the weighing and take their names and addresses. Next, contact an employee of the Kansas Department of Wildlife and Parks to identify the species of the fish. If an employee is not reached immediately, keep the fish in water and alive if possible. NEVER FREEZE THE FISH BEFORE VERIFICATION.

The Wildlife and Parks employee can provide a state record fish application. The application and a color photograph of the fish must be submitted to the Wildlife and Parks Pratt office. The application will be held for up to 30 days before certification.



Bruce Zamrzla photo

SPECIES	WEIGHT	LENGTH	DATE	PLACE	ANGLER
Largemouth bass	11.75 lbs.	25 inches	March 20, 1977	Jefferson Co. farm pond	Kenneth M. Bingham, Topeka
Smallmouth bass	5.56 lbs.	21 inches	Oct. 9, 1988	Wilson Reservoir	Rick O'Bannon, Westfall
Spotted bass	4.44 lbs.	18½ inches	April 16, 1977	Marion Co. Lake	Clarence McCarter, Wichita
Striped bass	43.5 lbs.	42¾ inches	May 18, 1988	Wilson Reservoir	Chester Nily, Sylvan Grove
Warmouth bass	1.11 lbs.	10½ inches	April 30, 1988	Mined Land Wildlife Area	Vivian Bradley, Pittsburg
White bass	5.25 lbs.	17 inches	May 4, 1966	Toronto Reservoir	Henry Baker, Wichita
Bluegill	2.31 lbs.	11 inches	May 26, 1962	Scott Co. farm pond	Robert Jefferies, Modoc
Bigmouth buffalo	54.25 lbs.	45 inches	May 24, 1971	Ottawa Co. farm pond	Randy Lee, Minneapolis
Smallmouth buffalo	51 lbs.	41 inches	May 23, 1979	Douglas Co. farm pond	Scott Butler, Lawrence
Carp	40 lbs.	40¾ inches	May 31, 1986	Riley Co. farm pond	Zane Mohler, Manhattan
Blue catfish	82 lbs.	53 inches	Aug. 18, 1988	Kansas River	Preston Stubbs Jr., Desoto
Bullhead catfish	7.33 lbs.	24½ inches	May 13, 1985	Montgomery Co. farm pond	David Tremain, Havana
Channel catfish	33.75 lbs.	38½ inches	May 22, 1980	Kaw River	Larry Wright, Kansas City
Flathead catfish	86.19 lbs.	55½ inches	Aug. 24, 1966	Neosho River	Ray Wiechert, Brazilton
Black crappie	4.63 lbs.	22 inches	Oct. 21, 1957	Woodson State Fishing Lake	Hazel Fey, Toronto
White crappie	4.01 lbs.	17½ inches	March 30, 1964	Greenwood Co. farm pond	Frank Miller, Eureka
Drum	31.25 lbs.	37¼ inches	July 17, 1982	Verdigris River	Aurthur Hyatt, Coffeyville
American eel	4.44 lbs.	35¼ inches	June 23, 1987	Kansas River	Ralph Westerman, Manhattan
Longnose gar	31.5 lbs.	unknown	May 24, 1974	Perry Reservoir	Ray Schroeder, Topeka
Shortnose gar	5.94 lbs.	34¼ inches	May 4, 1985	Milford Reservoir	Jack Frost, Manhattan
Goldeye	2.25 lbs.	17¾ inches	June 19, 1980	Milford Reservoir	Mike Augustine, Junction City
Paddlefish	81 lbs.	68½ inches	May 1, 1983	Chetopa Dam, Neosho River	George Elliott, Oswego
Yellow Perch	12 ounces	11½ inches	July 12, 1970	Lake Elbo	Merlin Sprecher, Manhattan
Northern pike	24.75 lbs.	44 inches	Aug. 28, 1971	Council Grove Reservoir	Mr. & Mrs. H.A. Bowman, Manhattan
Sturgeon	4 lbs.	30½ inches	Nov. 17, 1962	Kaw River	J.W. Keeton, Topeka
Green sunfish	2.36 lbs.	11½ inches	Sept. 26, 1982	farm pond	Fae Vaupel, Russell
Rainbow trout	9.31 lbs.	28¼ inches	Nov. 14, 1982	Lake Shawnee	Raymond Deghand, Topeka
Walleye	13.06 lbs.	31½ inches	March 29, 1972	Rocky Ford fishing area	David Watson, Manhattan
White amur	32.2 lbs.	39¾ inches	April 12, 1988	Shawnee Mission Park	Matt Ainsworth, Shawnee
Redear sunfish	1.47 lbs.	113/8 inches	Aug. 4, 1983	Frontenac Strip Pit	Pat Whetzell, Girard
Wiper	14.73 lbs.	28 inches	Nov. 1, 1987	Milford Reservoir outlet	Jimmie Lee Alexander, Junction City
Spotted Gar	7.75 lbs.	33½ inches	May 13, 1983	Chetopa Dam, Neosho River	Charles Harbert, Arma

1989

RESERVOIR FISHING FORECAST

	white bass	crappie	walleye	channel catfish	black bass	striped bass	flathead catfish	wiper
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REGION 1

CEDAR BLUFF	Good	Good	Fair	Excellent	Fair	None	Fair	None
KIRWIN	Good	Good	Good	Good	Fair	None	Good	Fair
SEBELIUS	None	Good	Fair	Good	Good	None	Poor	Fair
WEBSTER	None	Fair	Good	Good	Fair	Poor	Good	None
KANOPOLIS	Good	Fair	Good	Good	Poor	None	Poor	Poor
WILSON	Excellent	Fair	Good	Good	Good	Good	Poor	None
GLEN ELDER	Excellent	Fair	Good	Excellent	Good	Fair	Good	None
LOVEWELL	Fair	Poor	Fair	Excellent	Poor	None	Good	Poor

REGION 2

CLINTON	Excellent	Good	Good	Excellent	Fair	Poor	Poor	None
HILLSDALE	Poor	Fair	Fair	Good	Fair	None	Poor	None
MILFORD	Good	Good	Good	Excellent	Good	Poor	Good	None
PERRY	Fair	Good	Fair	Excellent	Fair	None	Fair	Poor
TUTTLE CREEK	Good	Good	Fair	Excellent	Fair	Poor	Excellent	None

REGION 4

CHENEY	Good	Fair	Fair	Good	Poor	Fair	Poor	None
EL DORADO	Good	Good	Fair	Excellent	Good	None	Fair	None
COUNCIL GROVE	Fair	Good	Poor	Good	Poor	None	Good	Poor
MARION	Excellent	Good	Fair	Excellent	Fair	None	Fair	Good

REGION 5

BIG HILL	None	Good	Poor	Fair	Good	None	Poor	None
ELK CITY	Fair	Fair	Poor	Good	Poor	None	Good	Poor
FALL RIVER	Good	Fair	None	Good	Poor	None	Fair	Poor
JOHN REDMOND	Fair	Fair	Poor	Good	Poor	None	Excellent	Fair
LA CYGNE	Good	Fair	Poor	Excellent	Good	Poor	Fair	Poor
MELVERN	Good	Good	Fair	Excellent	Fair	None	Good	None
POMONA	Good	Good	Fair	Excellent	Fair	None	Good	Good
TORONTO	Good	Good	None	Good	Poor	None	Excellent	None

The reservoir fishing forecast is compiled each winter by district fisheries biologists. The forecast for each species on each reservoir is based on a variety of information gathered by biologists. Test nets, electroshocking and creel surveys are all used to determine the year's fishing forecast. Fishermen can call the fishing hotline at (316) 672-3158 for a weekly update on fishing around the state.



by Bob Mathews

Environmental Heroes

There have been many distinguished spokespersons for the environment over the years. Aldo Leopold, Rachel Carson and the rest set some lofty standards for later champions for the conservation cause. With eloquence and wisdom, they defined human responsibility to the planet in unprecedented ways. Either directly or indirectly, they influenced a broad spectrum of the American population.

There's a new generation of environmental voices at work today. Some of them are delivering the message in bizarre but, we hope, effective fashion. One good example is Ray Cycle.

Ray is a singing, dancing superhero of the recycling programs currently underway in a couple of our most populous eastern states. He looks like a cross between a couple of comic book superheroes. Green tights, yellow shoes and cape, dark goggles, and copper-colored boots and gloves. That's his image. From all appearances, this unlikely environmental spokesman (and others like him) may be the most important player in the struggle to contain the monumental trash disposal problems that exist to some extent everywhere in the country.

Ray does a couple of routines, one designed for kindergartners through third graders, and another for fourth through sixth graders. The fact that he always has a couple of months worth of appearances booked in advance indicates how well-received he has been.

"There's so much trash, there's so much waste, it's polluting our water and taking up space," he sings in his opening number. His young audiences respond to him immediately as he urges them to chant, "Re...re...re...recycle!" His X-ray vision, he tells them, enables him to see "dump juices" creeping their way toward drinking water supplies. Pop, rock and rap music comprise the core of his high-energy delivery. "Let's hear you say, 'Landfills stink,'" he implores his youthful crowd as he introduces a song by that title.

Ray's real name is Chris Rowlands, but the character he portrays is the one his audiences remember. The kids obviously love him. They become participants in his shows. Afterwards, they line up to get his autograph.

Connecticut is one state that is relying heavily on Ray Cycle's influence. They now have a law on the books that will prohibit dumps from accepting recyclable materials such as paper and aluminum beginning in 1991.

"It's our hope that Ray Cycle will become for the Connecticut Department of Environmental Protection and its recycling program what Smokey Bear is for the National Forest Service," said Marc Breslav, a consultant who specializes in developing environmental education campaigns.

There's no argument with the fact that establishing a



Dana Eastes illustration

pattern early in life is far more effective than attempting to alter lifestyles of adults. Although there are many adults these days who can sympathize with the recycling cause, few are able to readily alter their day-to-day patterns to accommodate that lifestyle change. Breslav agrees with that and adds: "In a lot of families, children are the ones who take out the garbage, so they can have a lot of impact on recycling."

That may be the most profound lesson for environmental communicators: direct your message to the audience most likely to make a difference, and voice your message in the way best suited to get their attention.

Leopold and Carson will always have an honored place in our country's and our world's history. They opened our eyes to the dangers of remaining ignorant and inactive on environmental concerns. Ray Cycle may not fit the classic mold of the esteemed environmental spokesman, but his effectiveness may ultimately set a new standard for elevating public awareness of our problems.

The reason for that is not Ray's demeanor or his message, although those are assets to his task. We've always understood the importance of educating our children. What we may never have fully appreciated before is how powerful a force well-educated children can be in both immediate and long-term efforts formerly reserved for the adult world.



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