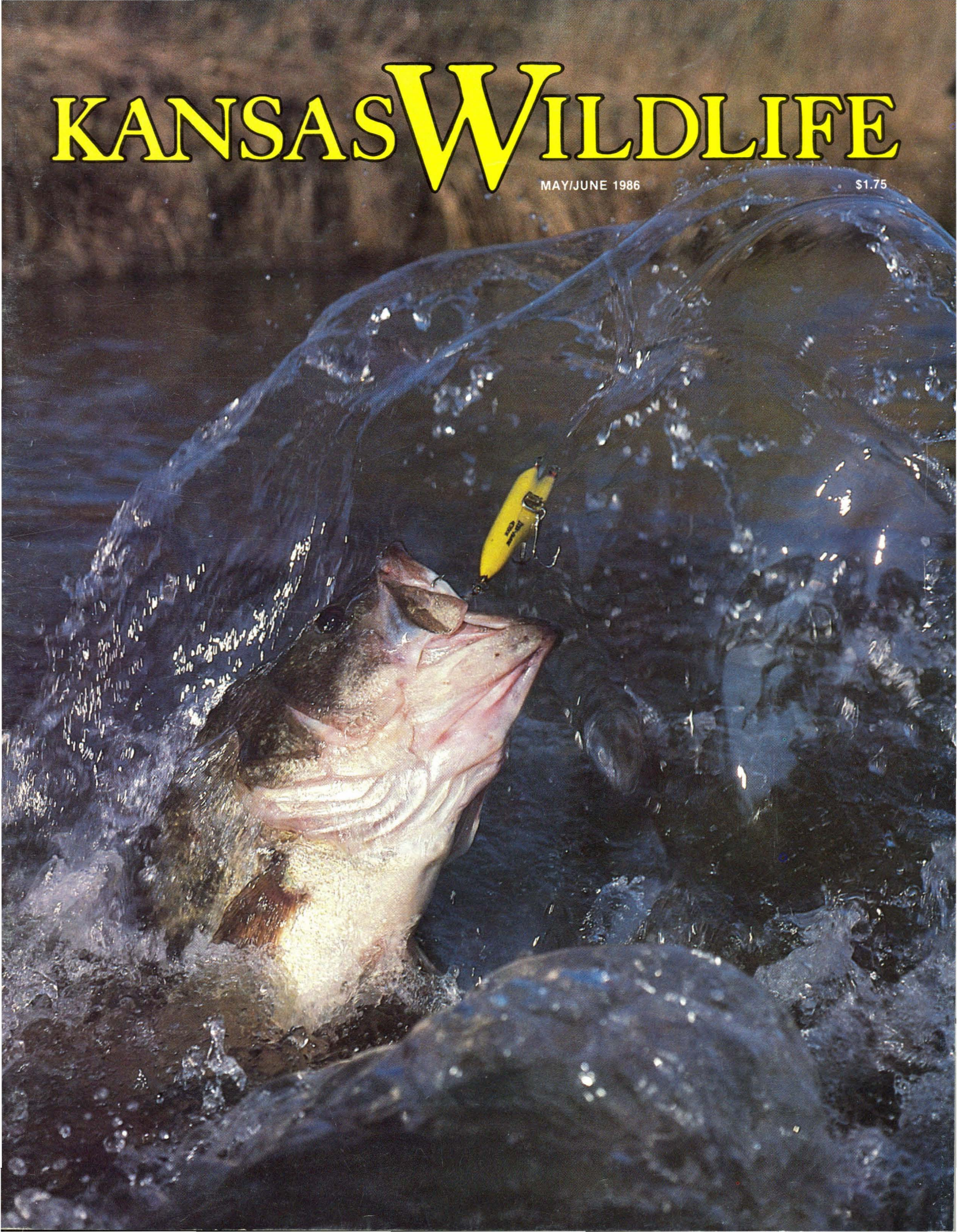


# KANSAS WILDLIFE

MAY/JUNE 1986

\$1.75





# KANSAS WILDLIFE

MAY/JUNE 1986

Vol. 43, No. 3

## MAGAZINE STAFF

**Editor**  
Paul G. Koenig  
**Associate Editor**  
Rob Manes  
**Illustrator**  
Mike Miller  
**Photographer**  
Gene Brehm  
**Staff Writers**  
David Case  
Mary Kay Spanbauer  
Joyce Harmon Depenbusch  
Bob Mathews  
**Editorial Assistant**  
Bev Aldrich  
**Circulation**  
Kathy Gosser

## COMMISSIONERS

Gary Caplinger, Chairman  
*Larned*  
Ronald Hopkins  
*Wichita*  
William Carriger, Sr.  
*Topeka*  
Joe Fowler  
*Weir*  
John Ostmeyer  
*Colby*

## ADMINISTRATION

**Director**  
Bill Hanzlick  
**Assistant Director**  
Kent Jackson  
**Chief of Administrative Services**  
George Axline  
**Chief of Information-Education**  
Mike Cox  
**Chief of Fisheries**  
Mike Theurer  
**Chief of Game**  
Darrell Montei  
**Chief of Law Enforcement**  
Omar Stavlo

KANSAS WILDLIFE (ISSN 0279-9030) is the official bimonthly publication of the Kansas Fish & Game Commission, Rural Route 2, Box 54A, Pratt, Kan. 67124 (316) 672-5911. Subscription rates: one year (6 issues) \$6.00; two years (12 issues) \$11.00; and three years (18 issues) \$15.00. Single copies are available at \$1.75 per copy.

Articles in the magazine may be reprinted with permission provided proper credit is given. Second class postage paid at Wichita, Kan., and additional mailing offices. POSTMASTER: Send address changes to Kansas Fish & Game, Rural Route 2, Box 54A, Pratt, Kan. 67124.

Postal I.D. Number: ISSN 0279-9030



2



6



27



**About the Covers**  
**Front:** Staff photographer Gene Brehm froze the action on this 6 1/2-pound largemouth bass with a shutter speed of 1/500 of a second. Brehm set his f-stop at 5.6.

**Back:** A field of yarrow flowers provided the setting for this portrait of a 2-day-old Reno County fawn. Mike Blair used a 50mm lens and Kodachrome 64 film.

## THE BUCK STOPS HERE

Changing of the Guard

1

## Tempting at the Top

Topwater fishing is the most exciting way to catch any fish. You can see, hear and feel the strike. Here's why I like this tactic better than all others. by Mike Miller

2

## Ruby Gems

The most common hummingbird in Kansas, the ruby throat will dazzle you with its rapid wing beat and iridescent color. A look at this amazing bird. by Joe Schaefer

6

## The Farm Pond Favorite

Once confined to eastern Kansas streams, bluegills are found throughout the Sunflower State. Spring is the best time to fish for them. by Lanny D. Jones

12

## the center section

Edited by Rob Manes.

15

## Send in the Clowns

Gone from Kansas waterways for decades, river otters were reintroduced here three years ago. An optimistic update on the restoration program. by Lloyd B. Fox

27

## Kansas Fish Records

Compiled by Bev Aldrich

33

## The Record, the River and the Man

In 1966 Ray Wiechert hauled in the state-record flathead catfish. In a recent visit, Ray talked about the record and his life on the river. by Rob Manes

34

## Fishing Boat Primer

In the market for a fishing boat? There are plenty of styles and sizes from which to choose, but you'll need to ask yourself a few questions first. by Tommie Berger

38

## HIGH GROUND

A Caller, A Calling. by Paul G. Koenig

41

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



# THE BUCK STOPS HERE



## Changing Of The Guard

**F**ifteen issues ago a fellow from the Pacific Northwest introduced himself on this page. Said he'd spent the previous 11 years living in that far corner but that his roots were in America's breadbasket and, well, Kansas wasn't so different from his boyhood home.

I can relate, and maybe I should, because with this issue I am the new name in the masthead. I grew up in St. Louis, attended school in Missouri then traveled east and south to outdoor-related jobs in New York and Alabama. While living in Dixie I was lucky enough to be invited to bird hunt in Kansas — twice.

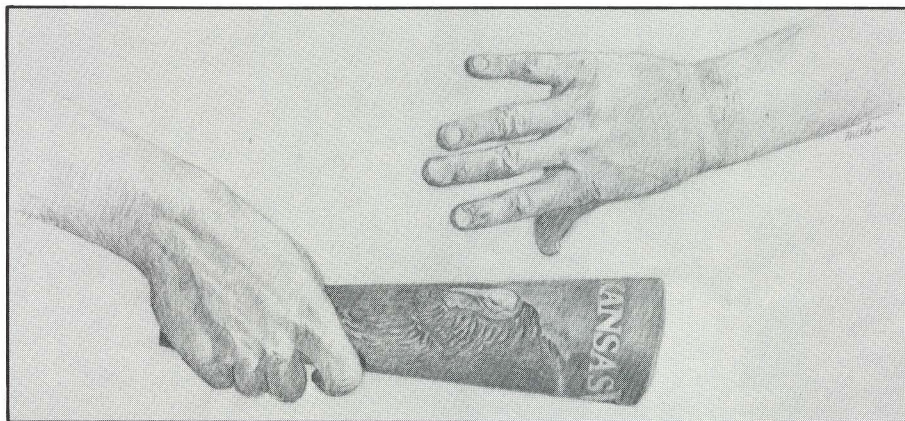
I realize that's no great shakes to a native Jayhawker. Bird hunt twice in Kansas is what you do on a fall weekend. But for me, then as now, Kansas bird hunts are special.

I'd heard Kansas was the state that offered good or better pheasant, quail and prairie chicken hunting. And I believed it, for sure, but it's hard to dwell on such a paradise when you're rolling along Interstate 70 going to or returning from somewhere.

The Kansas stretch of I-70 endears itself to other thoughts. Like: *Man, it's true what they say about Kansas. It really is flat. Miles and miles of it. Zero in the way of scenery.*

Providing scenery, of course, is not I-70's purpose. It was meant to carry travelers efficiently across the nation's midsection. Which it does.

Ramp off I-70, however, and you'll discover the Kansas and the landscape the traveler may never know. Spend some time in the Flint Hills, hunt pheasants with a friend or watch the



Mike Miller illustration

sun set on the prairie. Better yet, live here. Get to know Kansas. Make the time. That's how you get to know something.

Take KANSAS WILDLIFE, for instance. I invite you to continue — or to begin — spending time with us each issue. Get to know us as we get to know you. You've said you enjoy the color photography on these pages. We hear you. Look for more of it.

You've said you like hunting- and fishing-related stories. We do, too, and you'll be seeing these subjects covered in each issue.

You've said you enjoy reading about conservation, nature and nongame wildlife species. Likewise. Stay with us.

You've said you enjoy reading the Center Section, especially the pages devoted to Letters and The Law. Great. Count on them being there every issue.

Count on only a few changes in your magazine, in fact, as it's passed from

one editor to another. Stub Snagbark, for one, has left in search of greener pastures to the north. A new feature, called HIGH GROUND, will take Stub's place. Any subject is fair game on the HIGH GROUND so long as it puts a thought in your head or a smile on your face.

By now you may have noticed the new look on the table of contents page. We wanted to give you a preview of the photos that run larger inside. And you already may have noticed a few other changes inside the magazine.

We hope you continue to find KANSAS WILDLIFE as personable as your next-door neighbor, as satisfying as an old friend. Good friends need to keep in touch. Do that, please.

We'll do the same.

*Paul*

Paul G. Koenig  
Editor



# Tempting At The Top



This collection of topwater baits includes (top row): spinnerbait, propbait, jitterbug and buzzbait. Bottom includes: popper, imitation floating minnow and stickbait.

Gene Brehm photo

Topwater fishing is the most exciting way to catch any fish. You can see, hear and feel the strike. Here's why I like this tactic better than all others.

by Mike Miller  
*Illustrator*

**A**s a young angler learning to bass fish on farm ponds, I eventually found two lures that consistently worked for me: a purple plastic worm and a black Jitterbug. The plastic worm caught a lot more fish than

the Jitterbug did, but the Jitterbug was my favorite.

I always looked forward to an evening when the wind settled and I could tie on the big black plug. I can still feel the excitement just imagining

the rhythmic gurgling the lure makes as it leads a V-shaped ripple across the calm surface. It's a strike I'm always expecting yet one which usually seems to surprise me.

Topwater fishing is the most excit-







ing way to catch any fish. The fisherman can see, hear and feel the strike. The excitement of a tug, bump or even a hard strike below the surface can't compare with seeing the water explode around the lure you're watching.

The theory of topwater fishing is simple: Create a surface disturbance that a bass will mistake for an injured, panicked or stunned meal. The simplicity ends there. There are dozens of lures and techniques from which to choose. Be familiar with several techniques, and you should increase your catch.

The Jitterbug was an easy plug for me to use. I could cast it out and reel it in. The oval-shaped bug has a big, cupped lip that wobbles the plug back and forth making a *bloop, bloop, bloop* noise. As I learned more about topwater fishing, I found I could vary the retrieve and catch more fish. One trick is to let the plug sit for several seconds after it hits the water.

On one trip to my favorite farm pond, I'd been worm fishing unsuccessfully in a nagging wind. A thunderstorm approached, and the wind suddenly died. The water turned smooth as glass. I quickly tied on my Jitterbug. In a brief time before the wind came up with the storm, I'd caught four bass in the 2½- to 3-pound class. Three of those largemouths hit before I'd even turned the reel handle. The fourth fish hit as I twitched the plug after momentarily letting it sit.

The idea is to imitate stunned prey that's just fallen into the water and is about to escape. If you've twitched the plug a few times without results, begin a straight retrieve. Stop the plug and let it sit every 10-15 feet. A strike that comes when the plug is sitting quietly can really rattle your nerves. I've had to duck a flying Jitterbug several times because I set the hook as soon as I saw the water break around the plug. You'll catch more fish if you hesitate a moment before setting the hook. Jitterbugs and similar wobbling plugs are productive throughout the summer, especially from dusk till an hour or two after dawn. I've had my best success on calm outings and usually use a black or dark-colored plug in low-light periods.

Another surface bait is the popper. The line attaches to the center of a wide, dished face. The face, when jerked, pops water up in front of it. Work the popper with a series of jerks, letting the plug sit between jerks. Pause and twitch a popper just as you would a Jitterbug. Poppers come in several sizes and may be made from a variety of materials. Large wood and plastic plugs, cork and feather popping



Gene Brehm photos

Begin retrieving a buzzbait just as it hits the water. The bait rides with the prop running on the surface, where strikes can be vicious. The jumps are neat, too.

bugs and deer-hair bugs are popular with fishermen. A popper, especially the smaller cork or deer-hair models, will often work in late spring. Poppers aren't as raucous as the big plugs and won't be as likely to spook fish in clear water. On the other hand, large poppers can be jerked to make more noise than other surface lures and may attract fish in murky or weed-filled water.

During early summer, bass often prefer a fast-moving lure. They'll chase and hit that lure recklessly. This is a good time to try a buzzbait.

The buzzbait is a cousin to the offset or safety-pin spinnerbait with a two- or three-bladed propeller instead of a spinner. A buzzbait rides with a prop, sputtering and spitting, partially out of the water. It's meant to be worked quickly over structure, where strikes can be vicious. Cast the buzzbait past your target structure. Begin the retrieve just as the lure hits the water. Here's a tactic to try when fishing in trees or cattails: Bump the bait off the structure. That extra action from a cat-tail or limb can trigger strikes.

On days when clear or calm water may make buzzbaits ineffective, try bulging a spinnerbait. By bulging I mean working either a single- or dou-

ble-bladed offset spinnerbait under the water just fast enough to create a surface bulge. A bulging spinnerbait leaves a slight wake and light ripples as it moves and often is effective on calm nights. Strikes on spinnerbaits, however, won't be as evident as with other surface baits. Bass occasionally will come up from behind. The only indication of a strike may be a slight lateral twitch in the bait.

I had fantastic fishing one late summer evening using this technique. I was living on a 25-acre lake that had a good bass population. The water, however, was clear. One of the better fish-holding areas was a weedbed about seven feet deep. That evening I caught seven 1½- to 4-pound bass in just more than an hour. The bulging technique lured the fish from the weedbed to the surface. I saw most of the fish before they hit. Ever since then I've tried to keep the spinnerbait in sight throughout the retrieve.

Another type of surface lure is the propbait. These torpedo-shaped lures sport small propellers at one or both ends. The little props should turn at the slightest twitch and really sputter when jerked through the water. The propbait can be worked with a jerking motion like the popper, it can be



lightly twitched all the way in and it can be worked erratically in a fast retrieve. The fast retrieve can be effective when bass are chasing shad on the surface. In this situation, retrieve the bait with short jerks of the rod tip. The props will actually spray droplets of water when the bait is jerked. If you use this technique over schools of shad, hang on. The strikes will be mean ones.

Stickbaits such as the Zara Spook are similar to propellered baits. Stickbaits are cigar-shaped but have no noise-making hardware. The lure is weighted in the back so the nose will float above the surface. Working a stickbait takes some practice. Create the action with the rod tip. Retrieve the stickbait as you would a propbait—briskly and erratically. Hold the rod tip low and while reeling rapidly pump the rod tip in short, quick downward strokes.

**Y**et another bait that relies on action rather than sound or disturbance is the floating-minnow bait. This long balsa plug has a small lip that vibrates the plug as it's pulled a foot or two beneath the surface. These baits can be worked almost entirely on the surface with short jerks. The motion takes the plug just under the surface while sending ripples out on calm water. A pause between jerks lets the plug float to the surface. Twitch the plug gently between jerks. This sends out more ripples, letting fish know that something is struggling on top. This method works well on calm water.

Topwater baits also can be fished using other tactics. Some of the plastic or rubber baits can be worked effectively on the surface in weed-choked ponds and lakes. A rubber frog is another of my favorite baits. This bait is weedless and features folding back legs that extend when the bait is pulled across the water. The frog imitation can catch fish when a plug with treble hooks would become hopelessly entangled. Some of the twistertail plastic worms can be injected with air and worked on the surface. These non-weighted worms are rigged weedless and work especially well around lily pads. Plastic worms can be worked on and off the floating pads.


As a young boy I read every bit of fishing literature I could find. So when the plastic worm became popular I was



*Well, you did it. Tossed your buzzbait just beyond that old stump and began working it just as it hit the water. When everything goes right, you end up holding big bass for photos such as this one.*

ready to try it. I usually fished the worms weightless and used a fairly fast retrieve on those weed-choked ponds. On another one of those magic evenings when a summer thunderstorm was approaching, my cousin and I caught a hefty stringer of largemouths and lost several bigger fish. All of the fish were caught with unweighted black twistertail worms, Texas-rigged and reeled in fast enough to keep them moving just below the surface.

Topwater fishing is habit-forming.

The sight of a big bass boiling the water after your lure is something you won't forget. I always carry some of my favorite topwater baits in my tacklebox, and if the wind suddenly dies or if a summer thunderstorm begins to build to the southwest . . . I'm ready. 

*The author, a veteran bass fisherman, has served his apprenticeship on Greensburg-area farm ponds.*





*Autodrive and flash stopped this male hummingbird between wing beats.*

## ***Ruby Gems***

The most common hummingbird in Kansas, the ruby throat will dazzle you with its rapid wing beat and iridescent color. A look at this amazing bird.

by Joe Schaefer

*Nongame Biologist*

*Wichita*

photos by Gene Brehm

**C**enturies ago their plumage was used to adorn Indian ceremonial costumes. Statues of religious idols were fashioned to mimic their stunning metallic hues. Even today, the hummingbird's glittering plumage is believed to contain mythical powers, or so says a shrewd businessman or two. In parts of Mexico, hummingbird carcasses are sold as potent love charms. And hummingbird soap is promised to make the user irresistible to the opposite sex. Peddlers even sell



hummingbird powder for about \$80 a bag.

Sparkling gems of the bird world, hummingbirds live only in the Americas. Of the 338 species known, 16 are found in the United States and two are common in Kansas. Rufous hummingbirds are seen as they migrate through western Kansas. The ruby-throated hummingbird, however, is by far the most common hummer in the state. This feathered jewel is about three inches long and weighs as much as a penny. Its name describes the most brilliant part of the mature male's plumage. The outer end of the throat feathers contain air bubbles that give off an iridescent red tone in full light. Both sexes, both young and mature birds, have metallic green backs, gray underparts and white-tipped tail feathers.

The ruby-throat's breeding range extends from central Kansas to the East Coast and from Saskatchewan to Florida. The birds winter in Mexico and South America. Males arrive in Kansas around mid-April. The real show, however, begins when the females turn up about a week later. The males defend their areas from intruders and try to attract the females. One way males attract females is by fluffing their throat feathers to intensify their fiery color. Males also fan their tails and sing from their perches. But their chattering call could sound appealing only to other hummers.

The male, in a spectacular feat, climbs about 100 feet into the sky then swoops only to zip near a perched female. If she seems interested, the male's next courtship move is to hover over the female and swing back and forth in a series of short, quick movements. A chase follows, ending in copulation. After this short bonding, the male begins the sequence again in an attempt to lure another mate. The female's role is to build a nest, produce offspring and rear the young.

Her nest is a beautiful creation of plant down, adorned with lichens and bound with spider webs or fine plant fibers such as dandelion seed down. This walnut-size structure is saddled on a small limb about 25 feet above the ground. More often, however, the nest is built over water and is nearly invisible. Many nests are built on sycamore trees and appear as one of many protuberances. The upper lip folds inward, forming a secure seal with the female's body. This keeps heat in and rain out.

The female lays two translucent, elliptical eggs within a two-day period. Weighing less than a gram and measuring less than half an inch, the eggs change from pink to white as they mature. After 20 days of incubation, the young emerge featherless, darkly pigmented and with only the beginnings of a bill. Their mother's body heat warms them until they can maintain their own body temperature about 10

days after hatching. The female feeds her nestlings semidigested, regurgitated insects and nectar about twice each hour. The nest soon becomes crowded, and the young have to face in opposite directions to fit in the cup. Young hummingbirds make their first flight about four weeks after hatching, but the mother continues to feed them for another several weeks. Some early-nesting females may raise two broods during a summer by laying eggs in a second nest before the first young are independent.

One of the most fascinating aspects about hummingbirds is their helicopterlike flying stunts. The bird's nearest counterpart in nature is the sphinx moth, which hovers over flowers on summer evenings. Other birds such as kestrels also can hover but only for a short time. Not only can hummers suspend their bodies in midair, they also can fly backward, upward, even upside down. Soaring is the only maneuver they can't perform.

Hummers don't jump off perches as other birds do but begin flying before liftoff. They are truly the dragsters of the bird world, too, reaching top speed (30 mph) in about five wing beats or 1/100 of a second. A falcon is one of many birds that could overtake a hummingbird in sustained flight.

Although effective, the hummingbird's method of flying is inefficient. Hovering requires more energy than any other animal movement. Hum-

*An adult female ruby-throated hummingbird usually builds her nest over water and will lay two translucent eggs within a two-day period. The nest, made of plant down, is the size of a walnut.*







*Hummingbirds consume about one-half  
of their body weight each day  
and feed about 100 times daily.  
For this male it's one down,  
99 to go.*





*This female hummingbird extracts  
its food while hovering and  
can lick at a rate  
of 13 times per second.*





mers can maintain a wing beat of 50-200 per second. A crow, for comparison, flies at a normal wing beat of four times per second. And contrary to popular belief, hummingbirds don't hum. The sound is made by their rapid wing movements.

Because of their tiny size, hummers use a lot of energy keeping warm on cool nights. To prevent starving to death, hummingbirds feed heavily before roosting. They're also capable of going into a torpor, or temporary hibernation, if their energy reserves become depleted. During torpor, energy demands are drastically reduced. The

heart rate lowers from the normal 500 beats to about 40 beats per minute, breathing almost ceases from a normal rate of 250 breaths per minute and the metabolic rate lessens to about 1/50 of that when the bird is awake and resting. Body temperature also drops, so the calories needed to maintain body warmth are reduced.

Hummers don't torpor every night; when they do, it may last for only a few hours. There are reports of hummingbirds remaining torpid up to 14 hours and taking more than an hour to revive. Body temperature rises about one degree per minute. Hummingbirds are

unable to fly until body temperature reaches 86 degrees Fahrenheit.

The ruby-throat is the only hummer that must migrate non-stop across the Gulf of Mexico to escape winter. In order to make this 500-mile-plus flight, a hummingbird takes on about 50 percent extra body fat before departure. The flight takes about 26 hours but burns only two grams of fat. Their unique muscular structure enables hummers to store fat energy efficiently in the tissues where it's needed most.

Hummingbirds eat both insects and flower nectar. The insects provide necessary proteins, vitamins, minerals



divided into equal halves. Each half is grooved on the outside edge to form two tubelike structures. Nectar is drawn into the tongue much the same way liquid travels up a straw. Hummingbirds can lick at a rate of 13 times per second, and their crop is capable of holding about five grams of nectar at one time.

A flower's sugar concentration is more important to a hummer than its color. They prefer sweeter concentrations and reject solutions of less than one part sugar to eight parts water. Hummingbirds are not born with an attraction to certain colors but learn by trial and error which flowers give the best results. They are naturally inquisitive and explore many flowers. Because most nectar-bearing flowers within the range of the ruby-throat are red and orange, they quickly come to favor those colors and have been known to show an interest in red- and orange-colored lipstick, fingernails and clothing.

This learned color attraction, however, has also worked against hummers. In 1983 Missouri biologists and concerned conservationists found that hummingbirds were being electrocuted when they apparently mistook red electric fence insulators for flowers. The Red Snap R insulator was the only style found to be killing hummingbirds. This brand is used primarily for temporary electric fencing and fits on a metal support rod. When a hummer sat on the wire and probed into what it believed to be the opening of a flower, it contacted the metal ground rod with its bill and was electrocuted. Recently the insulator manufacturer changed the color of its product from red to black.

The hummingbird's attraction to some flowers is mutually beneficial. The flowers produce food for hummers, which return the favor by pollinating the flowers. This system has been successful for at least 100 species of hummingbird-pollinated flowers in North America and South America. While hummers are feeding, pollen sticks to their chin, throat and forehead. Pollination occurs when some of this pollen is rubbed off as they visit other flowers.

Hummers are remarkable birds. Their unique size, color and styles of feeding and flying are indeed fascinating. And nothing surpasses the pleasure of seeing a hummingbird whirling through your backyard. Once recovered from their hypnotic spell, you realize the true value of these ruby gems.



## How to attract hummingbirds

Hummingbirds can be attracted to backyards with the following red- and orange-colored plants:

Annuals — salvia, petunia, zinnia, impatiens

Perennials — columbine, phlox, digitalis, butterfly weed, bee balm, coralbells

Bulbs — cannas

Shrubs — abelia, honeysuckle, rose of sharon, weigelia, flowering quince, azalea

Vines — trumpet, honeysuckle

Trees — mimosa, flowering crab, flowering hawthorn

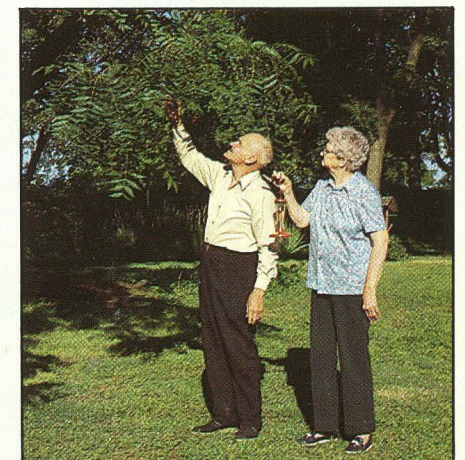
Artificial feeders also will attract hummingbirds. Place the feeder where rain will not dilute nectar in the end of the tube. Avoid direct sunlight as heat may cause the nectar to expand and evaporate. Heat also stimulates bacterial growth.

Use either an instant nectar preparation available at nurseries, or prepare your own solution with one part cane sugar to four parts water. This concentration is the same as that in wildflower nectar. Using sweeter nectar, sugar substitutes or honey could be lethal to hummers. It's not necessary to add red food coloring. The birds are attracted to red feeders.

Two basic feeders are available. One requires the birds to probe up into a tube and the other requires probing down into a flowerlike structure. Because a hummer that uses one type of feeder regularly may not adapt readily to the other, it is best to offer both.

—Joe Schaefer

*Waymouth and Lena Qualls of Lowell, Kan., care for hummingbirds by supplying more than 20 feeders on their property. Here they check one of those feeders.*



and fats, but nectar is the major food that keeps these birds humming. Hummers burn fuel quickly, and their small tanks need to be filled often. They feed about 100 times a day and consume about one-half of their body weight each day. By comparison, no other vertebrate consumes as much food relative to its own body weight.

Other birds also feed on nectar, but the hummer is the only one that extracts its food while hovering. Long needlelike bills and specially adapted tongues allow them to probe deep into tubular flowers to reach the nectar. The last half-inch of the long tongue is





Gene Brehm photo



# The Farm Pond Favorite

Once confined to eastern Kansas streams, bluegills are found throughout the Sunflower State. Spring is the best time to fish for these scrappy panfish.

by Lanny D. Jones  
*Regional Fisheries Supervisor  
Valley Center*

**I**t's been said the bluegill is, pound for pound, the scrappiest fish ever to tug on a fishing line. True, they don't jump like a bass, but a bluegill's exciting runs and circling moves will thrill you, no question.

Some fishermen unfamiliar with bluegills (one of the common sunfishes of Kansas) believe they're catching perch. Not so. Bluegills are related to black bass, however. Bluegill coloration ranges from olive to bronze with a yellow or orange throat and a dark blue or purple gill flap (hence the name). Green sunfish are often confused with bluegills, but a green sunfish's mouth is much larger and its fins have a band of orange or yellow on the tips. Bluegills and green sunfish do hybridize. Crosses of these two fish are common in farm ponds.

Bluegills were confined primarily to eastern Kansas streams before the Pratt Fish Hatchery was built. That's the word from Frank Cross in his book *Kansas Fishes*. Today bluegills occur throughout Kansas, although they

rarely exceed two pounds. The state record, an 11-inch fish that weighed 2 pounds, 5 ounces, was caught in a Scott County farm pond in 1962.

Adult bluegills eat insects and their larvae, small shrimplike animals and some vegetation. Bluegills will even eat their own eggs and young when food is limited.

Nesting can begin as early as April and last through early September. Most of the nesting, however, occurs in June. Spawning can occur all summer in waters where bass prey heavily on young bluegills.

Bluegills are nest builders. The male fans a saucer-shaped depression in water generally less than four feet deep and near the shoreline. He guards the eggs until the hatch and will defend the fry for several days. It's common to find 30-40 nests bunched along a 50-foot section of shoreline. Gravel areas are preferred nesting sites, but bluegills will use mud if rocky areas aren't available. The number of fry produced from just one

bluegill nest have been counted by removing the fry from the nest. Counts have varied from 4,000-6,000 fry per nest. One Michigan study showed that one-half million bluegill fry per surface acre had been produced on a given area.

Fishermen can catch bluegills just about year-round, even under the ice in January and February. The most popular time to fish for bluegills is during the spring and summer, primarily May and June. Males ferociously guard their nests at this time and are fooled by small baits or lures.

If the water is clear and waves aren't blocking your vision, look for clustered spawning beds. Can't find any spawning beds? Try moving along the shoreline and fishing water less than four feet deep. Bluegills may bite any hour of the day but seem to quit feeding at night.

Bluegills have small mouths so you'll need to use a small hook. A No. 8-No. 12 trout hook works nicely. My favorite hook for baitfishing is a long-





Gene Brehm photo

*Light line, a handful of jigs and you're ready for a day of bluegill fishing. And if the fish cooperate . . .*

shanked No. 8 or No. 10. I like a small piece of splitshot crimped above the hook. My favorite outfit is a spinning rod and reel spooled with 2- or 4-pound-test line. A bobber isn't necessary but will help you cast and allow you to work any depth of water. Earthworms and grasshoppers are probably the best all-around baits for bluegills. Flies, small poppers and small 1/64-ounce jigs also are popular bluegill baits that can be fished on a fly rod or spinning outfit. If you use a spinning rod you'll probably have to use a regular bobber or a transparent bobber partially filled with water. This allows you to cast these lightweight lures.

Little was known about bass and other sunfish in warm-water lakes and ponds until the early 1940s. Bluegills and largemouth bass were found to be excellent fish to stock in farm ponds and small lakes. It's there that bluegills provide forage for bass. This predator-prey relationship is essential for balanced, healthy populations.

Without adequate predation on its numbers a bluegill population can quickly overpopulate. The result is few 6- to 8-inch bluegills, but lots of 3- to 5-inch fish. This situation is undesirable for both the fisherman and the bass population. The small bluegills are unable to produce young, a favorite

food of largemouth bass. The bass population then becomes unbalanced. Bass may be stunted. Overharvesting bass is the major reason bluegills overpopulate in a farm pond or small lake. Other factors such as high turbidity (muddiness) or excessive vegetation also can cause bluegill problems. That's why many states have set length limit regulations—to help control the bass harvest. A length limit on bass keeps both bass and bluegill populations healthy.

Many anglers have fished a pond where most bluegills were seven to eight inches or longer, but the bass were all fairly small (around nine inches long). This situation is not good for catching a keeper-size bass, although the fishing for big bluegills is usually outstanding.

A landowner can manage for a quality bluegill fish pond by restricting the bass harvest to fish 15 inches or longer. Allowing a bass harvest of only big fish should help create an overpopulation of small bass. The increased number of bass will keep the bluegill numbers down, their average weight up.



For more information on successful farm pond and small-water fisheries management, contact your regional fisheries office.

Northcentral Regional Office  
Box 489, 511 Cedar  
Concordia, Kan. 66901  
(913) 243-3857

Northeast Regional Office  
3300 SW 29th  
Topeka, Kan. 66614  
(913) 273-6740

Northwest Regional Office  
Route 2  
Hays, Kan. 67601  
(913) 628-8614

Southcentral Regional Office  
8420 N. Broadway, Box 317  
Valley Center, Kan. 67147  
(316) 755-2711

Southeast Regional Office  
222 W. Main Bldg., Suite C&D  
Chanute, Kan. 66720  
(316) 431-0380

Southwest Regional Office  
808 Highway 56  
Dodge City, Kan. 67801  
(316) 227-8609



# the center section

Edited by Rob Manes

## LETTERS

### COMPLAINT DEPT.

Editor:

Why do we allow fishing during spawning season? Your article in the March/April issue told how to catch walleye during this time.

Why don't we hunt ducks, geese, pheasants, quail, wild turkey, deer and other game the year-round? What's the difference? Any sports-minded person should realize that you don't take any game at mating time. So, why fish?

Franklin Judd  
Lincoln

Dear Mr. Judd:

Thank you for your concern for conservation of Kansas fish resources. Rest assured that if closing the fishing season during spawning periods would increase the quality of angling in the state, the Fish and Game Commission would consider it.

The reproductive capabilities of fish, however, are much stronger than those of land-dwelling animals. Such a great excess of young fish are produced each year that all but a small percent is lost to natural mortality. In the last issue of **KANSAS WILDLIFE**, the article by Ken McCloskey stated that some studies showed survival of walleye eggs in the wild to be less than one percent. A Center Section article by Tom Berger cited research confirming that even the disturbance of walleye for egg taking had no significant impact on the Webster Reservoir fishery. *Manes*

Editor:

I have not drawn a turkey permit since 1982. If there are no permits available I can understand not drawing one, but I read articles in several outdoor magazines about how the

turkey populations have exploded and there aren't enough hunters, and the Commission is considering allowing non-residents to hunt turkeys. It is not justifiable to refuse any resident a permit.

Jerrilyn Cameron  
Agra

Dear Mr. Cameron:

**Kansas Fish and Game** records indicate that you applied to hunt in Unit 1 as a first choice and Unit 2 as a second choice. Because turkey populations are still limited in many areas of those units, the number of permits there remains restricted. In recent years, there have been nearly twice as many applicants as permits for those units. Though unsuccessful applicants are given preference in the following year's allotment, the luck of the draw has not been with you — as well as about 250 others each year.

If you are willing to travel a little in the spring, you might want to apply to hunt Unit 5 (approximately the southern one-third of the state). The number of permits for that area is unlimited, so you won't be disappointed again. *Manes*

Editor:

I am ashamed to be taking a magazine titled **KANSAS WILDLIFE**, in which the editor says these words: "Some people think we evolved from apes. I don't know. I don't think anybody else does either, so I'm not ashamed that I don't know."

How can anyone who publishes a magazine dealing with nature not know the Bible story of creation?

Genesis 2:7 reads "The Lord God formed man out of the ground and breathed into his nostrils a breath of life, and so man became a living being."

I am sorry to disappoint you, Mr. Editor,

but you did not evolve from apes! You say that no one knows, well, you are wrong. I know from whence man came and so do a million and some Christians, who are part of your readers.

Please read Genesis Chapters 1 and 2 and see if you don't get an insight into this so-called theory of yours. In John 1:3, we read "Everything was made by Him (God), and not one thing that was made was made without Him."

In this bright, beautiful world you live in, the presence of God is always near. You can see it if you will only open your eyes.

Hulda K. Lampe  
Nashville

Dear Mrs. Lampe:

I believe a lot of things, know very few. Before Columbus many people knew the world was flat. Earlier some well-educated folks knew that nothing good would ever come from Nazareth.

Would you constrain God by denying Him the tool of evolution?

*Wayne van Zwooll*

### MAKING NOTE

Editor:

Your March/April 1986 issue contained a most interesting article, "Lion!" by Rob Manes. In the article, Manes writes that Kansas Extension Wildlife Specialist Robert Henderson "is doubtful about the likelihood of wild cougars occupying Kansas." I understand Mr. Henderson's skepticism, and am doubtful that what I have to say will change his mind.

In the late spring of 1983, I was at home, 12 miles north of Hutchinson, when I noticed out the kitchen window an extremely large cat. It was approximately three feet long, not including tail, running along the fence to the north of the property. I dashed into the front room to grab my field glasses and darted outside just in time to get a good look.

Some 100 feet from me was what appeared to be a large, light brown cat with an extreme-



ly long tail and short, erect, pointed ears. In its mouth appeared to be a kill. The cat was moving briskly along the fence and turned its head toward me for just a second. My heart almost stopped.

I reviewed my sighting with neighbors and friends and have come to the conclusion that what I saw was, indeed, a Kansas mountain lion. I shall never forget the sight.

Steve Cantrell  
Hutchinson

Editor:

I have been feeding wild birds for many years and have come to a conclusion which I would like to check with you:

I have started to feed black oil sunflower seed and have found it to be the best all-around feed. It seems to satisfy chickadees, cardinals and woodpeckers at least as well as the alternative feeds. The finches seem to like it as well as the thistle seed. While the English sparrows like these seeds better than the big sunflower seeds, the blue jays (my private enemies) don't seem to like the little black seeds at all.

The black oil seeds look like a panacea so far as I am concerned, and I am wondering if you have any information along this line.

Peter Frevert  
Pomona

**Dear Mr. Frevert:**

**You are right. Black oil sunflower seeds are tops among bird feeds in this part of the country. If you also provide suet, you will meet the needs of most Kansas backyard birds.** *Manes*

Editor:

I have been fishing Glen Elder Reservoir for nine years. I also know a lot of people from Hastings, Neb. who enjoy fishing at Glen Elder.

Three years ago, I put 25 unsold Christmas trees in three spots at Glen Elder. They all have proven to be top spots for crappie. This year, I decided to get more trees and to enlist more help.

My grandson and I gathered over 100 trees that merchants had been unable to sell. I got an offer of a big truck to make one trip. I just thought you might like to know about some Nebraskans who are helping to make a Kansas fishing hole better.

Ray E. Brown  
Hastings, Neb.

## PAT ON THE BACK

Editor:

I have been receiving your magazine for about 10 years, and it is by far the very best wildlife magazine I read. It seems I have taken them all. I have read other states' conservation or wildlife magazines, but yours is better.

The special issue on deer was fantastic. So many times we read articles in other magazines and you can tell that the author has never been in the woods.

Your photos get better all the time. Keep up the good work.

Mark Thurman  
DeSoto

Editor:

Maybe I should address this to Mr. Sinclair. (See January/February issue of KANSAS WILDLIFE for Mr. Sinclair's letter.)

I have hunted deer in Kansas with a bow and arrow for 12 years. I have killed my deer 10 of those 12 years. I have only hit two deer that I have not recovered. Both of these deer were spotted a week later, and they were healthy and doing fine. (See the January/February issue of KANSAS WILDLIFE for Mr. Sinclair's letter.)

I must admit that some archery hunters, like some gun hunters, are incompetent and should not be allowed in the field. The Kansas Fish and Game department has a very tough job, trying to keep all Kansas hunters happy, and I feel they do a very respectable job.

As for the KANSAS WILDLIFE magazine staff — we, the archery hunters of Kansas, thank you for telling the wildlife story of our state. Keep up the good work.

Ozro L. Estle  
Hesston

## REQUESTS

Editor:

First of all, thanks for a great magazine.

Every year, there have been requests to bring elk into eastern Kansas. I think they used to be native to this region. I can understand that landowners might not like them eating crops, but as I am a landowner, I would not mind seeing a bull elk in the timber. I think

they would thrive here. Could I have your thoughts on this, please?

Wesley S. Johnson  
Bronson

**Dear Mr. Johnson:**

Elk did inhabit Kansas prior to settlement. Unfortunately, their reintroduction to eastern regions of the state is not practical today. Elk do not respect even the most formidable fences; and, as you suggested, many landowners in the area are strongly opposed to having the large animals on their cropland. *Manes*

Editor:

What periodicals do you publish for sale to the public, and how much do they cost?

Donald E. Williams  
Long Island

**Dear Mr. Williams:**

The Kansas Fish and Game Commission publishes maps of many public wildlife areas, information leaflets about common Kansas animals, special publications covering such topics as lead poisoning, posters of Kansas birds and endangered species, and others. In addition many scientific reports are published each year to document effects of the agency's programs. Most of these publications are available upon specific request at no cost. The agency's most popular publications include the "Fishing Guide to Kansas", the "Hunting Guide to Kansas", "Wildlife In Your Backyard", and hunting and fishing regulation brochures. *Manes*

Editor:

You put out a pretty good magazine . . . I would like to see the Fish and Game Commission furnish the laws to the public. I would even be willing to pay for a copy.

Warren Moore  
Hoisington

**Dear Mr. Moore:**

Good news — a summary of wildlife-related laws and regulations is available from all Kansas Fish and Game Commission offices, as well as the agency's field personnel and license vendors across the state. Two handy brochures, "Kansas Fishing Regulations" and "Kansas Hunting and Furharvesting Regulations," are updated and reprinted each year. Best of all, they're free. *Manes*



# THE LAW

## BIG BUCKS

A major U.S. Fish and Wildlife Service investigation into violations involving endangered species resulted in several successful prosecutions during 1985. Called "Operation Falcon," the investigation uncovered a variety of violations, including the taking of peregrine falcons from the wild.

To date, 55 people have been convicted through Operation Falcon. Violations of the Endangered Species Act and other federal laws have been uncovered. Fines resulting from the investigation currently total more than \$320,000. *Manes*

## ONE NIGHT AT WILSON

On opening day of the 1985 deer season, Wildlife Conservation Officer Rob Ladner and Wilson Wildlife Area Manager Mike Nyhoff had just finished field dressing a deer they'd found shot. About 7 p.m., they noticed a light down the road just east of the Wilson Area Fish and Game shop and went to investigate.

Ladner and Nyhoff found three men who had just loaded two deer into a car. A small fawn was in the trunk, and a big buck was in the back seat.

A Wichita man said he shot the fawn and properly tagged the animal. The buck, however, had only an unsigned tag stuck to its side. The permit was for another management unit, and it belonged to the Wichita man's grandfather, who was not in the party. With the Wichitan was a friend from Manhattan and another man from Great Bend.

Ladner questioned the suspects separately. The pair from Wichita and Manhattan swore that Grandpa had hunted with them and shot the deer but forgot to sign his permit. They both went on to say that Grandpa had left about an hour ago, but their stories did not agree about the vehicle in which he left. They also gave conflicting accounts about whether he left alone.

The Great Bend man had apparently joined the hunt with the other two late in the day because they would be all hunting in the same area. He was with them when they got the illegal buck and helped them drag it to the car. Nervous during questioning, he admitted that the Manhattan man had shot the deer, and

Grandpa was never there. He then was released.

The other two suspects were arrested and taken to the Russell County jail, where they confessed to the poaching.

Both subjects pleaded guilty before District Court Judge Jeanne Becker. She asked if they had previous convictions for wildlife violations, and they said they hadn't. Judge Becker recessed her court briefly so she could verify the culprits' claim to clean records. She found the Manhattan man had been convicted of a wildlife violation.

Back in court, Judge Becker fined the Wichita man \$500 and \$26 in court costs for illegal possession of a deer. She also revoked his hunting privileges for one year.

The Manhattan man, who hadn't mentioned his previous conviction, was fined \$50 for shooting a buck with a doe-only permit, \$750 for illegal possession of a deer, and \$26 in court costs. He was also given a six-month suspended jail sentence and six months supervised probation. His hunting rights were suspended for one year. Judge Becker added that if the culprit violated any law within his probation period he would be required to serve the entire jail sentence. *WCO Ladner*

## ONE COSTLY DEER

Wildlife Conservation Officer Dave Hoffman had been receiving complaints of deer poaching in the hills of Doniphan County last fall. It's difficult to catch poachers in the act, even when their general location is known. But Hoffman and WCOs Tim Schaid, Larry Dawson, Jim Dunn and Scott Hanzlicek set out to find the poachers the night of Nov. 1.

**It was near midnight when Hoffman saw a spotlight beam swing slowly across the trees of a nearby draw. He radioed the other officers, and they blocked roads leading out of the area.**

It was near midnight when Hoffman saw a spotlight beam swing slowly across the trees in

a nearby draw. He radioed the other officers, and they blocked roads leading out of the area.

When officers Schaid and Hoffman stopped the suspects' truck, they found two men from Wathena, Kan., and one from Missouri. They had a spotlight, three guns and a bloody knife. Asked where they had been hunting, the trio pointed the officers down the road to the river. No carcass was found there, so the search was expanded to the surrounding countryside. Finally, after two hours, the officers found the deer carcass under a bridge. The culprits had tried to guide the officers away from the evidence.

At the Doniphan County sheriff's office, the three gave written statements, admitting they killed the deer in Missouri. The two from Wathena consented to searches of their homes, where officers found packaged deer meat.

Each of the three poachers paid \$500 in Doniphan County Court, and their light, knife and guns were taken. When the trial was over, Missouri conservation agents greeted the trio. Two of them were convicted of similar violations in that state, and they each paid an additional \$522.

"That's one expensive deer," quipped WCO Dawson. *Manes*

## TOO MUCH LEG

A Chase County landowner wasn't suspicious when he first noticed a deer leg sticking out from under a pile of straw in the back of a pickup truck. It was, after all, deer season. The deer appeared hidden, however, so he noted the truck's tag number and three men in the cab, then called the sheriff's office.

When Wildlife Conservation Officer Dave Gentry got the message, he traced the tag number to a farmhouse just southwest of Elmdale. Since he was some distance from the house, Gentry asked a sheriff's deputy to keep watch there until he arrived.

While the deputy watched, a California man started to leave and was sent back. Fresh blood was still in the back of the pickup parked in the driveway.

When Gentry arrived, he quickly confirmed the blood was from a deer although no deer were found on the premises. The two suspects finally told Gentry there was one hanging in a shed belonging to a relative of the California man. They gave directions to a place in Morris County, which WCO Bill Hill patrols.

Gentry took the California man with him to meet Officer Hill and search the shed. There they found four deer — all without tags. Meanwhile, the deputy took the Elmdale man to jail, and the Chase County sheriff was dispatched



to Strong City to arrest the third suspect. By then it was late that night.

It wasn't until early the next morning that Gentry and Hill finished issuing tickets to the three suspects. Their charges included failure to tag a deer, making a false writing to obtain a resident hunting license and exceeding the bag limit.

The Elmdale man was convicted of shooting two deer, using his and his wife's permits. Even though he had both permits, he didn't tag either deer. Those offenses cost him \$776.

The California man, who used an old Kansas address to buy his license, lost a total of \$1,242, including his rifle. The Strong City man paid \$692 and lost a \$250 rifle. He had assisted the California man in getting the illegal resident license, and he didn't tag the deer he shot. Both were barred from hunting in Kansas for two years. *Manes*

## WRONG PLACE, RIGHT TIME

Last December, Finney County landowner and bowhunter Rod Stapleton heard rifle shots while sitting in his tree stand. Using a spotting scope he always carries with him, he watched a man chase a deer across the field. Stapleton hurried to the site and interrupted two Garden City men who were looking for a wounded whitetail buck. He obtained their names and license information from their pickup.

Stapleton then called Wildlife Conservation Officer Dennis Sharp. They found the buck after a 2½-hour search. The deer, which had been gut shot, had to be destroyed.

Two days later, Sharp interviewed the two men involved. One of them received three notices to appear in Finney County Court, the other only one. The culprit with a single citation pleaded guilty and was fined \$350 plus \$26 court costs. He was given 90 days of probation from a 10-day jail sentence, and the judge revoked his hunting license for two years. The other man was fined \$550 plus court costs. He also received six month's probation and a one-year license revocation.

Sharp notes that Stapleton's cooperation made this case a success for Kansas sportsmen. *WCO Sharp*

## WHO TO CALL

Kansas has 67 full-time wildlife conservation officers in the field. These officers may be reached through the sheriff's offices in the counties they patrol. The toll-free Operation Game Thief number, 1-800-228-4263,

allows 24-hour contact with officers around the state.

By calling Operation Game Thief or the proper sheriff's dispatchers, concerned citizens can help control poaching and other related violations in Kansas. Below is a listing of all Kansas Fish and Game Commission law enforcement personnel. Each officer and his area of responsibility is listed below. *Manes*

### Northeast Region

Glen Hurst	regional supv.
Larry Dawson	S½ Leavenworth & area supv.
Ray Beisel	Jefferson
Bill Burlew	¾ Shawnee, E½ Wabaunsee
Tim Schaid	Johnson, Wyandotte
Dave Hoffman	Brown, Doniphan, N¼ Nemaha
James Dunn	Douglas
Jay LeBeau	Atchison, N¾ Leavenworth
Paul Miller	S½ Riley & area supv.
Rick Campbell	W½ Wabaunsee, W¾ Pottawatomie
Rand Conrad	N½ Riley, Marshall
Scott Hanzlicek	at large
Jim Hale	N½ Osage, SW¼ Shawnee
Marvin Meier	NE¼ Pott., Jackson, S¾ Nemaha
Richard Ryan	S½ Osage

### Southeast Region

Charlie Ward	regional supv.
Doug Sonntag	N½ Allen, Anderson & area supv.
Don Clarke	N½ Wilson, Woodson
Terry Cloutier	E½ Miami, Linn
Jim Lichlyter	Coffey
Johnny Ray	W½ Miami, Franklin
Harley McDaniel	S½ Crawford, Chero., area supv.
Dudley Foster	Labette
Jim Hollis	S½ Allen, Neosho
Dennis Knuth	S½ Wilson, Montgomery
Doug Whiteaker	N½ Crawford, Bourbon

### Northcentral Region

Dean Deutsch	regional supv.
Dick Cole	S½ Cloud, Clay
Bill Hill	S½ Dickinson, Morris
Randy Benteman	N½ Cloud, Republic, Washington
Steve Stackhouse	N½ Dickinson, Geary
Mike Little	Saline, Ottawa
Arch Moberly	Osborne, Mitchell, area supv.
Val Haworth	Ellsworth, Lincoln
Gary Hesket	Smith, Jewell
Rob Ladner	Russell

### Southcentral Region

Bob Thomas	regional supv.
Al Halbrook	N½ Greenwood, area supv.
Kevin Couillard	S½ Butler, E½ Sedgwick
Bill Cox	N½ Butler
Dave Gentry	Chase, Lyon
Gene McCauley	Cowley, Chautauqua
Everett Wilnerd	Elk, S½ Greenwood
Charles Schmidberger	Marion, area supv.
Jerry Almqvist	Rice, McPherson
Ed Brown	Sumner, Harper
Jack Dunbar	S¼ Reno, Kingman
Jeff Gayer	N¾ Reno
Mack Long	W¾ Sedgwick
Verle Warner	Harvey, Marion Reservoir

### Northwest Region

Jerry Bump	regional supv.
Mel Madorin	Ellis, Trego, area supv.
Claude Blair	Wichita, Lane, Scott, Logan, Gove
Phil Kirkland	Graham, Rooks
Bill Ramshaw	Phillips, E½ Norton

Wes Wikoff	Thomas, Sheridan, area supv.
Dick Kelly	Rawlins, Decatur, W½ Norton
Kenneth Knitig	Chey., Sherman, Wallace, Greeley

Southwest Region

Jim Kellenberger	regional supv.
Bob Nease	Meade, Morton, Seward, Stevens
Bruce Peters	Hamilton, Kearny, Grant, Stanton
Dennis Sharp	Gray, Finney, Haskell
Tracy Galvin	S½ Pratt, area supv.
Marvin Jensen	Kiowa, Hodgeman, Ford, N½ Clark
Mike Ehlebracht	Rush, Barton, Ness
Matt Stucker	Edwards, Pawnee, Stafford, N½ Pratt
New officer	Comanche, Barber, S¾ Clark

## TOUGH IN TEXAS

Texas poachers now face stiffer fines, thanks to a new set of resource recovery guidelines adopted by the Texas Parks and Wildlife Commission. The guidelines, authorized by the Texas Legislature, are part of the state's continuing effort to make poaching unprofitable.

The commission established monetary values for hundreds of wildlife species, including game and nongame animals and fish. For example, a buck whitetail or mule deer is valued at \$251-\$800, a Rio Grande turkey at \$51-\$75.

The recovery guidelines for fish run from \$60 for a 10-pound saltwater red drum or spotted sea trout, to \$44 for a 10-pound bass, to 28 cents a pound for shad.

The guidelines also specify that an additional \$500 is to be charged for the loss of an animal on the threatened list and an extra \$1,000 for an endangered species. The highest value is \$10,000 for a whooping crane. *NWF*

## HIGH FINES

A nine-month investigation by Wyoming Game and Fish enforcement officers led to the conviction of a Laramie man for the illegal killing of moose and bighorn sheep.

For taking three moose on one license, he was sentenced to one year in jail, fined \$1,000 and ordered to pay court costs of \$7,967. In addition, his license privileges were suspended for two years.

For killing the bighorn sheep, he was sentenced to 30 days in jail and fined \$400. The jail term was suspended on the condition he have no law violations for six months. His license privileges were further suspended for 1986, and a set of trophy sheep horns were ordered forfeited to the Game and Fish Department.

The poacher paid a total of \$9,367 in fines and court costs, spent one year in jail and lost his hunting privileges for two years. *Wyoming Game and Fish Dept.*



# ISSUES

## CLEAN WATER VALUE

A study by Resources for the Future estimated the public's value of clean water. The study investigated public willingness to pay for varying degrees of water quality. The survey allowed participants to fine-tune their responses.

Respondents were allowed to choose from four levels of water quality: "non-functional" (boating, fishing and swimming not possible), "boatable" (only boating possible), "fishable" (boating and fishing possible), and "swimmable" (boating, fishing and swimming possible). Given these levels, there are three types of water quality improvements possible: "non-boatable to boatable," "boatable to fishable," and "fishable to swimmable."

---

**. . . those figures show these levels of water quality are worth \$8.7 billion, \$15.3 billion and \$22.6 billion.**

---

Study findings indicated that the average American household is willing to pay \$100.45 to improve water from non-boatable to boatable, \$176.06 to make the water fishable, and \$260.31 to make it swimmable. Applied to the 87 million households in the U.S., those figures show these levels of water quality are worth \$8.7 billion, \$15.3 billion and \$22.6 billion.

It should be noted that these figures reflect only part of the value of fishing and fisheries resources associated with clean water. The actual value of waters also includes revenues generated by recreational and commercial angling. *Sport Fishing Institute*

## ONE FOR OUR SIDE

In a historic 9-0 decision, the U.S. Supreme Court has affirmed that wetland protection portions of the Clean Water Act apply to a Detroit area wetland that otherwise would have become a housing development. And the ruling, because it affirms a definition of wetlands that had been challenged as too broad, strengthens the protection of wetlands throughout the United States.

But wetland advocates' jubilation over the court decision is tempered by the knowledge that the national wetlands protection program

will have to be watched carefully for the next few years. Robert K. Dawson, assistant secretary of the Army for Civil Works, has opposed wetland protection programs.

The National Audubon Society joined the fray over the proposed Detroit subdivision as a "friend of the court" in a case appealed to the Supreme Court by the Corps. At issue was the Corps' regulatory definition of a wetland.

Section 404 of the federal Clean Water Act protects wetlands by prohibiting the discharge of dredged or fill material into the waters of the United States (including wetlands), unless authorized by a Corps permit. The developer had started to fill a wetland near Lake St. Clair for construction of a housing project when he was sued by the Corps. The Corps said he needed a permit.

The developer contended that Section 404 applies only to wetlands actually abutting navigable bodies of water. The Corps, supported by environmentalists, argued that regulatory authority extends to properties (such as this developer's) that are near but not adjacent to rivers, lakes and coasts.

The definition used by the Corps and by the Environmental Protection Agency to determine what lands come under their jurisdiction is this: "those lands that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

The technical language is important. By accepting that definition as reasonable, the Supreme Court in effect ruled that Section 404 of the Clean Water Act is a broad wetlands protection provision. Wetlands that are hydrologically connected to the nation's waterways thus are subject to regulation, regardless of their closeness to those waterways. Wetlands opponents (including Robert Dawson) who have argued that the law should be interpreted much more narrowly, have been overruled.

*National Audubon Society*

## THE BAD NEWS

According to a report published in *National Wildlife* magazine, 1985 was a bleak year for wildlife. Continuing loss of wetlands, estimated at 350,000 acres per year, has

destroyed valuable waterfowl habitat. Duck populations in many areas dropped to their lowest recorded levels. Conservationists hope further habitat destruction will be slowed by two bills. The 1985 Farm Bill could protect or restore millions of wetland and upland acres. A second bill requires construction cost sharing among those who benefit from water development projects.

Some of the nation's most important wildlife habitat was further degraded last year by toxic pollution. According to the U.S. Fish and Wildlife Service a fourth of the nation's wildlife refuge waters are polluted. Chemicals that wash from farmland are the single largest cause. *NWWF*

## IRRIGATION INFO

A new report by the U.S. Geological Survey stated that irrigation practices have caused

---

**. . . irrigation practices have caused long-term changes in ground and surface water quality in three areas of north-central Kansas.**

---

ed long-term changes in ground and surface water quality in three areas of northcentral Kansas. After 10 or more years of irrigation, increased concentrations of sulfate were found in groundwater in the Almena Unit of the Prairie Dog Creek Valley. Increased concentrations of calcium, bicarbonate, sulfate and dissolved solids were found in groundwater in the Kansas-Bostwick Unit of the Republican River Valley. Large concentrations of calcium, sodium plus potassium, sulfate, chloride and dissolved solids were found in groundwater of the Cedar Bluff Unit of the Smoky Hill River Valley.

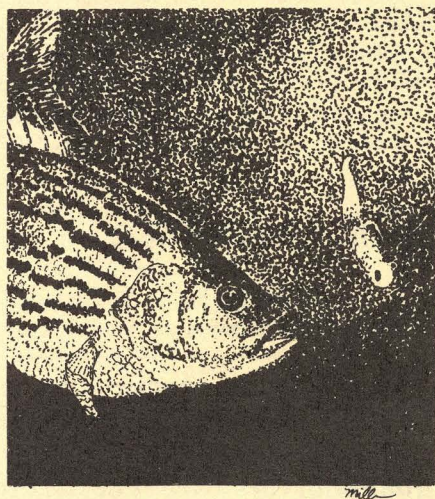
Results of the study, done in cooperation with the Kansas Department of Health and Environment, indicated that concentrations of certain chemical constituents were significantly higher. Irrigation in all three areas is the cause. Organic pesticides for which National Primary drinking water standards have been established were not found in groundwater in any of the three study areas.

Concentrations of sulfate in water of 80 percent of the wells sampled in the Cedar Bluff Unit exceeded the National Secondary drinking water standard. This is blamed on application of water containing large concentrations of sulfate from Cedar Bluff Reservoir. Long-term increased concentrations of nitrate in groundwater were not detected in any of the three areas studied. Nitrates in water can cause "blue baby disease" in infants. *U.S. Dept. of Interior*



# FISHING

## WIPER MANIA



Keith Sebelius Reservoir may be Kansas' best spot to pursue the state white bass-striped bass hybrid record. So it's only natural to have a wiper tournament there.

The tournament will take place May 24 from 7 a.m.- 6 p.m. A \$20 entry fee will be charged for each two-person team. The first-place prize will be \$150. A \$100 prize will be given for second place, \$75 for third and \$50 for fourth. The prizes will be awarded for the heaviest six-fish limit. A \$50 prize will go to the person who catches the largest single fish.

No fish under 15 inches long will be included in the six-fish weigh-in. More information is available from the Norton Chamber of Commerce, 112 N. State, Norton, Kan. 67654. Or call (913) 877-2501. *Manes*

## REACH FOR BIG ONES

Crappie seek out spawning areas that offer small rocks and a few larger ones on shorelines sloping at about 45 degrees. If you can find such a situation where a submerged stream channel comes near the shore, that's even better. The depth of the water in which crappie spawn varies with water clarity; they spawn deeper in clear water.

An effective method for catching spawning crappie is to walk the shoreline and use a long,

sensitive pole (a fly rod, for example), to raise and lower jigs or minnows into the crappie beds. The long pole allows you to put bait in front of the fish without getting close enough to spook them.

As with other fish, male crappie move into the spawning areas before females. If you're catching small males, you may be able to reach out past them far enough to get your bait to the large females in deeper water. *Paul Miller*

## FISH STUDIES

Though walleye have been stocked in most Kansas reservoirs, many are without fishable walleye populations. New Fish and Game Commission research may help fisheries managers decide which Kansas waters are most likely to develop good walleye fisheries.

The study results thus far confirm suspicions that reservoirs with large inflows are not good walleye waters. The research has also produced some new information.

Coordinated by biologists Dave Willis and Jim Stephen, the study compares each lake's walleye population to a ratio of water stored to water discharged. Walleye numbers were estimated by sampling with special nets. Comparing walleye population age structures to years of high and low reservoir discharge allowed researchers to identify drought and flood year impacts.

According to Willis, reservoirs with less inflow are generally better for walleye than those with excessive annual discharges. Some Kansas waters with large flow-through volumes include Elk City, Fall River, Perry and John Redmond reservoirs.

"This could be due to a number of things," says Willis. "It could be the direct loss of fish being flushed out; or a problem with the food web caused by turbidity (muddy water); or it could be another problem, such as competition for food with other fish. We do know that reservoirs with high outflows generally don't have good walleye populations."

Years when there is very little flow into reservoirs are not the best for walleye either, according to Willis. "We're not sure why yet," he says. "It could be that a high percentage of the walleye fry get eaten because the water is too low for them to find escape cover;

or it could be that brood fish are left in poor condition due to stress from crowding and food competition. Another possibility is that low water conditions make spawning habitat unavailable.

"Lakes that have intermediate storage ratios are the best," says Willis. "Glen Elder is a good example. We're trying to identify impoundments that have the greatest potential to develop quality walleye fisheries."

The study showed that walleye fry survival was poor in lakes with excessive flow-through, whether the young fish resulted from natural spawning or stocking. Even reservoirs with the highest average discharges were found to develop good temporary walleye populations during low-water years.

Many other factors are sure to affect Kansas walleye populations. When the study is finished, it will help Kansas fisheries biologists to better manage walleye for the state's anglers. *Manes*

## WHY GRAPHITE?

Several key differences between fiberglass and graphite affect rod performance. Perhaps most importantly, graphite is stronger and lighter than fiberglass. This gives a better strength-to-weight ratio. Thus graphite rods weigh considerably less than fiberglass rods of the same stiffness. This weight reduction means less fatigue to fishermen and better casting performance.

Graphite allows decreased rod weight, increasing sensitivity. The lighter the fishing rod, the more sensitive it is, assuming it's properly constructed.

Confusion arises because there's no standard amount of graphite that must be put into a rod before it's called a "graphite rod." The more advanced the rod construction, and the more graphite a rod contains, the better it will perform.

A 100 percent graphite rod offers more of the best qualities of graphite and a greater strength-to-weight ratio. Look on the rod blank to ensure you're actually getting a 100 percent graphite rod.

Choose a rod that's lightweight with a small diameter blank. Fat-butted rods needlessly absorb vibration and deaden sensitivity. Rods with through-the-handle blanks send vibrations directly to your hand for maximum sensitivity.

Check the rod's warranty. Some offer lifetime replacement guarantees against breakage. Coupled with the above criteria, this guarantee usually indicates a well-designed rod. *Berkley & Company*



# HUNTING

## BOBCAT RESULTS

Last year, Kansas furharvesters broke the state bobcat harvest record again. Kansas Fish and Game officials pelt-tagged nearly 1,900 bobcats during the 1985-1986 season. Furbearer Project Leader Lloyd Fox says growth in bobcat numbers can't continue indefinitely. He finds it encouraging, however, especially in light of recent predictions of drastic bobcat population declines.

More than 30 percent of the state's total harvest came from six southeast Kansas counties (Butler, Cowley, Elk, Chautauqua, Wilson and Montgomery), all with harvests of more than 70. Fox attributes this to the presence of large tracts of unbroken range and plentiful den sites. "That oak savannah country, with lots of rock outcrops, is good bobcat country," says Fox. "They find plenty of food in the pastures and dens in the rocks."

"You don't find many bobcats where you have ditch-to-ditch farming," he points out. Most western counties reported no bobcat harvest last year. In eastern Kansas, only Brown and Doniphan counties had no cats taken.

Kansas bobcat pelts sold for about \$80 a piece during the 1985-1986 furharvesting season. *Manes*

## BACK IN TIME

Kansas has been chosen to host the 1986 High Plains Rendezvous of the National Muzzleloading Rifle Association. The event includes shooters from North Dakota, South Dakota, Nebraska, Kansas and Oklahoma.

"Buckskinning," or sport shooting with a muzzleloading firearm, is rapidly becoming popular in the United States. It's a chance to escape the demands of a rapid-paced society, dress in leather clothes and experience a part of history.

Because of the increased participation in buckskinning in Kansas, it is possible to attend a related activity almost every spring and fall weekend.

A national rendezvous such as the High Plains event is devoted to the purists. For nine days during June, they will be surrounded by others wearing the clothes and living in camps of the early 1800s. Although authentic dress is required at all times, two days are open to

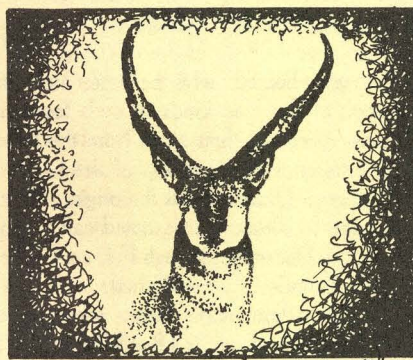
visitors — 1-5 p.m. on Wednesday, June 11, and Saturday, June 14.

Visitors will walk back into history. Shooting events, using muzzleloading weapons of the era, are scheduled. Tomahawk and knife competitions also will be conducted. Instructional workshops and seminars will detail aspects of 1830s lifestyle. Visitors will be able to browse and purchase goods of that time period from authentic traders.

For more information, write: Larry Zimmerman, 127 McCaustland No. 1, Dodge City, Kan. 67801. The phone number is (315) 225-3031; or Dave Baldwin, 7119 S. Patie, Wichita, Kan. 67233. Or call (316) 529-0666. *Dave Baldwin*

## RECORD PRONGHORN

"I can't really take all the credit," says Charles Barnett of his state-record pronghorn. "I was just in the right place at the right time. If my folks hadn't seen him, I wouldn't have got him."



**Its 15 3/8-inch horns, with an inside spread that measured exactly the same, ran up 83 2/8 points for Barnett. One horn's base was 7 1/8 inches around, and the other was an even seven inches.**

The antelope Barnett shot scored the highest on the Boone and Crockett scale of any taken in Kansas. Its 15 3/8-inch horns, with an inside spread that measured exactly the same, ran up 83 2/8 points for Barnett. One horn's base

was 7 1/8 inches around, and the other was an even seven inches.

Barnett, who lives in Colby, says his mother and father spotted the huge antelope from the highway and returned to tell him about it. That was in September, about a month before the season opened.

"When I first saw it, I was really impressed with the spread of his horns. I didn't realize they were that long," says Barnett.

With the help of friends Jim Deibert and Mark Adams, Barnett kept track of the antelope until the season opened. "We put him to bed the night before the season opened," he remembers. "I got him just about 10 or 15 minutes after shooting hours started."

*Manes*

## MORE ON MALLARDS

The 1986 Kansas Mid-winter Duck Survey showed mallard numbers to be at predicted all-time low levels. Mallards typically make up the majority of Kansas wintering ducks. This year, 69,000 of the 73,000 ducks wintering here were mallards, but that reflected a decline of 50 percent from 1985's 139,000 (also an all-time low).

Before 1985, the lowest mallard count was 145,000 in 1974. The highest count on record totalled 962,700 ducks in the state during the winter of 1978. Of those, 944,400 were mallards. The continuing mallard population decline is due to prairie wetland destruction. *Manes*

## DEER HUNTER SUCCESS

Kansas firearms deer hunters fared even better in 1985 than they did the previous year, with success up 1 1/2 percent. Of 31,095 hunters who went afield in 1985, 69.5 percent bagged deer. The total harvest was 21,596. Of those, 11,546 were antlerless. The total 1984 harvest was 19,433 including 9,719 antlerless deer.

Chautauqua County had the most deer harvested last year, though the success rate, 68.6 percent, was slightly below the state average. Chautauqua County also had the highest whitetail harvest at 559. The top spot for mule deer harvest in 1985 was Rawlins County with 160. In all, 19,684 whitetails and 1,912 muleys were taken in Kansas.

Among public lands, Webster Wildlife Area had the most hunters (169), and Cedar Bluff had the most deer harvested (82). In all, 2,266 hunters took 731 deer from Kansas public hunting areas in 1985. *Manes*



# NATURE

## BALD EAGLE COUNT

The National Wildlife Federation, comparing results to those collected in 1984, reported larger bald eagle populations in more than half the states canvassed during the 1985 Midwinter Bald Eagle Survey.

Surveyors in 20 of the 38 participating states counted greater numbers of bald eagles, with Nebraska, Utah and Washington accounting for the greatest increases.

Nebraska increased its counted bald eagle population to 746, up from 388 counted a year earlier. Utah surveyors spotted 1,263 eagles compared to 901 in 1984. Washington had 1,828 bald eagles in January as compared to 1,525 a year earlier. All three states recorded their largest number of eagles in the survey's seven-year history.

Still, the bald eagle is considered by the federal government to be either endangered or threatened with extinction in all of the contiguous 48 states.

The annual bald eagle survey is coordinated by the National Wildlife Federation (NWF) with the help of state and federal conservation agencies and more than 3,000 volunteers across the nation. The survey was not conducted this year in California, Florida, Georgia, Idaho, Maine, Michigan, Montana, Nevada, Oregon, West Virginia, and Wisconsin. As a result, the total number of counted bald eagles was only 10,985, as compared to 11,819 in 1984.

The 1985 state figures may be higher than in the past because of "ideal counting conditions," according to Maurice LeFranc, director of NWF's Institute of Wildlife Research, which supervises the annual survey. "During previous years, the survey was hampered in key areas of the country by severe cold and heavy precipitation. Such annual changes in conditions make it difficult to draw conclusions about population trends from the survey's results. For this reason, survey procedures have been modified for 1986."

While the news about the bald eagle's resurgence was good in some parts of the country, other states recorded substantial declines. Weather conditions and changes in survey efforts primarily contributed to the low statistics. Wyoming led the list with 271 fewer eagles counted this year, down from the 1984 total of 482 birds. Missouri, with the second largest

decline, recorded only 758 eagles as compared to 975 a year earlier. Along the Mississippi River, 1,299 eagles were counted as compared to 1,468 in 1984.

In Kansas, the 1985 Midwinter Bald Eagle Survey resulted in a count of 330 birds. This compares to a high of 453 in 1982 and a low of 165 in 1979. *NWF*



## THE BIG HOOT

The great horned owl is the largest and most common of the nine kinds of owls found in Kansas. They get their name from the large, erect tufts of feathers on top of the head.

The great horned owl is the original "hoot owl" and its distinctive six-noted call can be heard from December through February, when nesting territories are established.

The great horned owl has a wingspan of 45-60 inches and stands 18-25 inches tall. It weighs between 3 and 4½ pounds, and females are generally larger than males. Young owls are nearly the size of adults by the time they leave the nest.

Great horned owls are nighttime predators with voracious appetites. Their diet includes mice, rats, squirrels, rabbits, snakes and crows. Ironically, the striped skunk seems to be a preferred food.

Great horned owls are well-adapted for hunting at night. Their large eyes are 10 times more sensitive to light than human eyes and provide sharper images in dim light. Their hearing is so acute they can actually locate and capture prey in complete darkness.

Rather than construct their own nests, great

horned owls rearrange the old homes of hawks, crows or squirrels. Tops of broken snags, large tree cavities and buildings are also used for nest sites. Great horns are the earliest nesting birds in Kansas. One to five eggs are laid in late January or early February. Incubation takes about 28 days, and the young leave the nest at 10 weeks.

Great horned owls are found throughout most of North America and are year-round residents of Kansas. They occupy a variety of habitats — from the dense forests of eastern Kansas, to the high plains of western Kansas, to urban woodlands and city parks.

It is illegal to kill or possess a great horned owl or any other owl, hawk or eagle. In early spring, young owls found perched on branches away from the nest are often thought to be abandoned. Most of these are only temporarily left by the parents, which are off searching for food. Truly abandoned young owls are readily adopted by neighboring adults. It's best to leave all owls alone. *Dave Case and Joe Schaefer*

## LOST SLEEP

New studies show that a creature's sleep time may depend not only on its metabolism rate, but also on the animal's "danger factor." Animals that have few natural enemies, such as the opossum and bat, sleep as much as 20 hours a day. But the small roe deer, which has many predators, dozes only 2½ hours each night. *National Wildlife magazine*

## FOR THE BIRDS

Bread is a popular bird food because it contains both ground grain and shortening (fat), which are nutritional foods. While sunflower seeds and suet are more attractive than bread to birds such as cardinals and grosbeaks, some introduced species (house sparrows and starlings) may be kept busy eating bread while native birds consume more expensive grains such as sunflower and millet.

Moldy bread, however, should be avoided. It may cause aspergillosis, a deadly bird disease. This is a common, widespread mold that grows on wet grain and bread. *National Audubon Society*

## WISDOM

Life consists with wildness. The most alive is the wildest. Not yet subdued to man, its presence refreshes him.

Henry David Thoreau



# NOTES

## AUDUBON ART

The Kansas Audubon Council unveiled its first Wild Bird Art Print as part of Kansas Wildlife Heritage Month celebrations. Joyce Wolf, president of the Jayhawk Audubon Chapter in Lawrence, presented Gov. John Carlin with the limited edition artwork for display at the Governor's residence. The inaugural print, by Towanda artist Diane D. Mason, features lesser sandhill cranes.

People who buy the prints will be investing in artwork that should increase in value. More importantly, they'll be investing in the future of Kansas' wild resources. Proceeds will support Kansas Audubon chapter activities.

Copies of the prints are available from local Audubon chapters, or by contacting Ralph Wiley, 3934 N. Clarence, Wichita, Kan. 67204. Call (316) 838-1063. *Kansas Audubon Council*

## EAGLE ADVENTURES

On Jan. 30-31 and Feb. 1, more than 1,600 people in Kansas City — including 900 schoolchildren — experienced a close encounter with an eagle. As part of Eagle Days 1986, participants were introduced to "Omega," a 17-year-old captive bald eagle. Omega, with handler Stephanie Rutan, came from the Dickerson Park Zoo in Springfield, Mo., to provide Eagle Day participants with a close-up look at the national bird.

While Stephanie discussed Omega's history and the zoo's captive breeding program, Omega gave the audience plenty of viewing and photographic opportunities. An indoor segment of the program included film about bald eagle ecology and natural history.

For schoolchildren, the day also included a trip to an eagle viewing site along the Kansas River. Last year, visitors to the open-water site saw up to 15 bald eagles.

Because of mild January weather this year, eagles weren't concentrated at the river area, and none were seen there. For this reason, the Saturday session included the indoor segment only. No one seemed to mind, however. Few had seen a live bald eagle at such close range.

Eagle Days in the United States are traditionally held in January and February in areas

where eagles winter. In addition to the program in Kansas City, more than 150 people attended Eagle Days at Cheyenne Bottoms and Wilson Reservoir.

Eagle Days programs are funded by donations through the Chickadee Checkoff on Kansas income tax forms. Information on next year's Eagle Days around Kansas is available from local Fish and Game offices. *Mary Kay Spanbauer*

## GUNSMITHING SCHOOL

This summer, the National Rifle Association Gunsmithing Schools offer the chance to develop a hobby, pursue a vocation or fine-tune a profession.

All enthusiasts are welcome to take part in NRA's low-cost one- and two-week sessions. The school will be held at Trinidad State Junior College, 20 miles north of the Colorado-New Mexico border. Registrants receive hands-on experience in the techniques and artistry of several gunsmithing skills.

Basic courses such as gunsmithing, engraving, stockmaking and checkering are available. More specialized subjects such as customizing rifles, handloading and ballistics also will be offered.

Trinidad State introduced Gunsmithing into its curriculum in 1946. Today, Gunsmithing at Trinidad is a fully-accredited, year-round program that attracts international interest.

The college features a gun range equipped with three trap fields, one skeet field, and rifle and pistol ranges. Campsites, fishing and boating facilities are at nearby Monument Lake and other areas.

Housing accommodations are available on the Trinidad campus. Sessions begin June 2 and continue through July 11. Applicants are encouraged to register early. Class size is limited. For a complete schedule of classes, write or call: Trinidad State Junior College, Attn: Jim Moseley, P.O. Box 186 - TSJC, Trinidad, Colo. 81082. Or call (303) 846-5631. *NRA*

## KANSAS READING

No professional or amateur Kansas naturalist should be without these three books. Each one

offers important information about the diverse wildlife of the state.

*Amphibians and Reptiles in Kansas* offers detailed information about all 92 species of snakes, lizards, turtles, frogs, toads and salamanders in Kansas. Ninety-one maps and 229 photographs provide an up-close look at these amazing animals. Paperback editions are available for \$12.95

*Mammals in Kansas* provides information on 86 species. In addition to 100 photographs and 80 maps, this book also contains guides to identifying tracks and skulls of common Kansas mammals. Paper back copies cost \$12.95.

*Fishes in Kansas* features illustrations and information on all 123 species in the state. At 197 pages, paperback copies cost \$9.95.

All three books are available from the University of Kansas Press, 329 Carruth, Lawrence, Kan. 66045. *Manes*

## CONTEST REMINDER

Just a reminder — the deadline for the nongame photo contest is July 1, 1986. See the January/February issue of *KANSAS WILDLIFE* for details. *Manes*

## KWF POSTERS

"Rivers: Highways of Our Heritage" was the theme of Kansas Wildlife Heritage Month and the first Kansas Wildlife Federation poster contest.

"The theme is very important," says Jim Bennett, Conservation Education Chairman for the Kansas Wildlife Federation, "as the purpose of the contest is to draw the attention of Kansas youth to the importance of waterways and their surrounding habitats."

The poster contest coincided with both the celebration of Wildlife Heritage Month in March and with Kansas' 125th Statehood Anniversary.

Posters were submitted by approximately 500 sixth-graders throughout the state. Kansas Wildlife Federation officials selected Tonia Janzen from Santa Fe Middle School in Newton as the winner. Miss Janzen's poster depicts a river scene with deer, beaver, raccoon, birds and fish. Other regional winners include Kim Lechner of Seneca, Kim Fritsche from Jefferson School in Iola, Jason Gray of Osborne, and Jason Rice of Lakin.

The winner from each school will receive a certificate from the Kansas Wildlife Federation. Regional winners also will receive a T-shirt and a wildlife art print.



Miss Janzen will receive a scholarship to the Kansas Association of Teachers of Science Summer Camp, a copy of *Natural Kansas* by J. T. Collins and an invitation for her and her family to attend the Kansas Wildlife Federation's annual banquet in October. *Jerry R. Hazlett*

## \$50,000 SHOTGUN

The historic Two Millionth Browning Auto-5 shotgun was auctioned for \$50,001. The proceeds will be used to promote the shooting sports.

When bids were opened on the final day of the 1986 Shooting, Hunting, Outdoor Trade Show Jan. 19, the high offer for the milestone Auto-5 was \$50,001, submitted by William Henkel of Winchester, Va.

The Browning shotgun was the third to be auctioned at the show, with proceeds earmarked for the educational programs of the National Shooting Sports Foundation. To date, these auctions have raised more than \$97,500 for shooting education.

The Two Millionth Browning Auto-5 shotgun, originally produced for presentation to President Nixon, has been stored in Browning vaults since 1970 when the scheduled presentation to Nixon was cancelled. For 15 years, Browning had declined cash offers for the gun, seeking the most appropriate and meaningful use for its valuable and historic shotgun. *NSSF*

## GOOD TERNS NEEDED

Last year the interior population of least terns, which once was widely distributed along the great river systems of the central United States — including the Red, Arkansas, Missouri, Ohio, Mississippi and Colorado rivers — was added to the U.S. Fish and Wildlife Service's list of threatened and endangered species. Only 1,400-1,800 interior least terns are known to exist within their historic breeding range, according to FWS.

This tern, a small bird with a black crown and deeply forked tail, is the second variety of least tern to earn federal protection, following the California least tern. Flooding and destruction of nesting islands by channeling projects and reservoir construction are the main causes of the birds' demise. Other nesting areas have been overgrown by shrubs and trees due to alteration of river flows. *National Audubon Society*

## BLACKBIRD BOOK

*Blackbirds of the Americas* is a 164-page illustrated book about some of the most seen and least known birds in the U.S. It is available for \$24.95 from the University of Washington Press, Seattle, Wash. 98105.

Blackbirds, orioles, grackles, cowbirds, meadowlarks, bobolinks, oropendolas and caciques all are closely related members of the blackbird family, a group of birds found only in the New World. In this volume, noted ornithologist Gordon Orions and artist Tony Angell portray the physical and behavioral traits of this fascinating bird family.

The book provides a provocative introduction to behavioral ecology. Orions describes how blackbirds interact with others of the same species and with the environment in general; how vocal and visual communication signals are related to social organization; and how special features of bill, musculature and feathering have enabled blackbirds to exploit a remarkable number of natural feeding niches. *Wildlife Management Institute*

## TAXIDERMISTS RETURN

The World Taxidermy Championships will return to the University of Kansas in Lawrence for the fourth annual contest. Seminars and a trade show will begin on May 28 for registered participants. Hundreds of taxidermists are expected to take part.

An exhibit of competition entries will open to the public May 30 after judging is completed. Exhibit hours are tentatively scheduled for 10 a.m.-9 p.m. Friday, May 30, and 10 a.m.-6 p.m. Saturday, May 31. The exhibit admission fee will be \$3.50 for adults and \$1.50 for children.

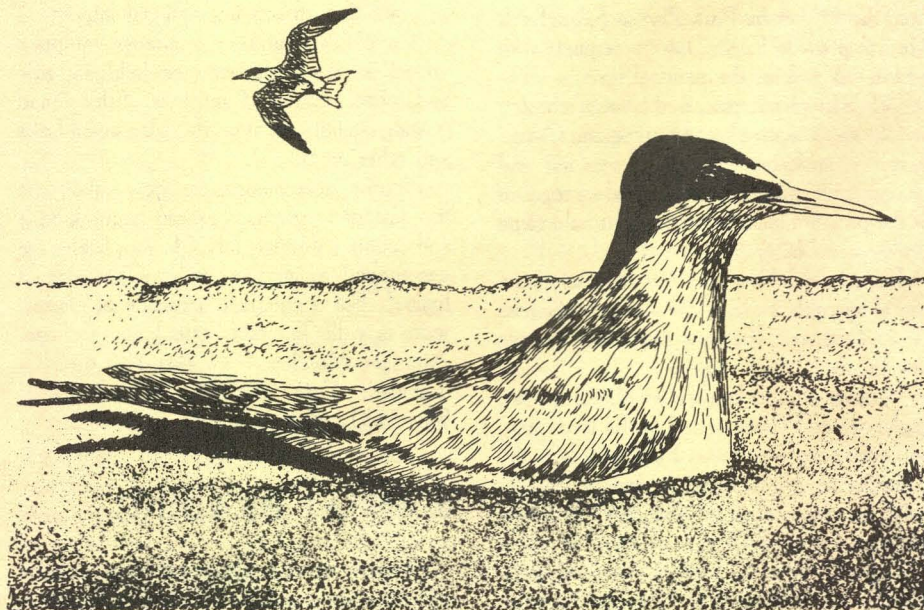
Information on the public exhibit is available from the Museum of Natural History's Public Relations office, (913) 864-4540. Contact Karl Kappelman at (913) 864-3284 to register for seminars and other events. Activities are cosponsored by the KU Museum of Natural History and Breakthrough Publications, Loganville, Ga. *Ann Peterson*

## SONAR DAMAGE?

New trolling motor power control systems can damage depthfinders, say Lowrance Electronic officials. Offered by at least three manufacturers, the new units use pulses of direct current to control speed.

The units emit an abnormal amount of RFI (radio frequency interference), which hampers depthfinder performance.

Lowrance officials have tested leading brands of depthfinders, including new liquid crystal display units, flashers and straight-line graphs. The tests reveal that trolling motors with the new speed control systems will black out liquid-crystal-display graphs and other depthfinders that are capable of showing fish. The RFI can cause extensive interference lines on straight-line graphs, and completely light up flasher unit dials, when both are in use. *Lowrance*





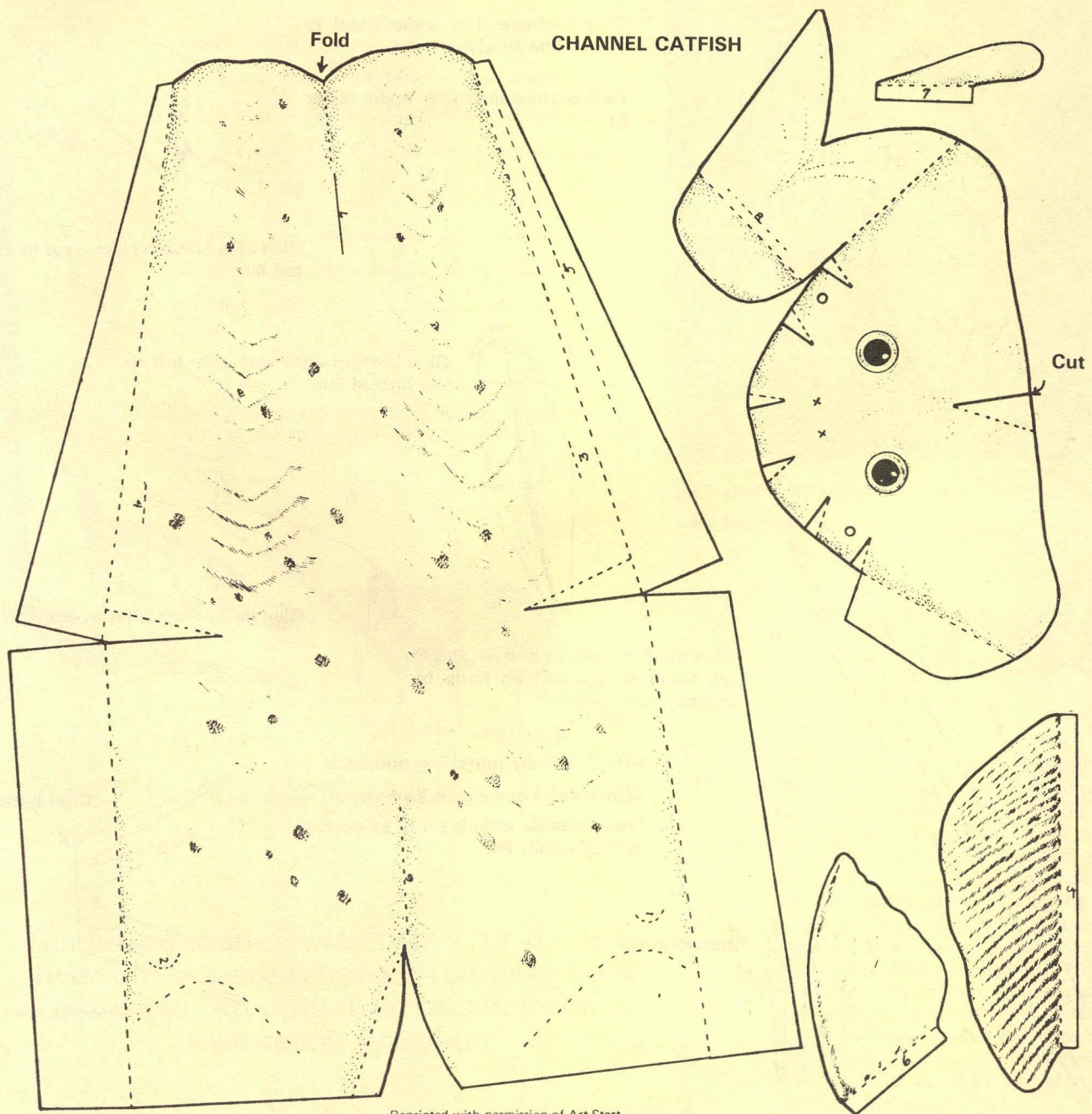
# NATURE'S NOTEBOOK

by Joyce Harmon Depenbusch Wildlife Education Coordinator

**WILDLIFE  
IN ANOTHER**

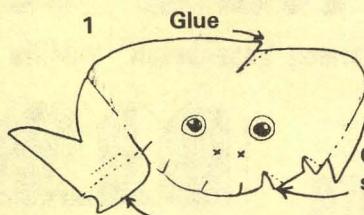
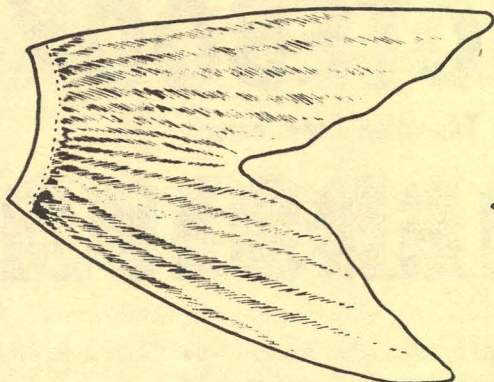
**DIMENSION**

Channel catfish are an angler's delight. Make a three-dimensional model of one by following the directions below. Copies of this pattern may be glued onto heavier paper, or a ditto master can be made, with copies run on construction paper. Have fun.



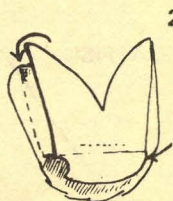
Reprinted with permission of Art Start





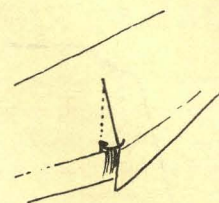
Glue flap over to dotted line to shape front of head.

Curl tightly with scissors to form bottom lip.



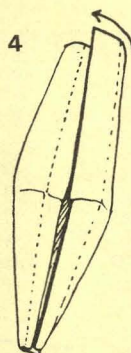
2 Glue V-shape flap under head to dotted line to close head.

Tuck bottom lip slightly under upper lip.



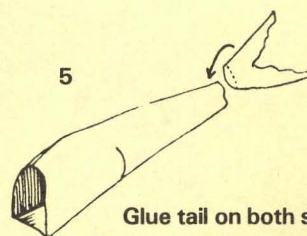
3

Glue slits on both sides over to dotted line.



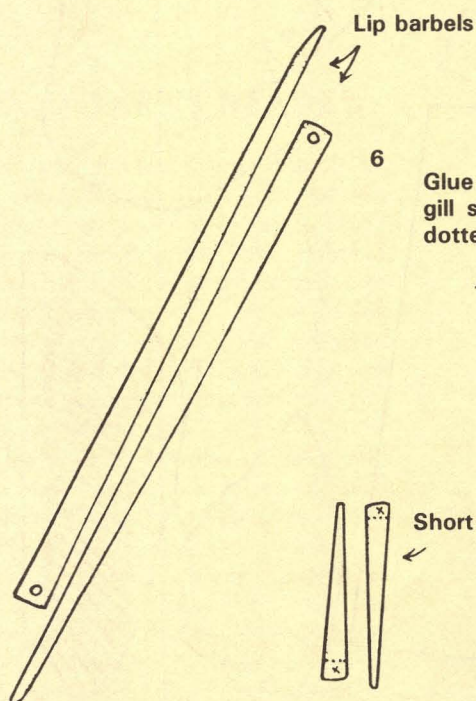
4

Glue bottom right side over left to the dotted line.



5

Glue tail on both sides at dotted line.



6

Glue head to body at bottom and at gill sections (marked on body by dotted lines).

7

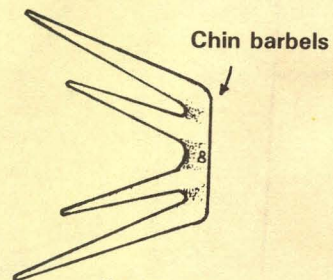
Attach fins by matching numbers.

Attach short barbels on Xs on head.

Long barbels attach on O at each side of upper lip.



Short barbels



Chin barbels

© 1982 Stephanie J. Wille

Reprinted with permission of Art Start.





Leonard Lee Rue III photo

*Long, thick facial whiskers give an otter an almost comical appearance, but these vibrissae help detect prey movement in murky water.*

# *Send In The Clowns*

**by Lloyd B. Fox**  
*Furbearer Project Leader*  
*Emporia*

Gone from Kansas waterways for decades, river otters were reintroduced here three years ago. An optimistic update on the restoration program.

**S**mooth, sleek and shimmering wet, a river otter slips down a mud-slicked slide of a South Fork River bank. Soon two more otters about the same size as the first and a third that's noticeably larger join the first in a water frolic. Chattering with birdlike chirps and coughing barks, the pups give one the impression that this expenditure of energy is just for fun. The similarities of these sights and sounds to a schoolyard during recess are striking. The date was 1850. Soon these Kansas river playgrounds would be silent. They would remain that way for many years.

In May 1983 the Kansas Fish and



Game Commission, in an effort to re-establish river otters here, began a restoration project on the South Fork of the Cottonwood River. To date 19 river otters have been released in the area. There have been numerous positive signs although it's still too early to know if a population will develop.

One of the most exciting pieces of news comes from landowners in the release area. Some have observed groups of otters they consider to be a female with young. Don Eccles, the Emporia State University graduate student who's worked on the project since the first release, has seen tracks that suggest young otters have been produced.

These observations of river otters surviving and reproducing in Kansas are extremely promising. The last known river otter in Kansas before this recent release was taken near Manhattan in 1904. In 1911 the Kansas Legislature protected the state's furbearers. An open season for the harvest of civet cats (spotted skunks), raccoon, striped skunk, opossum, muskrat and mink was set from Nov. 16-March 14. This action closed all seasons on otters and beavers and would prove to be beneficial for most furbearers. It was too late, however, to help the river otter. No otter population developed. The precise reason or reasons why river otters disappeared from Kansas may never be known. Tragically we allowed it to occur.

Species restoration programs are begun when the probability of natural expansion is low and, at the same time, the potential for survival is high if the species is moved to new areas. Think of this practice as planned island-hopping. The theory of island biogeography, as outlined by Robert MacArthur and Edward Wilson, has numerous applications in wildlife management.

River otter restoration is slow and expensive. There is a limited supply of wild river otters available for restoration programs. Few people have the skill and knowledge necessary to safely capture and properly handle this species. The cost of capturing an otter for restoration is estimated to be more than \$400. That doesn't include the added cost of holding and transporting an otter. It's best to test the habitat and refine all techniques before jumping into a full-scale program.

David Erickson and Chuck McCullough of the Missouri Department of Conservation recommend a minimum stocking of 20 otters for each release site. Other researchers share this opinion. Stocking at least 20 otters in an area ensures that individuals will

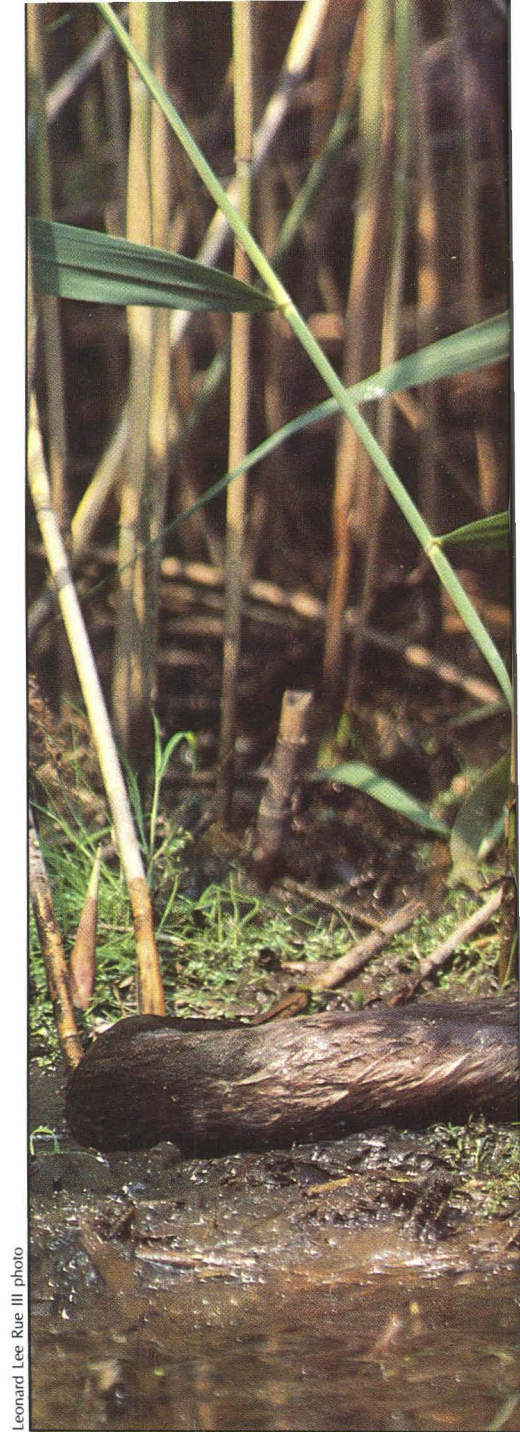
make contact with each other. Released otters generally do not reproduce during the first two years.

Of the 19 otters released in Kansas so far, 13 were surgically implanted with radio transmitters, thereby allowing us to monitor their survival and dispersal. Only two of the animals died, both shortly after being released. The rest of the otters remained near the release site. We were able to find them even a year later.

**T**he art of handling and transporting wild river otters is in its infancy. A wild river otter in captivity may appear to be tranquil, but inside it's a very nervous animal. Some otters can cope with this stress while others succumb. Otters prone to stress may develop terminal shock, a fatal illness that frequently includes bleeding gastric ulcers and an inflammation of the intestinal tract. Even experienced veterinarians and wildlife biologists hardened to wildlife mortality can be moved by the loss of an animal just before release. It's one thing to know the island biogeography theory, to understand that countless individuals will die in the sea of unsuitable habitat before a few may find their way to an island of suitable habitat. It's quite another to hold in your hands the lifeless form of one of these beautiful creatures that died during your restoration attempt. Thanks to the skills and dedication of Emporia veterinarians Warren and Duane Henrikson and the sharing of information among researchers, we've been able to control this problem.

Others have helped in our river otter restoration program. The Minnesota Department of Natural Resources issued special permits to two trappers, Ray Thorpe and Marvin Smith, to capture and transport otters to Kansas. There would be no otters in Kansas today were it not for skilled trappers such as Thorpe and Smith, both former Minnesota conservation officers. Our otters were shipped by commercial air freight in special containers. Frequently we released otters the same day they'd been captured in Minnesota.

Evolved from the mustelid family or weasels, which consist of about 25 genera and nearly 70 species, river otters are found on five continents.



Leonard Lee Rue III photo

Northern river otters (*Lutra canadensis*) occur only in North America. Taxonomists recognize about 20 subspecies of northern river otter within its historical range, stretching from the southern tip of Florida to the mouth of the Mackenzie River in the north.

River otters are a marvel of biological engineering. The basic body plan of the otter is cylindrical. One part of the body blends smoothly into the next. There are no sharp lines of demarcation from head to trunk or trunk to tail. The legs are stocky, and there is a web of skin between the toes. Adult northern river otters range from 3- to 4½ feet long and weigh 10-20 pounds.





Males are usually 10-20 percent larger than females living in the same area, a common mustelid trait. The fur has a glossy appearance and an oily texture. It ranges in color from a dark, rich brown to a pale, silvery gray. The throat, cheeks and underside of the neck are generally pale brown, tan or beige. Long, thick facial whiskers give an otter an almost comical appearance. These vibrissae are receptors, however, and work with the brain to detect prey.

River otters are carnivores, specifically piscivores or fish eaters. Most of their diet is fish. Fifteen different studies on the northern river otter's

diet have shown that of the 3,600 otter stomachs, intestines and scats examined, more than 82 percent contained fish remains.

That otters eat fish has never been controversial. The amount of fish consumed and the impact of their diet on sport fisheries, however, occasionally has created a stir. River otters have a metabolic rate about 20 percent higher than a mammal of similar size. Feeding that metabolic furnace requires a large source of high-energy food. Otters have the equipment to outmaneuver, catch and consume prized gamefish. Otters generally capture slow-swimming species, injured or

---

*Adult northern river otters range from 3- to 4 1/2-feet long and weigh 10-20 pounds.*

---

weakened fish and fish that are abundant or found in large schools. This includes species such as carp, sucker, chub, sunfish and bullhead.

For years people considered predators as competitors, and otters weren't exempt from this hatred. When predator populations dropped to low levels an enlightenment developed. For the next few years popular publications stressed that predators took the sick and injured. Occasionally an overzealous writer would add the word "only"





Michael H. Francis photo

*Otter pups grow rapidly although at birth they're blind, helpless and weigh less than five ounces.*

to this predatory behavior. Truth about predators may be like beauty — it is interpreted in the eye of the beholder. We are the judges and we should remember that predation is what it is: neither bad nor good, merely a way of life.

Northern river otters have a fascinating reproductive pattern that includes a phase known as delayed implantation. Embryonic development begins and reaches the blastocyst stage of 100-400 cells. The embryos then go into arrested development for 240-285 days. At the end of this hiatus, the blastocysts implant in the uterine wall of the mother. Growth of the young proceeds normally from that point. The northern river otter, then, has a gestation period of 288-375 days in comparison to its European counterpart, which, having a normal gestation period, gives birth 63 days after conceiving.

Most females do not mature sexually until they are two or three years old. Males mature at about the same age, but they may not become successful breeders until their fifth or sixth year. Mature female river otters use scent marking to chemically signal males of

their reproductive condition. River otters, regardless of their sex, have scent glands. The odor is not repulsive (as with some species of mustelids), yet it's an odor you'll never forget.

Mating can occur on land but generally takes place in the water. During breeding the male bites the female and holds on to her by the scruff of her neck. The females may caterwaul. A pair bond is formed but lasts only a few days. The male soon returns to traveling through an extensive home range that may include the home ranges of several females. The female, frequently with pups, remains in a small portion of her home range after mating.

Female otters give birth in a standing position. The litter size is generally two to four young although litters of one to six occur. Otter pups grow rapidly. Blind at birth, helpless and weighing less than five ounces, the pups will weigh more than a pound in three weeks, about the time their eyes open. In two months they'll begin eating solid foods. At three months they'll be weaned.

The adult female introduces her young to the wilds during the first summer. She'll spend a great deal of

time teaching the pups to forage. Adult females have been known to catch fish, bring them to the pups and release them alive. Captive river otters are known to spend a lot of time playing. Wild river otters are certainly not solemn and sober, but they don't place as much emphasis on play as the captives. University of Idaho researcher Wayne Melquist observed that wild otters in Idaho played only 16 percent of the time periods that he observed them. Mundane activities such as feeding and foraging were observed during 62 percent of these observation periods. The adult female places survival lessons for her young above all else.

Breakup of the family unit varies. Pups can become independent and dissociate with the adult female during their first autumn. More commonly, family units remain intact until the following spring. Invariably the breakup will occur before the adult female gives birth to her next litter. Siblings may remain together even after the split with the mother.

In 1977 Melquist and Maurice Horkner developed procedures for capturing and handling river otters. They



also surgically implanted a specially designed transmitter in the abdominal body cavity. Without this technique we wouldn't know how our restoration attempts had fared.

Transmitters used to monitor otters have a range of less than one-half mile to land-based receivers. We were frequently unable to find the otters from the ground and had to follow their movements by air. This extended the range to three or four miles. One otter gave us a surprise; she disappeared from the release site. We'd expected some otters to do this so we began an air search. After an extensive search we found the animal more than 25 air miles away and hundreds of miles by stream from the release site. We believed she was lost from the restoration program, but to our surprise and pleasure she eventually returned.

River otter home ranges are amoeboid in shape. This ever-changing living area is a function of topography, prey availability, habitat, weather and the influence of other otters. River otter home ranges in stream ecosystems are typically linear whereas marsh home ranges are circular. Otters in Idaho streams have home ranges 20-30 miles long. Males usually have larger home ranges than females. This same trend holds for the Texas marshes, where males have home ranges of nearly 1,000 acres and females live in an area of about 700 acres. Missouri's river otter restoration program is ambitious and well documented. Conditions there are similar to conditions in Kansas, and we should expect similar results. Reintroduced male river otters have home ranges of nearly 3,000 acres in Missouri marsh habitat and 25 miles long in their streams. Female otters averaged 1,600 acres in marshes and 15 miles in the streams.

River otters are capable of traveling long distances quickly. In Idaho, Wayne Melquist followed several telemetered otters he found on consecutive days. This allowed him to estimate the minimum distance the animals traveled. Movements of one to three miles were normal. Most of the animals he followed occasionally took an overnight trek of 10 miles.

River otter habitat preference appears to be up to the individual. They can live in marine estuaries, marshes, swamps, rivers, lakes, ponds, reservoirs and high mountain streams. Food-rich environment such as the

coastal marshes will support more otters than food-poor areas such as clear-water mountain brooks. Some otters prefer one type of habitat. While some may choose to live around lake shorelines, other may prefer stream habitat leading to the lake. Generally, however, otters seem to be attracted to beaver bank dens and lodges.

Otters are susceptible to canine distemper, jaundice, hepatitis, human tuberculosis and feline panleucopenia (distemper common in cats). The impact of these diseases and the variety of parasites present in wild otter populations is unknown. Most non-man caused deaths of river otters go undetected.

Trapping otters for their fur is the most apparent form of human impact.

Yet where otters are managed for their fur, populations have remained relatively stable. Otters continue to occupy their traditional habitats. A managed and monitored harvest is no threat to the river otter.

What is a threat is man's indirect impact, which can take many forms. Habitat destruction is easy to see. Riparian habitat (that strip of woody vegetation along streams and rivers) is a key component of river otter habitat. This habitat is rendered useless for otters when man digs canals and makes other waterway improvements. Farming and forestry practices that increase siltation or cause dramatic changes in flood intensities also can hurt otter populations.

A State Water Plan, now under con-



Len Rue Jr. photo

*River otters are piscivores, or fish-eaters. Otters generally capture slow-moving species as well as injured, weakened and schooling fish.*



sideration, would be beneficial to the state's otter population in addition to other wildlife populations. This plan, familiar to many, provides landowner incentives to protect and enhance both riparian and wetland habitat. Many other wildlife species also could benefit from such a water management program.

Direct impacts on otter populations include road-kills. Thirty percent of the otter that died during Wayne Melquist's study were road-kills. Indirect

cally magnified as they pass up the food chain, can be lethal to predators at the top. River otters and some of the other mustelids are particularly sensitive to these contaminants. Researchers fear that a contaminant may do irreversible damage long before its impact can be measured.

Acid rain's impact, for example, is just beginning to be understood. Streams and lakes in the northeastern United States and eastern Canada are growing in acidity. Sterile waters de-

ing the species. Similarly, reading the signs of occupied otter country can be exciting.

River otters can captivate our thoughts. Their presence allows our thoughts to drift to a more romantic period when life was simpler, as during the days of the mountaineers. No one can appreciate this nostalgia more than a trapper. The Kansas Fur Harvesters Association was one of the first groups to become involved in the river otter restoration program. Association members have donated money to Wildtrust specifically for that purpose, and they've taken special precautions while trapping in the otter release area.

River otters are hard to find, even harder to see. Researchers have followed otters for months without actually seeing one. Then, when it's least expected, an object that looks like the end of a vertical log will bob to the water's surface. The researcher is being investigated. The comical face of the river clown will appear. A special performance may follow.

Somewhere today river otters are cruising downstream on the South Fork River in central Kansas. It's my hope a procession of pups follows. The restoration program has worked so far because people care. One day you may have the chance to see otters slide down a mud bank or hear them play along a Kansas stream.

The playground no longer needs to be empty.



---

## River otters arouse some primitive and basic emotions in people. We can associate with a frolicking group of otters.

---

impacts are harder to quantify. When humans occupy an area they take with them a host of tag-alongs. Dogs are one such example. Of the nine otters that died during the Idaho study only one was killed by a dog. But dogs could present a major problem as human populations increase. Small tag-alongs such as pet and livestock parasites and human diseases also could undermine an otter population.

Environmental contaminants may be the most insidious of man's impacts on otter populations. Otters are at the top of the food chain. Contaminants such as methylmercury, PCBs, DDT, mirex and other pesticides, biologi-

void of fish certainly can't be expected to support river otters. Acidity also creeps into the ecosystem through mine pollution. The river otter is absent from the coal-mining regions of West Virginia, eastern Kentucky and eastern Tennessee largely due to acidic pollution.

River otters arouse our primitive emotions. We can associate with a frolicking group of otters. We marvel at their abilities, at the permanent smile affixed to their faces. They seem happy and that makes us happy. You don't even need to see them to enjoy them. Many people enjoy bird songs without seeing the bird or even know-

*The future looks promising for Kansas' river otter population. An Emporia State University graduate student has seen tracks that appear to be those of an adult female otter with pups.*



Ron Shade photo



# Kansas Fish Records

SPECIES	WEIGHT* (in lbs. & ozs.)	LENGTH (in inches)	ANGLER	WHERE CAUGHT	DATE	METHOD
Bass, Largemouth	11-12	25	Kenneth M. Bingham, Topeka	Farm pond, Jefferson Co.	March 20, 1977	Rod and reel
Bass, Smallmouth	4-11¾	19	Terry Stanton, Liberal	Milford Reservoir	Oct. 21, 1983	Rod and reel
Bass, Spotted	4-7	18½	Clarence E. McCarter, Wichita	Marion Co. Lake	April 16, 1977	Rod and reel
Bass, Striped	35-12	41½	Rick Dirks, Hutchinson	Cheney Reservoir	Feb. 16, 1985	Rod and reel
Bass, Warmouth	14¾ ozs.	10½	Craig Sonka, Parsons	Farm pond, Labette Co.	April 5, 1977	Rod and reel
Bass, White	5-4	17	Henry A. Baker, Wichita	Toronto Reservoir outlet	May 4, 1966	Rod and reel
Bluegill	2-5	11	Robert Jefferies, Modoc	Farm pond, Scott Co.	May 26, 1962	Rod and reel
Buffalo, Bigmouth	54-4	45	Randy Lee, Minneapolis	Farm pond, Ottawa Co.	May 24, 1971	Bankline
Buffalo, Smallmouth	51 lbs.	41	Scott Butler, Lawrence	Farm pond, Douglas Co.	May 2, 1979	Rod and reel
Carp	37-5	40¼	William W. Nagle, Prairie Village	Shawnee Mission Park Lake	June 13, 1984	Rod and reel
Catfish, Blue	56 lbs.	47¼	Royce D. Stiffler, Lawrence	Kansas River	Aug. 18, 1984	Rod and reel
Catfish, Bullhead	7-5¼	24½	David A. Tremain, Havana	Farm pond, Montgomery Co.	May 13, 1985	Rod and reel
Catfish, Channel	33-12	38½	Larry L. Wright, Kansas City	Kaw River near Kansas City	May 22, 1980	Rod and reel
Catfish, Flathead	86-3	55½	Ray Wiechert, Brazilton	Neosho River near St. Paul	Aug. 24, 1966	Trotline
Crappie, Black	4-10	22	Hazel Fey, Toronto	Woodson State Fishing Lake	Oct. 21, 1957	Rod and reel
Crappie, White	4-¼	17½	Frank Miller, Eureka	Farm pond, Greenwood Co.	March 30, 1964	Rod and reel
Drum	31-4	37¼	Arthur C. Hyatt, Coffeyville	Verdigris River	July 17, 1982	Trotline
Eel, American	4 lbs.	34	Dean & Frank Endsley, Salina	Saline River	Aug. 25, 1984	Throwline
Gar, Longnose	31-8	unknown	Ray Schroeder, Topeka	Perry Reservoir outlet	May 21, 1974	Rod and reel
Gar, Shortnose	5-15	34¼	Jack M. Frost, Manhattan	Milford Reservoir	May 4, 1985	Bow and arrow
Gar, Spotted	7-12	33½	Charles L. Harbert, Arma	Chetopa Dam	May 13, 1983	Bow and arrow
Goldeye	2-4	17¾	Mike Augustine, Junction City	Milford Reservoir	June 19, 1980	Rod and reel
Paddlefish	81 lbs.	68½	George Elliott, Oswego	Chetopa Dam	May 1, 1983	Rod and reel
Perch, Yellow (Ring)	12 ozs.	11½	Merlin Sprecher, Manhattan	Lake Elbo, Pottawatomie Co.	July 12, 1970	Rod and reel
Pike, Northern	24-12	44	Mr./Mrs. H.A. Bowman, Manhattan	Council Grove Reservoir	Aug. 28, 1971	Rod and reel
Sturgeon	4 lbs.	30½	J.W. Keeton, Topeka	Kaw River near Topeka	Nov. 17, 1962	Rod and reel
Sunfish, Green	2-5¾	11½	Fae Vaupel, Russell	Farm pond	Sept. 26, 1982	Rod and reel
Sunfish, Redear	1-7½	11½	Pat Whetzell, Girard	Frontenac Strip Pit	Aug. 4, 1983	Rod and reel
Trout, Rainbow	9-5	28¼	Raymond Deghand, Topeka	Lake Shawnee	Nov. 14, 1982	Rod and reel
Walleye	13-1	31½	David Watson, Manhattan	Rocky Ford Fishing Area	March 29, 1972	Rod and reel
White Amur	32 lbs.	39	Scott R. Vogles, Stark	Farm pond	Aug. 23, 1984	Rod and reel
Wiper	11-9	28¼	Gilbert J. Meis, Oakley	Sebelius Reservoir	June 4, 1985	Rod and reel

\*For official records, weights will be computed to nearest hundredth of an ounce.

## STATE-RECORD FISH: What to do

Here are the steps to follow should you or someone you know catch that fish-of-a-lifetime.

1. Have the fish weighed on certified scales. At least two witnesses must verify the catch at the scales. Get their signatures, addresses and phone numbers. Take at least one picture of the fish.

2. Have a Kansas Fish and Game Commission employee verify the catch. Ask the employee for a state record-fish application.

Only now may you do with the fish as you wish.

3. Send the completed application and the witness signatures to the information-education chief for review. The address is: KF&G, Box 54A, RR 2, Pratt, Kan. 67124.

4. The chief will issue a news release on the fish. The Fish & Game employee who verified the catch is contacted at this time. If more information is requested, the fisherman and the witnesses will be notified.

5. The interview information, application

and photo are then presented to the chief of fisheries. Both chiefs then issue a joint decision that can go one of three ways: 1) verify the record, 2) disallow the catch, or 3) research the matter further.

If after additional study there is reasonable doubt the fish was taken legally, the application will be rejected.

This evaluation procedure usually takes 3-4 weeks. For more information, call the Information-Education Division at (316) 672-5911.





Mike Miller illustration



## **FLATHEAD CATFISH**

# **The Record, The River And The Man**

In 1966 Ray Wiechert hauled in the state-record flathead catfish. In a recent visit, Ray talked about the record and his life on the river.

*photos and text*

*by*

**Rob Manes**

*Associate Editor*

**"T**he only way you'll make me mad," says 70-year-old Ray Wiechert, "is if you chew up some brown chicken manure and spit it 'tween your teeth at me." Then he laughed and his eyes twinkled, the way they must have when he was an ornery schoolboy.

Outside of hard work and catching big fish, Ray doesn't seem to take life too seriously. "I just shoot a line of bull all the time," he states with flawless accuracy.

One thing that's no bull, however, is that Ray Wiechert (pronounced Wick-ert) is one of Kansas' champion anglers. He proved it 20 years ago by pulling an 86-pound, 3-ounce flathead catfish from the Neosho River near St. Paul. That catch shattered the previous flathead record by more than 13 pounds. According to Kansas Master Angler records, five pounds is about as close as anyone has come since. Ray's flathead is the biggest fish on Kansas records, followed by the paddlefish at 81 pounds.

I met Ray in his Brazilton blacksmith shop in southeastern Kansas. Greeting most folks with a joke or good-natured jab, Ray makes friends easily. Ray's hands look every bit of their 70 years, but his eyes and wit still show the spirit of a youngster.

He fumbled in the top drawer of his old metal desk and produced several tattered photos of giant catfish he'd pulled from the Neosho. I'd driven to Brazilton to fish with Ray, and those flathead photos were encouraging. Even though he'd run trotlines on the river the night before and come up empty, I knew the fish could start moving anytime. My optimism about the next two days of fishing was strong.

By then Jim Guy and Rick Mein, two of Ray's friends, had returned to the shop. They'd helped Ray run his lines the night before. Rick is the son of one of Ray's lifelong fishing buddies. Much of what Rick knows about fishing the river came from Ray.

Early that afternoon the four of us eased down the dirt steps carved in the Neosho's steep bank, following the same path Ray had taken the night he caught the record flathead 20 years ago. The smell of the river on the soft spring breeze was dank but sweet. Ray's boat was tied at the water's edge.

As Jim rowed us upstream, Ray talked — not bragged — about some of the monster flatheads he'd caught. Many had topped 30 pounds; a handful were better than 50 pounds.

"We didn't even lose any bait last night," Ray noted as he checked each of the 25 hooks on the first line. A few

were empty this time, though. That, too, was encouraging. On the bare hooks Ray hung large, live goldfish, impaling each one just below and behind the dorsal fin. Water dogs (immature salamanders) are his preferred bait, but none were available for this trip.

The next line was set in the same spot where Ray had taken his state-record flathead, but the line was empty this time. We didn't catch any catfish the next day either. No matter. Just being with Ray on the river, listening to him . . . that was catch enough.

The stretch of the Neosho River we fished winds around the western and southern boundaries of the Neosho Wildlife Area. Giant cottonwoods and willow trees bow over the deep channel where the river's murky waters churn endlessly. Ray has fished here for 60 years.

Ray will always remember what happened the evening of Aug. 24, 1966. Though not the avid fisherman her husband is, Ray's wife Edna had planned to accompany her man rather than let him go alone. Then Joe Butler happened by, letting Edna off the proverbial hook.

Joe and Ray pushed the boat into the current and slowly oared upstream





Ray Wiechert of Brazilton has been running his trotlines for 60 years. His specialty? Flathead catfish.

toward the trotline. Ray had placed that trotline in what he still describes as his best spot — near an outlet from the wildlife area marshes. He didn't really expect to find fish on the line; he was just checking his bait.

Ray pulled the line up, starting with the end tied to a willow sapling. One by one he passed the hooks, re-baiting the bare ones with 8-inch goldfish. Then the line tightened.

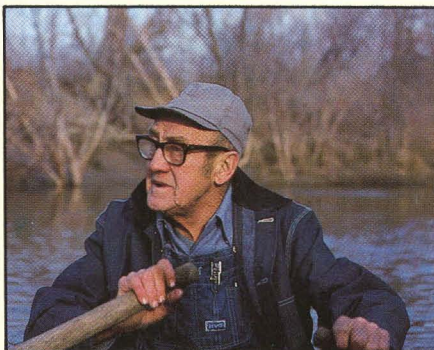
"Snagged," Ray said over his shoulder to Joe. Before yanking on the line, though, Ray plucked it sharply. This sends vibrations down to any fish that might be on the bottom of a snag. Ray says it irritates them and sometimes makes them pull loose.

The tactic worked this time, and the line ripped out of his hands. Startled, Ray and Joe quickly worked themselves to the bank end of the line and removed the hooks they'd already checked. This eliminated a hazard that

---

**"What I know about bass fishing you can write on a cigarette paper."**

---



could have caused them to lose the fish once the fight had begun.

Both men tugged on the line, and the fish immediately jerked it through their hands. For 20 minutes it continued, a seesaw battle that saw Ray and Joe establish a lead, then lose it. Establish a lead, then lose it again.

The strategy behind fighting a big fish on a set line is much the same as that used by rod and reel anglers — retrieve line until the fish runs it out again. Repeat this until the fish can no longer continue.

The huge flathead eventually surrendered. Ray reached into the water and gently stroked the monster. Then he carefully slipped his hand into the flathead's mouth, latched on and heaved. When the fish finally slid over the boat's stern, Ray sprawled backward into Joe's lap. He was exhausted from the fight.

Ray Wiechert moved to southeast





Wiechert and Rick Mein, a Crawford County farmer, take a breather along the Neosho near St. Paul.

Kansas with his family in 1915. Home had been Stover, Mo. As a small boy, Ray learned the art of trotlining from his dad. Father and son fished together on Walnut Creek, which flowed near their farm. Ray remembers horse-drawn wagon rides to the fishing hole. That boyhood love for the river and for catching big catfish has only grown deeper.

For nearly 20 years, Ray worked days at a Parsons cattle yard and nights at his own blacksmith shop. Though fishing cut into his few hours of sleep, Ray ran his lines on the Neosho River between jobs. After 60 years, he still returns to his familiar spot on the river.

"I'd leave my boat down on the river for a month at a time," Ray says. "I'd run my lines at least twice a day, every day, as long as the water was good."

"August and October are the months to catch big flatheads. But if you can catch fish in January and February, those months are good, too. Seems like cloudy weather is best, though I've caught fish in just about every kind of weather. If you run lines on a clear, moonlit night, the gar won't leave your bait alone. But you can catch fish just about anytime."

"I used to fish by the barometer. They bite better when the pressure is going up. But that doesn't help much, since you never know when it's going to go up. So I just go whenever I can. I can't tell anybody when they're going to catch fish or when they aren't," Ray explains.

"Braided nylon line is the best. That twisted stuff isn't near as strong, and it won't hold a knot. One of the mistakes a lot of people make is tying their lines to solid stumps or old car bodies. If you do that, it gives the fish something to pull against, and the hook will tear

loose. I always look near a good, deep hole for a branch that's strong enough but will bend fairly easy."

"The other end of the line I weight down with a half a brick. It's a mistake to use window weights because they sink into the sand and give the fish something solid to yank against. The half brick will hold the line tight, but a fish will wear out because it will move with the line."

Ray uses 18-inch drop lines spread along the main trotline. He adjusts the tension so the bait suspends slightly above the river bottom.

"Years ago," he remembers, "we didn't have nylon line. That cotton cord had to be dried out every two or three days or it would rot. You couldn't run the same lines continuously for a month, like you can with nylon."

Ray has used baitfish weighing up to two pounds — big enough to fillet by most anglers' standards. Once he found a 4-pound channel cat on his trotline. He left it on the hook while he checked the rest of his sets. When Ray returned to get the channel cat, he found a huge flathead had wrapped its mouth around the smaller catch. The big flathead slipped away, though, because the hook was buried inside the smaller fish.

Ray's a dedicated trotline fisherman although paddlefish and bass can hold his interest when he isn't running lines. He's held fishing licenses in five states at one time. Yet he's humble about his fishing prowess in spite of his success.

"What I know about bass fishing you can write on a cigarette paper," he says. "To me, a rod and reel is for getting bait to go to the river."

People who run trotlines are often labeled law-breaking river rats, but

Ray follows the law of the lines closely. "I don't want somebody to break into my shop and steal my stuff," he states. Point being, he follows state fishing regulations.

Ray uses a cane to combat a distinct limp (a blacksmithing battle scar) he received years ago from a spirited horse. "I don't get around like I used to," he says without complaining. "It's hard to get up and down the riverbank, so I've slowed down a little in the last few years."

Ray seems far from quitting his beloved pastime. When we were fishing, his cane stayed in the back of the pickup truck. He handles the lines with the strength and agility of a man half his age.

The river has slowed too, according to Ray. "That dam they put in up by Burlington (John Redmond Reservoir) has really screwed it up," he says with a slight frown. "They let water out so the river is bank full for several days, then they shut it down all of a sudden. The banks have washed out a lot, and the water is muddier. I don't think it's as good as it used to be, but you can still catch some big fish."

I was richer when I left Ray Wiechert's blacksmith shop and a few pounds heavier from eating Mrs. Wiechert's fine cooking. I'd also learned alot about a form of fishing I already loved.

I shook Ray's hand and made an effort to thank him. It fell short, as I expected. Then I turned to find my way through his shop's dark maze of oily iron and bulky equipment. As I opened the door, Ray called out a parting jest: "Be good to the women, and if you have any boys, name 'em after me."

I just might.







Gene Brehm photo

What boat to buy? That depends on your needs. A few of the choices shown above (clockwise from lower left) include: johnboat, aluminum-bodied bass boat, canoe, fiberglass bass boat, two-man lightweight boat and combination skiing-fishing boat.

# Fishing Boat Primer

In the market for a fishing boat? There are plenty of styles and sizes from which to choose, but you'll need to ask yourself a few questions first.

by **Tommie Berger**  
District Fisheries Biologist  
Dodge City

**W**ater is a strange medium to us humans. We can swim through it, float on it and dive into it. It cools us, cleans us and tires us at the same time. We have fun in water but can't live there. Fish are different — they're built for water. We can't catch fish by swimming after them, so we need to keep ourselves

dry, warm and mobile on top of the water. We need boats.

Fishing boats can greatly enhance fishing success. Fishermen tied to the shoreline of their favorite lake, stream or pond may catch fish, but the boat angler is better prepared. He's more mobile, quieter. He can position himself right where the fish are. Some

species are hard to find near the shoreline, especially on large reservoirs. Boats surely give the summertime white bass, striper and walleye fisherman improved access to those species.

Sometimes the best habitat for a certain species is just beyond casting distance from shore. Access to good



fishing spots on streams and bigger waters may be more than a mile from the nearest road or public access site. Besides putting an angler where he wants to be, boats also allow him to retrieve snagged lures or hooks that otherwise would be lost. Boats allow a fisherman the maneuverability that bank anglers must forego.

Boats have undergone several design changes since the mid-1960s. Today 10-horsepower motors are small by some standards. And price? Some fishing boats can cost \$20,000 or more.

Boat fishermen may be divided into two types: the devout big-water fishermen and the anglers who prefer small impoundments, rivers and streams. These two groups require two distinct types of boats. Perhaps the best approach is to divide the boats into groups based on their construction. Here's a look at the advantages and disadvantages of four different styles of fishing boats: lightweight (plastic, rubber, vinyl or Styrofoam), wood, aluminum, and fiberglass.

### Lightweight Boats

This category comprises inflatables, belly boats, water wagons and one-man or two-man plastic or fiberglass boats. These boats are compact, lightweight and usually propelled by an oar, paddle or small motors. Lightweight boats are designed for one or two fishermen, but some larger inflatables can carry up to six.

Inflatables, of course, are the air-filled vinyl, plastic or rubber crafts. Deflated, they store nicely and require little storage room. A cousin to the inflatables is the belly boat or float tube. This one-man glorified inner tube is designed with a canvas covering, a comfortable seat and pockets for gear. If the water's warm, you don't even need waders. Special duck fins or scuba fins and a little leg power are all you'll need to be mobile.

A water wagon is a flat piece of Styrofoam designed as a floating raft that will support one angler. The new one- and two-man plastic or fiberglass Bass Tracker boats are just a longer-lasting, more durable form of the same thing. These outfits are generally propelled by paddling or small electric trolling motors.

Such small fishing vessels have a few distinct advantages. Launching these boats is easy. You don't even need a concrete boat ramp. Just carry your craft to the water's edge and hop in. You can maneuver these little jewels back into the boonies where no other fisherman can get with a bigger rig. And, naturally, smaller boats are

more economical than bigger outfits. Few of these boats fully rigged will cost more than \$500.

Portable boats do have drawbacks, though. For one, you can't fish big water. Small boats don't take rough water well and even a modest Kansas wind will soak you. Another disadvantage is speed. You can't plan on traveling far and returning by suppertime. Finally, these small fishing outfits are unstable. You'll sit all day because standing up makes even the best of the portable boats tipsy. They won't sink, but they'll sure give you a bath. One little slip may send all your equipment to the bottom.

### Wood

Several logs tied together probably formed the first boat ever used. Indians scooped out logs to make canoes and kayaks. The colonists, too, sailed in wooden boats on their voyage to the New World.

Wood may have historic significance in boatmaking, although it's not the preferred construction material today. Wood is heavy, requires constant maintenance and has a limited lifespan. Before the advent of aluminum and fiberglass, wooden boats were the most common afloat. Their popularity, however, has all but vanished.

### Aluminum

Aluminum boats have been popular for more than 30 years, and the aluminum fishing boat industry remains healthy. Aluminum has been cast in different shapes. The latest are all-welded hulls and the new aluminum V-hulls. Aluminum is durable, economical and lightweight, as much as 50 percent lighter than other models of similar length. These boats, which can be powered by small engines, are easily towed, launched and loaded. Some fishermen say aluminum boats handle better and give faster acceleration than boats made of other materials. Aluminum boats unquestionably take the wear and tear of shoreline docking much better than, say, fiberglass boats.

Aluminum canoes and small johnboats are great for float-fishing trips on streams because they can be carried easily atop a vehicle or inside a pickup. Usually they're light enough for handling by one or two people. If you come to an obstruction on the water merely pick up the boat and carry it across. Such boats also are good on ponds and small lakes where wind is not a problem. Yet aluminum boats, due to their size and instability, perform poorly on rough water. And you

should never stand in a small aluminum boat.

Larger aluminum johnboats or flat-bottom boats, however, are much more stable. A 14- to 16-foot boat with a beam width of 60 inches or more provides stability. But such a boat is heavy and must be trailered and unloaded at a ramp. And most big johnboats, if not fully equipped, come with a ribbed floor. Some type of decking or flooring is necessary to prevent stubbed toes.

Aluminum boats are regaining some popularity in the high-performance bass boat market. They're significantly cheaper than fiberglass high-performers. Quality aluminum boats cost \$3,000-\$4,000. No aluminum bass boat yet has been rated for a motor larger than 100 horsepower.

### Fiberglass

Made of a combination of glass fibers and resin, fiberglass is surely the reigning king of boat construction materials. Fiberglass is durable and easily molded into just about any shape. It looks nice, requires limited maintenance and can take a beating.

If you want light weight for speed, it's available. If you want a little more weight (for less vibration and a smoother ride, especially in rough water) it's yours. You can buy a little 14-footer that works great on small waters or a 20-footer for reservoir fishing. Some folks buy ski boats and use them for fishing as well. A few models are even designated as "fish-n-ski." The possibilities are unlimited with fiberglass.

A fully rigged fiberglass fishing outfit can cost \$5,000-\$20,000 or more. High resale value is another plus for fiberglass boats.

In the early days of fiberglass boats, manufacturers quickly learned one thing: Anyone could build a boat that would run fast and stay together on calm water, but light and fast were not necessarily good. Some companies ended up with a six-month throw-away boat that cracked up in choppy waters. Fishermen began to demand tougher hulls.

When fiberglass fishing boats were introduced, the tri-hull was the standard of the industry. This modified flatbottom boat rode better, kept fishermen a lot drier and accelerated better than the traditional flatbottom or the straight V-hull. A derivative, the wider V-bottom (called a pad) boat, has since become the workhorse of the boating fisherman.

There is a demand for speed in the high-performance boat market. This





*Big boats may be fine for big water, but small, lightweight boats such as this one are ideal for farm ponds.*

has prompted a change from the true V-bottom into the modified tunnel V, which combines the stability of the pad technology with the speed of the tunnel hull racing boats. These new high-performance hulls offer a major advance in comfort, speed and stability. But they don't take rough water as well and won't keep you as dry as a standard V-pad.

Some manufacturers are concerned with the current obsession for speed. Most folks perhaps don't realize that 70 miles per hour on rough water is similar to driving a car 70 mph over a plowed field. Dangerous? You bet. Most anglers aren't capable of handling a boat at that high speed. Common sense dictates boat speed just as it does automobile speed. So drive safely and wisely.

Buy wisely, too. Any boat is a poor choice if it doesn't fit the fishing you do. When you shop for a boat, consider

two things: First, what type water will you fish most — small or large? Second, always consider the Kansas winds in your decision because they are unavoidable. Color, price, power and compatibility to your trailering rig may all figure in your decision. But the stability and maneuverability of your craft should be foremost.


If you're a serious fisherman, you'll want a motor designed for that boat. Sure, we can all go out in a rowboat and catch fish, but half the day is spent rowing. Planning to fish big water? Buy an appropriate outboard. It will shorten your trip as well as be safer on rough water.

If you're a black bass angler or plan to fish lots of shoreline cover, a front-mounted electric motor is a must. An electric trolling motor (about \$300) will increase your mobility and let you quietly approach those fishing holes.

Another important option is a

depthfinder. Sometimes mistakenly called fish finders, these little machines can show water depth, habitat, even images of fish. Many fishermen recognize depthfinders as necessities, not options. Good depthfinders will cost \$200-\$300.

Boats can be rigged according to taste. There are never-ending lists of options and gadgets available . . . if you want to pay the price. Fiberglass wears well and needs little maintenance. Package deals can be attractive since the high cost of boats today lies primarily in the engines and accessories. Boats complete with motor, trailer and many of the popular options are available from the factory.

Whatever boat material and design you prefer, buy carefully, operate that boat safely and you'll find time spent fishing is suddenly much more enjoyable than it had been. And probably a lot more productive. 





by Paul G. Koenig

## A Caller, A Calling

In the spring of 1917, a Tennessee turkey hunter called an Eastern gobbler into shotgun range for his 8-year-old son. The son, sitting to his father's left, pulled the trigger when told. He'd been turkey hunting at the man's side for several years, but this was the first time the son got to kill the gobbler.

The father, congratulating the youngster, said simply: "You see how it's done, boy. Now go out and do it."

The boy meant to do it again, but first had to learn how to use the home-made caller he'd been given. Four years later he'd learned well enough to lure a gobbler into range. Killed it cleanly, too. The boy continued his apprenticeship and today, 65 years later, Millard Inman plays the sweetest series of crisp clucks and throaty yelps you've ever heard. And all on a turkey caller you can't buy in a store. Inman wouldn't sell you one, either, although he may offer to make one for you. The callers are that special to him.

Inman, 78, runs a fish camp on the Coosa River in central Alabama. He'll talk fishing with you anytime, but he'd rather talk turkey all the time.

Ask him about the history of the caller, for example. Inman's father showed him how to craft a piece of walnut or cedar into a bar soap-shaped Stradivarius, how the old flattop nail must be seated into the wooden block using pine splinters as wedges. Then Inman will show how the Arkansas softstone must be stroked over the canted nailhead to produce just the perfect tone, the correct cadence. Hand position is important, too. If the hands don't work as one, if the sound chamber isn't cupped properly, the caller will produce noise, not melody.

Whatever the sound, Inez Inman has tolerated it for 57 years of marriage. She's used to the routine by now. When Inman is making one of his callers, he won't put it down till the music is in the same key as the one he carries on chilly spring mornings.

Mouth callers? Peg-and-slates? Wingbones? Keep 'em. Inman always carries two of his callers in addition to a box call he uses for gobbling. The backup piece, by the way, isn't really a



Mike Miller illustration

backup piece. It's an extra for when fellow hunters ask to try his caller. The inquisitive will pull the block-and-nail piece sharply over the stone. This thing looks like a peg-and-slate, they'll think. That must be how it works. But their efforts often produce only squeaks. Off to the side, Inman will cringe, patiently show the interested hunter how the call works, then silently give thanks that this fellow wasn't messing with his personal hunting model.

An Inman caller may be special, but the man's turkey-hunting outfit sure isn't. Inman's only concession to the camouflage craze is a camo coat and cap. He wears dark green or black pants but no face net or gloves. The toms he's killed haven't noticed.

And there have been *many* toms who've walked into a load of Inman's 3-inch magnum No. 2s. Each gobbler came in differently, Inman assures. He'll swear, too, that he can remember every gobbler he's ever taken, enough to tax a computer's memory. He hunted one bird, in particular, for 12 successive mornings. In that time Inman learned that this gobbler was tight-lipped in the morning but quite the talker during the afternoon. With that in mind, Inman owled at the tom

early one afternoon. The tom double-gobbled, then triple-gobbled.

A conversation ensued and lasted until 3 p.m., when the bird hushed. Inman froze and listened as the tom came in and slowly circled the questionable tree trunk. An hour later Inman gently shouldered his shotgun and shot the bird as it walked into full view. Down went a 12-inch beard, a set of 1½-inch spurs and an 0-for-12 batting slump.

Millard Inman is a proud turkey hunter but not one to brag on beard and spur lengths. These days, however, he is bragging about a 14-year-old friend who, using an Inman caller, worked in and killed his first Eastern gobbler. The boy did just as the master had instructed and set up near a stand of pines that had been sheltering one particular tom. From there the boy yelped, and the turkey responded. So quickly, in fact, that it sprinted directly for the seductive yelper. The youngster's shot was on target.

Inman congratulated the rookie turkey hunter and no doubt reminisced to the spring of 1917, someone else's first gobbler and the words that have led to lifelong calling.

"You see how it's done, boy. Now go out and do it."





