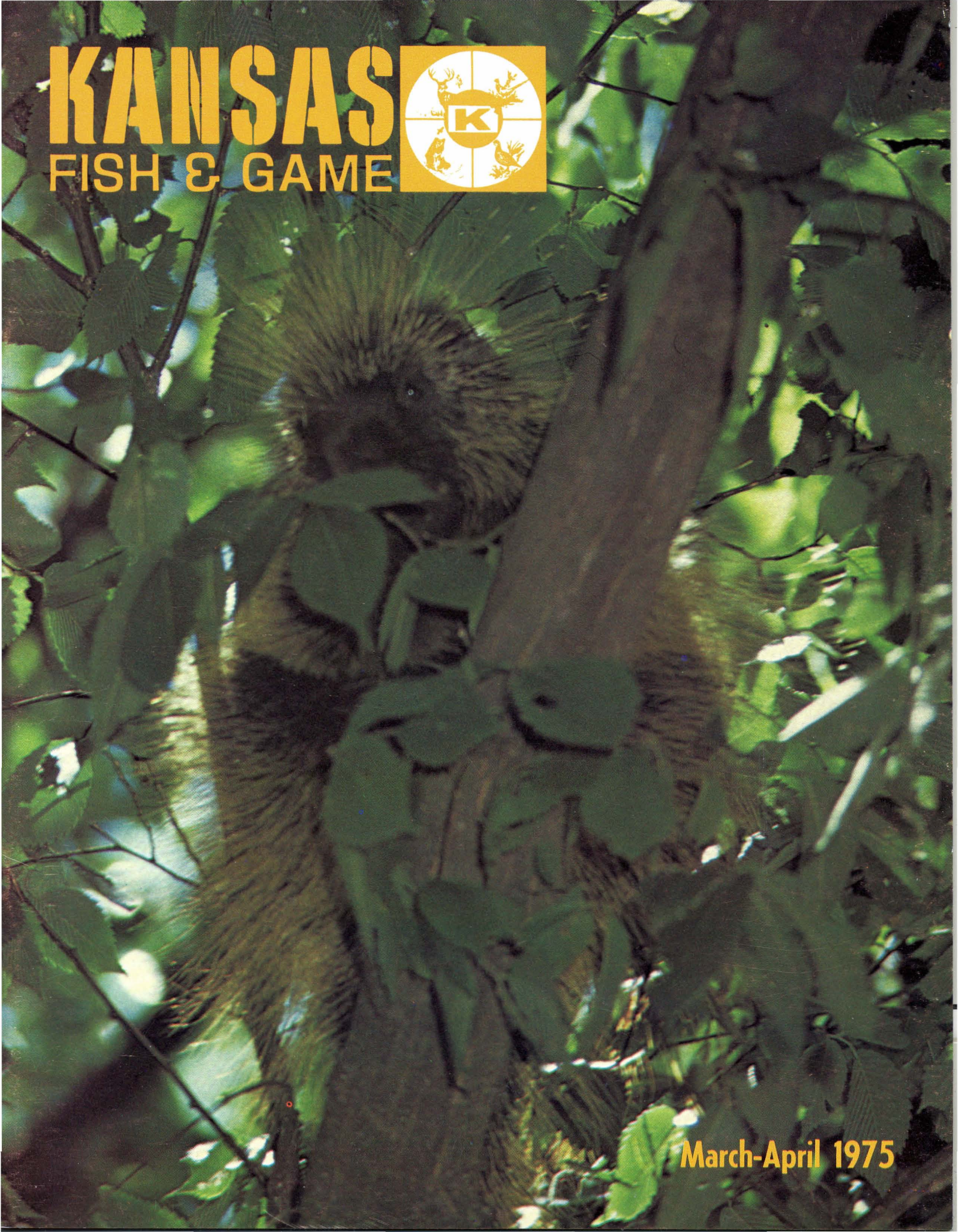


KANSAS

FISH & GAME



March-April 1975

KANSAS FISH & GAME



March-April, 1975

Vol. 32, No. 2

CONTENTS

A Cat By Any Name <i>by Vic McLeran</i>	1
Angler's Guide to the Northeast's Big Four <i>by Bill Scott</i>	5
The Hunter Ethics Award <i>by Paul Bocquin</i>	11
Take Care of that Gun <i>by Farrell Brewer</i>	16
Chiggers in Kansas <i>by Edward A. Martinko</i>	19
FISH & GAME FORUM	20
OUTDOOR BOOKS	21

COVER PHOTOS

Front cover—Porcupine. Kodachrome transparency by Ken Stiebben.

Back cover—Eastern yellow-bellied racer. Kodachrome transparency by Ken Stiebben.

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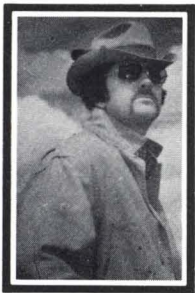
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YOU HEAR him called different names in various parts of the country: he's "forktail" in Tennessee, a "spotted cat" in Iowa, a "fiddler" in Arkansas, a "barbed trout" in Texas and ichthy-



McLeran

logy textbooks refer to him as *Ictalurus punctatus*. But regardless of which name he goes by, the channel catfish is one of the most popular sportfishes around. And in Kansas, it's a tossup between the channel catfish

and the largemouth bass for angling popularity. A smooth-skinned, slender-bodied fish, the channel is garbed in various shades of sliver gray. In some waters the fish's top side is brown to olive-green. Sometimes it's bluish with the sides a lighter yellow or tan with dirty white undersides. Albinos, with cream-colored bodies and pink eyes, are occasionally taken. But these albinos don't last long in the wild state since their conspicuous color makes them an easy mark for predatory fish and turtles. Then too, the fish "sun-burn" easily because of the lack of pigment in their skin.

There are times when the channel cat's color assumes a slate-blue cast. This has prompted some anglers to refer to these blue-colored channel cats as "blue cats." The blue, however, is an entirely different species, distinguished from the channel cat' by having 30 or more rays on its anal fin. The channel on the other hand, is limited to less than 30 of these rays.

The Fish and Game Commission has tagged and released a number of blue catfish in the Neosho River and Marion Reservoir. Anglers catching tagged fish should send these tags to the nearest Fish and Game regional office or give them to their game protector.

In size, the channel cat' ranges from one or two pounds up to the current world record of 57 pounds. This giant was hauled from the waters of Santee Cooper Reservoir in South Carolina

A CAT BY ANY NAME

By Vic McLeran, Editor

back in 1960. The current Kansas record on channels is a 32-pounder that was taken from Gardner City Lake in 1962. The average fish taken in Kansas is of course, much smaller, averaging from less than a pound up to four or five.

Incidentally, the daily creel limit on channels, blue cats and flatheads in any combination of these species cannot legally exceed 10 fish in all.

A popular sport fish, the channel cat' is found statewide. You'd be hard pressed to find a creek, river or lake in Kansas that didn't contain some channel catfish. The species' original range included the St. Lawrence basin west to Montana, Wyoming and the prairie provinces of Canada. The fish was then found southward to the Gulf states, Texas and into Mexico with its greatest abundance in the Missouri-Mississippi River systems. Through introductions and stockings, the chan-

As evening shadows shroud the lake, Dave Asbury, Liberal banker, leaves with a string of fat channel catfish.

Ken Stiebben





Allen Holt, Longford, and Mick Crawford, owner of Mick's Bait Shop in Wakefield, display a string of hefty channels taken from Milford Lake.

nel cat' is now found far from his original range. Even some of the Hawaiian Islands have channel catfish as the result of stocking procedures.

In Kansas, the Fish and Game Commission annually stocks thousands of channel catfish in both private and public waters.

Catfishes as a group are among the most common fish in the world, represented by at least one of the 11 known families on all continents. The channel, like other catfishes, gets his name from the fleshy barbels extending from around his mouth. These barbels resemble the whiskers on a cat's jaw and they give the channel cat' a fantastic ability to taste. These barbels are equipped with taste buds and allow the fish to taste the water for food. In addition, catfish also taste with tiny taste buds on their skinless body and on their tail. Recent fisheries research has shown that the muddier the water

becomes, the more of these sensory buds are activated on the fish's body. This occurs because the fish is less able to use its eyes in locating food. Therefore, when a new lake or pond fills and remains turbid, you can usually expect it to be a better producer of catfish than of "sight-feeding" fish like bass.

The channel cat', like other fish, also has the ability to "smell" underwater. Behind the nostrils are two sacs, lined with smelling organs. Water constantly circulates through these organs, enabling the channel to smell various baits and foods in the water.

These fish "hear" or sense vibrations through their lateral lines—a tubelike organ running down their sides. On some fish, like the largemouth bass, this organ is visible as a dark line, but in the catfish, it isn't as obvious. This lateral line contains a number of sensitive nerve endings and pores which

pick up movements and noises in the water or around the water's edge.

While most of the catfish's senses are acute, its eyesight is poor by human standards. With the refraction of light on water, ichthyologists say fish see objects on land as if they were looking through a distorting glass window. Also, fishes' eyes are designed to focus in water, not air and when they're taken from the water their vision becomes blurred.

The annual cycle for a channel cat' begins in late May or early June after warm spring rains have raised the water temperature to around 80 degrees. The male channel cat' then selects a nest site; an old muskrat den or beaver tunnel in the side of a creek bank, a washout beneath submerged tree roots or any other hole that affords him protection during the spawning process. In farm ponds or small watershed lakes, old

10-gallon milk cans make excellent spawning sites for these fish. For best results these cans should be punched with holes and placed in two or three feet of water with the mouth of the can facing the center of the impoundment. The holes are required to let air bubbles escape from the can.

After enlarging and cleaning the nest site, the male locates a "ripe" female and coaxes her onto the nest. There, depending on her size and age, she deposits from four to twenty thousand eggs. These eggs, each about half the size of a pea, appear as a large gelatinous mass that resembles a handful of tapioca. Her part of the spawning process completed, the female swims away.

But the male stays, constantly fanning the mass with his tail to prevent silt from covering the eggs. This fanning motion helps prevent oxygen depletion within the nest chamber. The male also drives off nest predators like snapping turtles and fish that would eat the eggs.

The young fish or "fry" as they're called, stay in or near the nest for several days. Within a week or so they have absorbed the egg sac which encased them. Gradually the young channels drift away from the nest, moving out into shallow water and along rocky riffles. During winter, the young catfish leave the shallow areas for deep pools but return in the spring.

Growth, maturity and weight gains in channel catfish vary according to longitude. In the North, where growing seasons are short, catfish mature and gain weight slowly while their southern counterparts mature earlier and gain weight more quickly because of the warmer water and longer growing seasons. In Kansas, biologists say a five- or six-pound channel cat' is generally seven or eight years old.

Life is full of hazards for a young channel catfish. He must evade hungry bass and bluegills, sinister turtles and water snakes, stalking herons, dive-bombing kingfishers and glut-tonous raccoons. But the channel catfish isn't totally helpless. Like other members of the catfish clan he has a defensive armor of three sharp stiff spines. One is located at the front of

the dorsal fin while another is found on each pectoral fin. These pectoral spines are bathed in secretions from a pectoral poison gland. The venom isn't nearly as potent as that of venomous reptiles, but it's strong enough to sting like mad for a few moments on the hand of a careless angler. Wary of these spines, some catfishermen keep a leather glove in their tackle box to use in unhooking catfish.

Predators on small catfish, like bass and water snakes, have been found impaled on the cat's sharp pectoral spines. Occasionally the predators were in the process of swallowing the catfish when the spines penetrated the sides of their mouths. A five-pound largemouth bass which had swallowed an eight-inch catfish was found dying. Its stomach walls had been punctured by the cat's pectoral spines.

Mike Smith, Topeka, struggles with a mixed string of channel cat', bull heads and bluegill.



Vic McLeran

Generally the first two or three years of the channel cat's life is the most dangerous with respect to natural predators. At this stage of the fish's life it's important to have adequate cover in your pond or lake. Under project SASNAK, fisheries biologists have constructed a number of fish shelters in reservoirs and state lakes which will provide feeding, loafing and protection sites for young channel catfish and the young of other gamefish.

Later, as the channel catfish achieves frying-pan size, his biggest problem will be staying away from anglers who offer chicken blood, a gob of worms, beef melt, crawfish tails or cheese bait—impaled on a No. 2 Eagle Claw.

Basically nocturnal in its habits, the channel catfish usually spends the day holed up in an undercut bank, beneath a sunken log or under a brushpile. As shadows fall along the river, he'll ease into the current tasting and smelling for food which includes just about anything that doesn't eat the channel cat' first. A partial list includes aquatic and terrestrial insects, river clams, crawfish, frogs, all sorts of fish (dead or alive), fish eggs, worms, vegetation, wild grapes, mulberries, elm seeds, "cotton" from cottonwood trees and any animal matter that might wash in regardless of how decomposed it might be. In fact, channel catfish seem to like their food fairly ripe. Feeding as they do, on dead animals, birds and fish, catfish are great scavengers and cleaners of rivers and lakes. In Wyoming, stomach analyses showed that channel catfish were eating young carp, suckers, discarded entrails of game fish, small birds, rats, mice and frogs.

Large catfish, just like large bass, have their favorite haunts. Successful setline fishermen know that as soon as they take a large channel from a good spot, sooner or later another lunker will take up residence in the same area. They set their lines accordingly. But channel cats can be great travelers too. Some channels which were tagged in the Colorado River were later recovered great distances away, the farthest being 76 miles from the spot they were tagged.

Because of the channel cat's nocturnal habits, fishing for the species is usually best at twilight or after dark. But if they're hungry enough and the angler has plenty of time, channels can be taken during daylight hours. It's a good bet to fish for channel cats during or immediately after a rainshower. Natural foods are washed in during these periods and the fish often go on a feeding spree.

Not long ago I was down on the Verdigris River chatting with an old-timer who was fishing for channel cats. Suddenly his rod tip dipped sharply.

The old man leaned back, setting the hook in the channel cat. After playing the fish for several minutes, he eased it onto some rocks at the water's edge. As he reached for the fish, it gave one final flop and a pectoral spine slashed the old man's thumb.

"You dirty rotten . . .!" the old-timer yelled, his thumb pumping crimson. It was a new one on me because I'd never heard the channel cat' referred to in exactly that manner. But regardless of what you call him, the channel catfish is one of Kansas' finest gamefish.

Grinning proudly, Tom Smith, Topeka, shows off a nice five-pound channel catfish.



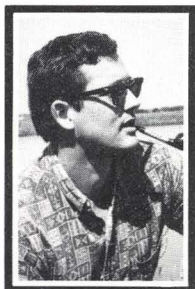
Vic McLeran

Perry, Pomona, Melvern and Tuttle Creek

Angler's Guide to the Northeast's Big Four

By Bill Scott, Staff Writer

IF YOU'RE one of those guys who can go out to your favorite reservoir and knock the heck out of two- to five-pound walleye or scornfully toss back two-pound largemouth or lug home a gunnysack of dishpan crappie when the other fellow is still looking for his first fish, do yourself and me a favor.



Scott

Read no further. I sit at your feet. I burn incense to you every night. I'd also like to be your friend. Like Mr. Rogers' Neighborhood, my neighborhood has lots of room for friends like you.

But let's say you're new to reservoir fishing. You're sitting there in your recliner with that faraway look your wife easily recognizes. Let's say you're wondering about what kind of boat, motor, baits you'll need to fish the northeast's Big Four. Let's say you're a little bewildered how to know how to fish for what, where, when and how. Let's say you've been a pond fisherman or done nothing more complicated than offer worms to bullheads down at the "crick."

If you're sitting there, you're my man.

Well, I've told you what the article is. Let me tell you what it isn't.

It isn't gonna make an expert out of you. You won't march forth after reading this and be Harold Ensley or John King or Ralph Cramm. Reservoirs are complex critters, and you get to be a gentleman of their stature by being more than whimsically acquainted with your outfit and body of water.

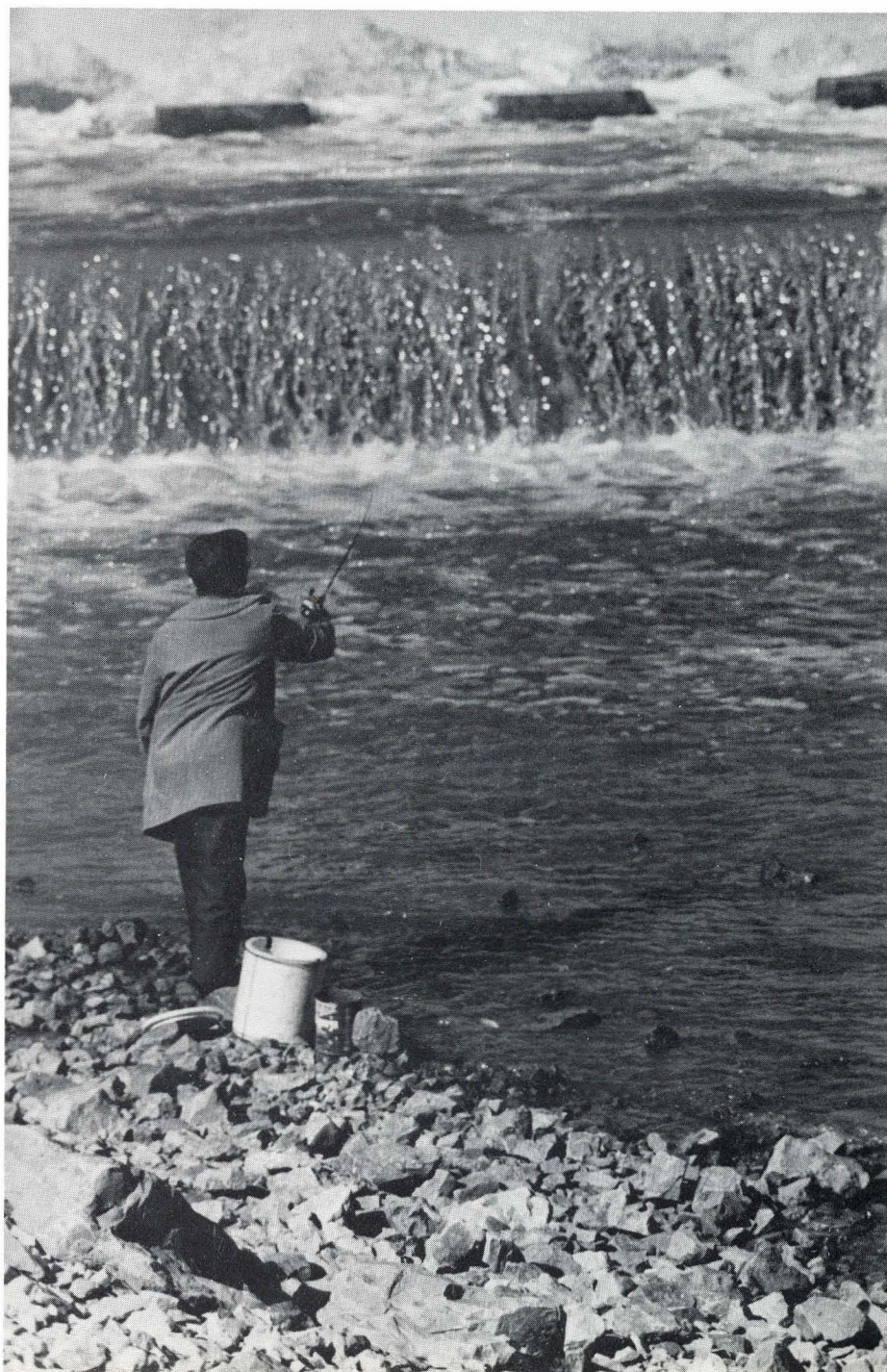
What might happen if you and I

are lucky is that you'll go out and be just a little better off than fishing Perry, Pomona, Melvern and Tuttle

Creek like the blind men feeling the elephant.

What about Perry, then?

You don't need a boat to catch fish around the northeastern reservoirs.



Ken Stiebben



Pontoon boats and shoreline camping trips are popular with anglers of all ages on the state's northeastern lakes

According to Jim Goudzwaard, fisheries biologist at Perry, we're dealing with some "pretty varied" habitat types. Perry's deep—going down to 40 feet and more near the dam. There are sharp dropoffs abounding in all areas where a gentle slope gives way without warning to 20-foot depths. More specifically, Rock Creek, Thompsonville, Perry Slough and the wilderness area of the state park are all dropoff areas.

Moving northward Perry gradually slopes into mudflats and upper end vegetation bobs, partially submerged, in certain areas.

As you continue motoring northward and enter the Delaware River, Jim suggests that extreme caution be used or you'll have a motor that will be missing its prop. Soupy river mud has filled in much of the area and it can rack up your outfit. The channel cat fishermen probably have a good idea—they use the Valley Falls boat-ramp and avoid the mudflats. However, like a good neighbor, the Valley Falls Lions Club puts buoys in the old river channel each summer to mark the navigable areas. Jim does feel strongly that it's best, though, that if you use a boat you should use a depth finder. It'll save broken props

and help you find fish. All the northeast biologists, by the way, agreed with Jim.

There was similar unanimity in the biologists I interviewed on what kind of boat and motor a fisherman needs. While it's true you don't have to have a boat to catch fish in the northeast reservoirs—creel census data is already revealing the weekend boat fisherman the least efficient in catching fish, apparently because he is out there only when the job allows—the serious angler after bass or walleye does need it. On other species of fish, it's a bit of a toss-up as to who catches more fish—the shore or boat fisherman. A little more on that as we move along.

Anyway, our biologists are quite happy with their outfits, and recommend them to you. A 16-foot flat-bottom pram, or "john boat," with a 40 h. p. motor is a good, all around fish getter. If you're a bass fisherman, you might want to plunk down a little more dough and purchase an auxiliary electric trolling motor. A 40 h. p. outboard will get and gallop, getting you from bass hangout to hangout, but it's a little tricky to troll with a 40. And you must have suitable personal floatation devices, whistle and lights on your 16-foot craft.

All of this does add up to money. With a \$340 trailer thrown in, we've been talking about roughly a \$400 boat and a \$570 motor, for a total of a shade more than \$1300.

If this takes your breath away in the economy's infla-recession we're in the grip of, let me emphasize you don't have to have a boat to catch fish as long as you're not choosy about kinds of fish you catch. Jim said, "I feel that the boat fisherman is probably more successful in catching game fish (largemouth bass, northerns, walleye), while the shore fisherman catches the rough fish (carp, buffalo, drum). It's about a toss-up for panfish (crappie, bullheads, bluegill). For channels, a game fish, you naturally need a boat to set lines."

Let's talk a little about what species where and how at Perry. For example, the likelihood of white bass coming on at Perry is netting Jim dozens of questions. He stated, "White bass are coming at Perry! They're showing up for me in my shoreline seining, and I'm getting some reports of fishermen catching them. There are millions of gizzard shad at Perry, too." The presence of gizzard shad at Perry doesn't make Jim a bit unhappy—gizzard

shad are a favorite food fish of white bass and other game fish. Little Slough Creek and the lower Delaware are the places to go.

Largemouth bass have an excellent population at Perry, and Jim recommends you try Rock or Slough Creek arms. "Both have exposed trees in about 10 feet of water right up along the shore in spring and early summer," Jim remarked. Then he smirked. "But as one Topeka angler said, 'All you need to catch bass at Perry is a boat and 50,000 casts.'"

Crappie at Perry? Well . . . "If we get good growth crappie fishing may be fair at Perry," said Jim. "We've got harvestable size crappie, but they're skinny fish." Jigs are a "must have" for Perry crappie, particularly the old standbys $\frac{1}{8}$ - $\frac{1}{16}$ oz. yellow or whites. Shore fishermen do well for crappie at Perry, and the areas the jig jumper will want to concentrate on include Little Slough Creek and the lower part of the river, as well as at the outlet.

Channels are just great at Perry. "Try it in the extreme upper ends of Slough or Rock Creeks in the exposed timber. Best of all is certain areas of the Delaware River, particularly after a good rain produces a rise in water levels," Jim said.

And you can't talk about channels at Perry without talking about the reservoir's real oddity, the "green" worm. Jim explains, "You can find 'em only in certain areas of the upper Delaware. They're in moist but not soupy soil. Look for worm holes and you'll dig them out rolled up into balls. We've got wild stories of their juices hitting you in the eye causing blindness circulating up here—they stink, but boy, do they catch channels!" Jim is doing research presently to learn whether the greenies are simply earthworms that peculiar soil composition turns them green, or what.

Walleye fishing is better at the outlet than anywhere else—the trouble is, snaggers know that too. The Fish and Game Commission closed the area to fishing twice the past year because of rampant snagging. If fun and games persist below the tubes this year, the Commission may be

expected to take whatever action is necessary to curb it once again.

POMONA RESERVOIR

"All three habitat types are found at Pomona," fisheries biologist Rick Hunter was saying—"mudflats, rocky shores and flooded timber. A sloping gravel shoreline predominates."

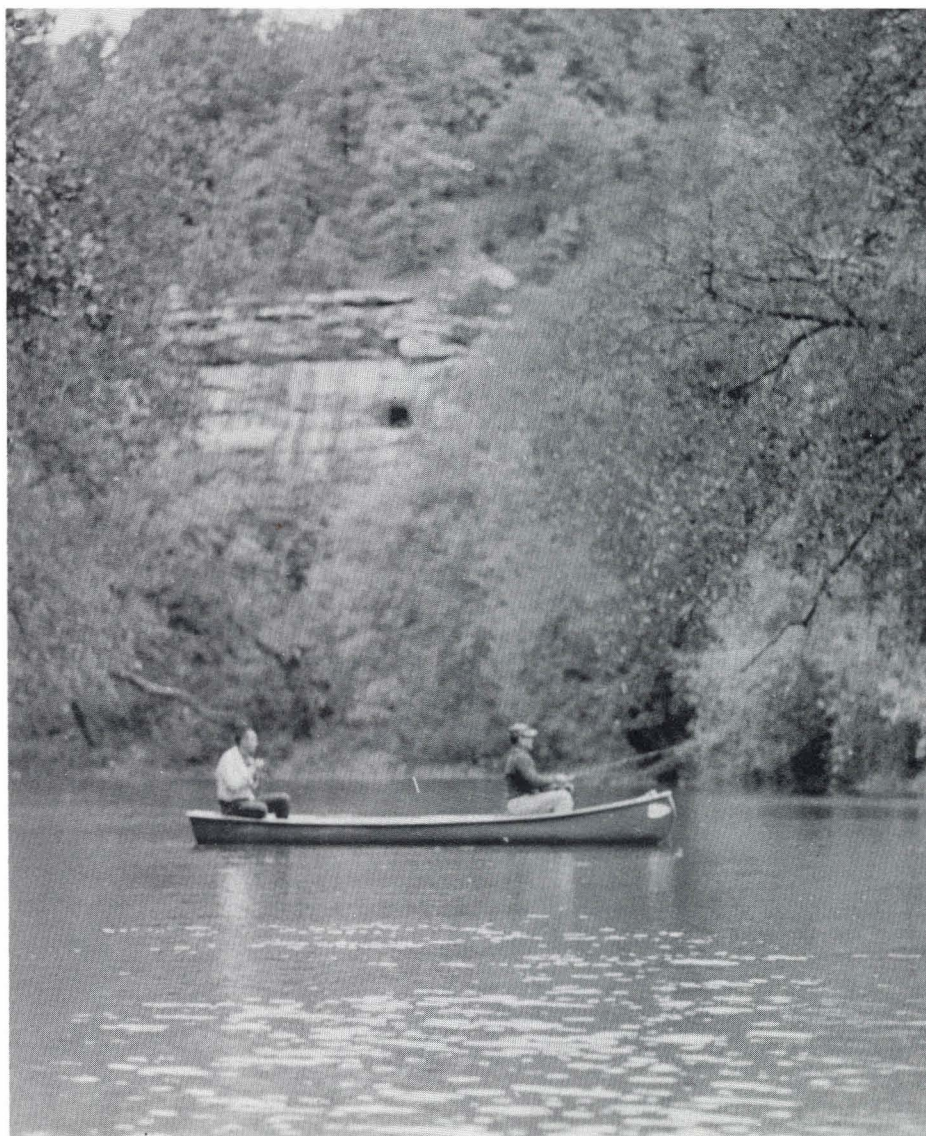
What most experienced northeast Kansas anglers think about when they think about Pomona is walleye. The star attraction "should continue to do well," according to Rick. "We've got an excellent walleye population, but most people don't know how to fish for them. Most people go after 'em off the riprap or in the stilling basin during late March or April. I recommend they try trolling around ledges and dropoffs in the lake with yellow or white Hellbenders or use minnows with a minnow harness. And when

you catch one walleye, stop!" Walleye are schooling fish and where there's one there should be two, or three, or . . .

Crappie nosedived at Pomona recently, but better days are not far off. Rick explains, "Crappie appear to be cyclic. Two or three years ago they were really catching 'em. Then it slacked off due to natural old age mortality. But crappie are not a prized forage fish for predators such as bass and walleye, and the remaining crappie got off a big spawn, then died of old age at four or five. It's my belief that more crappie are dying of old age at Pomona than are being caught by anglers. And crappie have a tremendous reproductive potential and it's virtually impossible to overharvest them in a large reservoir."

"The spawn those leftover adult crappie produced has resulted in tre-

Canoes are becoming increasingly popular with anglers who fish the coves and arms of large lakes.



mendous numbers of one- to two-year-olds that are now in Pomona. These fish will grow and in another two years crappie fishing will be good again. The food supply is adequate and growth will be good."

Try it with minnows in cold water, jigs as the water warms in Cedar, Wolf and 110 Mile Creek arms for Pomona crappie.

It'll be '76 or '77 before white bass will be catchable size at Pomona. Rick is seeing "lots of little white bass," however.

Largemouth bass continue to have trouble at Pomona. Water level fluctuations during spawning season are mostly to blame, Rick feels. Reservoir operations to control spring rains produce water level fluctuations that bass eggs cannot tolerate. Rick explains, "Turbidity (muddiness) has really hurt us on the bass. Egg hatching success has much to do with light penetration. For example, in clear reservoirs the light adequate for hatching may penetrate to 30 inches or more. If the eggs are spawned at 15 inches, let's say, water levels can rise up to 15

inches and there will still be a successful spawn. On the other hand, in a turbid or muddy reservoir like Pomona adequate light may penetrate only 18 inches. If the bass spawn at 15 inches, they could tolerate only a three-inch rise."

Walleye haven't been hit like the largemouth because the walleye pull off their spawn in March and April and water levels are more stable then. The largemouth, spawning in May and June, are hit squarely by heavy spring rains raising water and turbidity levels.

Another fish suffering from under-harvestation is the channel. "About 50% of 'em are harvestable, but many of 'em are just 11-12 inch stuff. To me, there are more fish than there is food available for optimum growth," said Rick. Channels will hit minnows all year around in just about all areas at Pomona.

MELVERN RESERVOIR

The youngest of the northeast reservoirs, Melvern features a rocky gravel shoreline in most areas. A deep, clear-

watered reservoir, fisheries biologist Ron Walter is looking forward to good crappie fishing this spring and summer. With a large number just entering the keeper size, Ron leans toward the marina cove breakwaters, the rip-rap along the dam and constructed brushpile areas as the best bets. Try it with jigs and minnows.

Largemouth bass also have Ron optimistic. "Good populations with a lot of young-of-year and other class sizes are established also. There'll be a lot of bass caught that will be less than a pound, but there are enough larger ones in there that serious bass fishermen should end up with a few good ones." Fish the small flooded trees, or "stickups," in coves. The same baits as crappie will produce.

As with most young reservoirs, Melvern has "fantastic" numbers of bullheads. Fishermen need dead or live minnows to catch the bigger bullheads, while worms attract the smaller stuff. Tiny bullheads traveling in clouds through the water as they do, are easy pickin's for predator fish. This may account for their slowly dy-

The various reservoir spillways offer excellent fishing at times.

Ken Stiebben



ing out as the years roll on. Bullhead fishermen, where are you when we need you?

"Whenever there is an increased outflow below the spillway, the fisherman should check it out for drum, channels and flatheads," Ron said—"and I'm just in the process of stocking two ponds below the dam. Numerous farm ponds dot the Melvern land, and they're open to fishing—"nice for kids."

TUTTLE CREEK

Fisheries biologist Bob Domermuth is confronted with five habitat types at Tuttle—the old Big Blue River channel, the mudflat area north of the Randolph Bridge, a sandy shallow area called Garrison Flats, deep rocky areas on the east side and coves that bristle with flooded timber.

Bob pointed out each area has its distinct appeal to certain fish. Channels and flatheads like the northern end of the river channel, while Nebraska carp fishermen find the mudflat area north of the bridge attractive to carp. Single large channels also roam the flats, searching for food.

The sandy area at Garrison is strictly white bass country, while from McIntyre to Carnahan to Oak Canyon coves are good for white bass and walleye. The sharply falling rock shelf is ideal trolling country for both. Coves are for crappie.

Bob feels a boat is a necessity at Tuttle for game fish, with its minimum length 16 feet and nothing below 25 h.p. is a suitable motor. "And any boat put on Tuttle should have substantial freeboard—in other words, clear the water by 10 to 12 inches. Tuttle Creek is too rough for less," Bob said.

Bob recommends a medium action rod, not an ultralight outfit. "The fight's more exciting with an ultralight, but you'll lose more fish."

Crappie are all over. Just listen to Bob's listing: "Small coves off McIntyre Cove, the west shore Tuttle Creek cove, small pocket cove areas on lake's east side, south shore of Baldwin Cove, Army Cove, Girl Scout Cove, and Oak Canyon Cove are all good."

When working white bass, watch



The ever popular crappie is present in good numbers at reservoirs in northeastern Kansas.

for Franklin gulls. Those big white birds are telling you shad are schooling near the surface and both gulls and white bass are in hot pursuit. Get over there as fast as your horsepower can carry you, Bob advises. "When you get into 'em, don't play your fish. Whites move quickly. And when you've finished fishing for the whites, try it for channels on the bottom. They're down there feeding on pieces of shad."

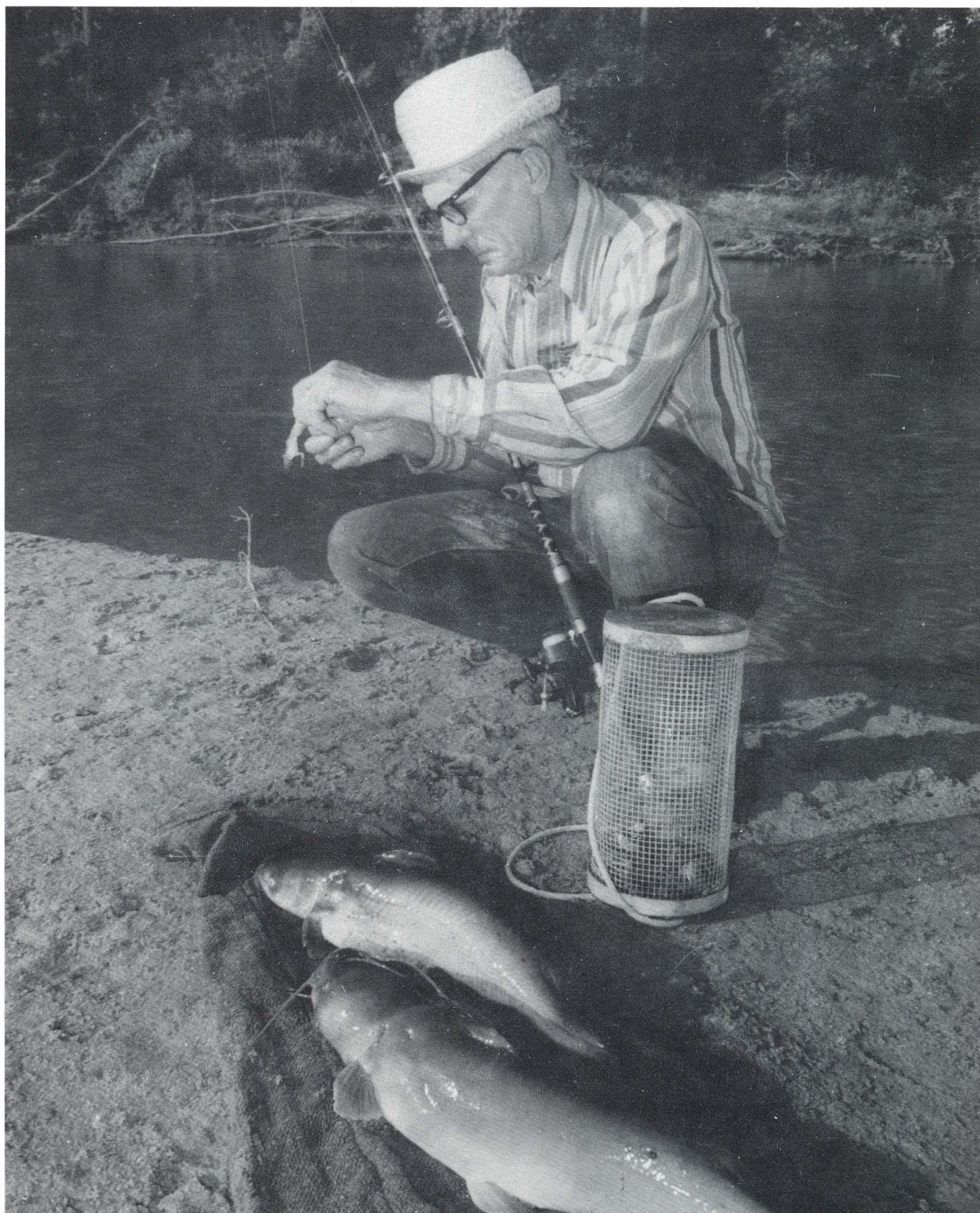
A thriving carp fishery north of the bridge brings in out-of-state money, Bob explained. "Carp fishing in eastern Nebraska is popular," Bob said. "Actually, pound for pound, the carp

is the best fighting fish in Kansas."

Probably the most talked-about fishing at Tuttle is its fabulous flathead resource. "Six flatheads between 58 and 65 pounds were caught in 1974," Bob remembered. Limb or trotlines set in the old river channel north of the bridge and using small carp and goldfish does it. Big channels come out of this same area. A boat is a must—"I've seen hooks barely of legal size come out of there straightened out."

The Northeast's Big Four are big reservoirs, and it'll take a big effort to conquer them.

Are you up to it?



Walt Stieben, Great Bend, baits up with a frog, figuring on adding another channel cat' to the pair of dandies he's just taken from the Republican River above Milford Lake.

KANSAS FISH & GAME



NEWS

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ADDITIONAL ACREAGE AT MELVERN RESERVOIR

(released 1/30/75)

MANHATTAN--Kansas Fish and Game Commission First District Commissioner Art Hanson of Bonner Springs announced today the Commission's approval of interim licensing of nearly 10,000 acres of land and water adjoining Melvern Reservoir.

The licensing has been requested from the U.S. Army Corps of Engineers, and will take effect March, 1975.

The land is located on the Marais des Cygnes River about 10 miles southwest of Lyndon.

R.E. McWhorter, Manhattan, northeast regional game manager, stated that "It is anticipated that following this two-year interim license, these lands will be granted under a general plan and 25-year renewable license."

These lands are riverbottom and upland, purchased by the Corps for the Melvern Reservoir project," McWhorter continued. "Under a 1944 act of Congress and subsequent legislation, these lands are made available for state fish and game agencies to manage for public hunting and wildlife management purposes. These, like other reservoir lands in Kansas, will be managed to increase the carrying capacity of resident game such as quail, deer, squirrel, rabbit and migratory fowl including doves, ducks and geese.

"As this license is consummated, 1975 activities will include sharecrop leasing of agricultural lands with local landowners and planning for future habitat development. These lands will be available for hunting in 1975 and will be posted as public hunting lands," McWhorter said.

Fisheries personnel have been developing the fishery resource also at Melvern, with stockings in 1973 and 1974 of walleye, northern pike and largemouth bass.

CORRECTION

The Kansas Wildlife Federation was inadvertently omitted from the "Backyard Bird Bundle" article in the Jan.-Feb. issue. The KWF is one of four agencies or organizations sponsoring development of backyard songbird habitat.

FISH TAGGINGOPERATIONS UNDERWAY

(released January 1975)

MANHATTAN--Fish tagging operations are now underway in north-east Kansas reservoirs and state fishing lakes, and Kansas Fish and Game biologists are asking the public's help in the project to improve future fishing.

According to Leo Dowlin, northeast regional fisheries supervisor, each northeast impoundment has been assigned a specific color. Among species being tagged are bass, walleye, northern pike, channel catfish and flathead catfish. Each species is being tagged at the base of the dorsal fin, located on the back of the fish.

The tags should be turned in to any Fish and Game Commission personnel, local bait dealer or marina or sent to the regional office. The office is located at 215 South Seth Childs Road, Manhattan, Kansas 66502.

Information needed from each fortunate angler includes the species and tag number, location of the catch, length of the fish, actual weight and condition of the fish.

If the angler wishes to retain the tag as a memento, he may do so but the Commission requests he forward his name and address.

Information gleaned from the tagging program will help Commission biologists determine numbers caught of the various species, movements of the fish, rates of growth and population levels so that a better management program can be developed for each species.

####

DEER POACHING COSTLY IN
WESTERN KANSAS

(released January 28, 1975)

WAKEENEY--Illegal poaching of deer in western Kansas proved costly this week as State Game Protectors continued their crack-down on illegal hunting activity.

Robert E. Roths, 31, of Ransom was charged with shooting a mule deer doe during closed season and Randey R. Randall, 27 of Brownell was charged with illegal possession of a deer. Both men were arrested by State Game Protector Claude Blair on January 19.

Both suspects entered pleas of guilty before Trego County Judge, David Rhoades, and were assessed fines and cost totaling \$259.15 each. In addition to the fines, both men had their hunting licenses revoked and were sentenced to 180 days in jail and placed on probation for 1 year.

####

ILLEGAL CYANIDE USE PROMPTS
WARNING FROM FISH AND GAME

(released February 3, 1975)

DODGE CITY--A rash of violations in the use of cyanide gas for hunting coyotes in southwest Kansas has prompted the Kansas Forestry, Fish and Game Commission to warn that unauthorized use of cyanide or other poisonous gas is a violation of the law.

A permit for the use of poisonous gas guns or devices must be issued by the director, Forestry, Fish and Game Commission, Pratt, Kansas 67124. In no case may the permit be issued until the specialist in predator control at Kansas State University has recommended its use in writing, after he has made an investigation to determine the need for wildlife control.

Permits are limited to landowners and legal tenants of the land on which gas guns are to be used, and an application for a permit must be made on forms provided by the Commission. The application must be accompanied by a legal description of the property and a small map of the area clearly marked to assist in identifying the property.

A permit may be issued for up to 30 days and not more than 10 cyanide or other poisonous gas guns or devices may be used by a permit holder. Each must be marked with a stake and sign within six feet of the device. All signs must be approved by the specialist in predator control at KSU.

As an added safeguard, the permittee must notify all adjacent landowners and tenants in writing, giving the time and place of operation. No device may be set within 50 feet of a public road or public property line, or within one-half mile of any buildings other than that of the permittee.

Cyanide or other poisonous gas guns shall not be set or operated at any time during the legal open game bird hunting season, the regulations state. Furthermore, the local game protector must be notified of any protected or domestic wild animal or any domestic animal that is accidentally wounded or killed.

The Commission director has the right to refuse to issue a permit when, in his judgment, there is a lack of justification, clarity in information stated, or for any reason indicating lack of cooperation.

####

AMPHIBIAN AND REPTILE
GUIDE AVAILABLE

LAWRENCE--Kansas University's Museum of Natural History and the State Biological Survey recently announced the publication of an identification manual entitled, Illustrated Guide to Amphibians of Kansas.

The guide was written by Daryl Karns and Ray E. Ashton, Jr., of the Museum of Natural History. It is illustrated with some excellent artwork by Tom Swearingen, museum artist.

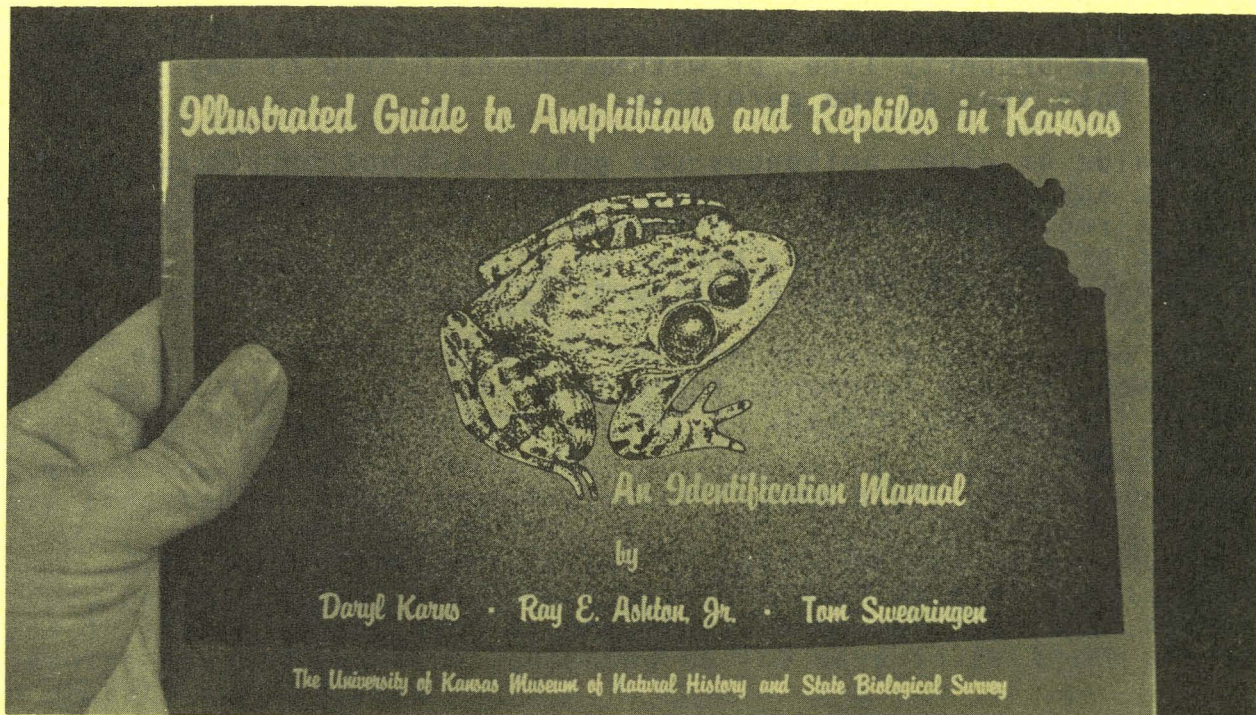
Basically, the guide provides an illustrated flow chart featuring easily observed field characteristics which enables non-biologists to identify about 85 per cent of the Kansas reptiles and amphibians.

"This identification technique was developed by working with students and teachers in our Summer Workshop Program," explained Ray E. Ashton, Jr., the Museum's Coordinator of Public Education.

Prices for the publication are \$1 for individual copies; .75 for orders of 10 and .50 each for orders of 100 or more. The order should be placed through the publications secretary at the Museum of Natural History, University of Kansas, Lawrence, Kansas.

This guide is the first of a series that will include fish, mammals, birds and possibly plants and insects of Kansas. The publications are designed to provide the people of Kansas with natural history information in a popular, readable format.

####



THREE AREAS RECEIVE
CHANNEL CATFISH

(released February 1975)

NEWTON--Three area State Fishing Lakes received catfish for supplemental stocking according to R.W. "Bill Fowler, of Weir, Commissioner for the Kansas Forestry, Fish and Game Commission.

Lyon State Fishing Lake near Emporia received 5,900 channel catfish; Cowley State Fishing Lake located near Ark. City received 2,100 and 1,600 fish were stocked in McPherson State Fishing Lake.

All channel catfish were marked by removing the adipose fin which is the fatty fin on top near the tail. The marking was done to identify the fish in creel censuses which will be taken next spring and summer.

When the fish are caught by anglers they will be weighed and measured to determine their growth rate and numbers taken will be used to determine harvest ratio of the marked fish. When they were stocked the fish were in the six to eight inch class according to Gene McCauley, district fisheries biologist.

Information gained from this project will be used to enable biologists to better manage the fishery potential of the lake.

Anglers who catch the marked fish are requested to notify the Newton Regional Office at 204 W. 6th, P.O. Box 764, Newton, Kansas 67114 giving the length, weight, when and where the fish was caught.

####

\$1.3 MILLION FROM
FEDERAL SPORT TAX

(released January 24, 1975)

PRATT--The Kansas Forestry, Fish and Game Commission will receive about \$1.3 million in fiscal year 1975 as its share of federal money for fish and wildlife projects, the U.S. Dept. of Interior announced.

More than \$280,000 of this amount will come from the 10 percent federal excise tax on fishing gear and will be used to improve sport fishing in Kansas.

An additional \$975,000 of the total will go for wildlife work in the state. This fund is generated from the 11 percent tax on firearms, ammunition and other sport hunting equipment. Another \$74,000 from the 11 percent tax will help fund the Kansas hunter safety program.

####

WORK PROGRESSING
ON NEW OFFICES, WAREHOUSE

(Released January 24, 1975)

PRATT--Construction work is more than half completed on the new office addition to the Kansas Forestry, Fish and Game Commission headquarters in Pratt and only a few more weeks of work remain on the new warehouse.

The office annex which joins the existing headquarters will house administrative, field services and information-education divisions. Brick and block are being laid and the rough electrical and plumbing work is 75 percent completed, according to Jim Lane, engineering technician.

"The building should be enclosed within a month. Then, finish work on the inside can be accomplished," he said, adding that the weather has not caused any significant delays.

Construction was started last June on the 75 x 75 foot annex. The project is expected to take a little less than a year to complete. As work nears completion, the present office headquarters will be remodeled for the remaining division offices. The director, assistant director, fisheries and game division, and personnel office will remain in the present building.

Soon to be completed is the 40 x 100-foot pre-fabricated steel warehouse building. Lane said furnaces have been installed and he estimates that four weeks of work remains on the interior.

The warehouse consists of two main areas divided by a concrete block partition. It will serve as a storage area for supplies and literature used by the administration and information-education divisions. One section will be used for paint storage. The warehouse is located directly east of the new office annex.

In other work, the dike road north of Commission headquarters was washed out in a flash flood several months ago but has since been repaired and is now in use.

####

GAME PROTECTORS
BUSY IN 1974

(released February 10, 1975)

PRATT--According to the Kansas Forestry, Fish and Game Commission, 1974 was a busy year in Kansas for state game protectors as well as violators of state fish and game laws.

According to figures released this week by Harold Lusk, Pratt, Law Enforcement Chief for the Commission, there was a 76 percent increase in arrests and convictions over 1973.

-more-

"Cooperation of the public and other enforcement agencies combined with a concentrated effort on the part of our game protectors resulted in 1,400 more arrests than in 1973," Lusk said.

During the year game protectors checked 44,899 licenses and arrested 3,088 violators resulting in collection of \$53,106.89 in fines. An additional \$26,458.64 was collected for court costs. Money collected from fines is returned to the school fund of the county in which the violation occurred; court costs are retained by the courts.

In addition to law enforcement duties, game protectors presented 691 programs for civic clubs and schools and spent 1,360 hours on hunter safety education. Boating safety work accounted for 3,159 hours.

###

FARMER-SPORTSMAN

AWARD TO WERNER

(released February 12, 1975)

INGALLS--A Gray County farmer was recognized at the Kansas City Sport Boat and Travel Show as the Kansas Farmer-Sportsman for 1975.

Wesley Werner of Ingalls owns a section of land and leases two sections. On four acres at the upper end of his draw, Werner is planting pecan and walnut trees that could produce a crop as well as provide shelter.

Cedars, four rows deep, are being planted at opposite ends of the shelter for protection against wind and snow. Further down the draw, hundreds of cedars have been planted on terraces, followed by Nanking cherry trees and cotoneaster. This will provide thicker cover, Werner explains.

At the lower end of the draw is Werner's pond that covers 18 acres when full. In the center is a screened boat-house-fishing dock. On the south side of the pond, a dike has been built so silt will settle out in the field instead of into the water.

The dike area has been seeded to buffalo grass and bald cypress, and weeping willows have been planted. Pheasants occupy the heavy grass around the dam. The pond provides the best channel cat hole for miles around.

A 25-acre field of milo ties together the pond and a wind-break that is six rows thick with cedar, spruce, cherry and cotoneaster. The area between the rows of trees is heavy with unmowed grass.

Werner said the pheasants spend the night in the wheat stubble and go to the maize stubble to eat during the day. When

-more-

it is stormy or windy, they use the windbreak. He leaves a row of grain sorghum on the outside of every field.

On the opening of pheasant season, Werner cuts swaths through fields of milo stubble with a shredder to improve hunting. He said 35 or 40 birds were taken this season, but the best season he remembered, there were 115 birds harvested by his guests.

####

DEER POSSESSION COSTLY
IN RENO COUNTY

(released 12/19/74)

HUTCHINSON--Robert Strickler, 35, 312 East 3rd, Hutchinson, was assessed a fine of \$500 plus court costs and sentenced to six months in the county jail for the illegal possession of three deer by Richard Rome, Reno County Judge.

Strickler was arrested at his residence in Hutchinson on November 7 by State Game Protectors Mike Smyth, Mike Little and Charles Schmidtberger.

A motion to appeal the case to district court was filed by Strickler's attorney.

####

REGIONAL OFFICE
IN NEW QUARTERS

(released January 3, 1975)

DODGE CITY--The southwest regional office of the Kansas Forestry, Fish and Game Commission is being moved Jan. 6 into new quarters that will provide more space for the increasing workload and furnish more parking facilities, according to John Luft, Bison, third district commissioner.

The new regional headquarters will be located in the former Farm Bureau building, located in the south part of Dodge City on highway US-56. The address is 808 Highway 56 and the telephone number is 316-227-8600 or 316-227-8609.

Regional supervisors stationed in the southwest regional office are Marvin "Butch" Hamilton, law enforcement; Jerry Hazlett, fisheries; Bill Hanzlick, game; and Larry Kerr, field services. Hanzlick and Kerr serve both the southwest and northwest Kansas regions as supervisors but have their offices in Dodge City. Also stationed there are Mike Theurer, district fisheries biologist, and Cindy Henry, clerk stenographer.

####

The Hunter Ethics Award

By Paul Bocquin, Staff Writer

IT was mid-December when Orville Rogers of McCracken, Kansas, was loading his cattle into a truck near the Smoky Hill River. The task was



Bocquin

nearly completed when the last cow broke through the loading chute with both hind feet. The rancher had been working almost an hour to free the trapped animal, when along came Edmund Peters, 13, Route 1, Hays, accompanied by his father and a friend. They had been hunting deer,

and the early evening hour would have been an ideal time to continue the hunt.

During the next half hour, the hunters worked together to free the cow, repaired the chute and helped load the animal into the truck. Grateful for their assistance, Rogers granted them permission to hunt on his land. He later recommended young Edmund for the coveted hunter ethics award.

As of January 1, 1975, there have been 44 boys and girls receiving this certificate of award out of 55,000 students who have successfully completed the hunter safety course. This course is sponsored by the Firearms

Training office of the Kansas Forestry, Fish and Game Commission.

To win an award certificate, the youngster must prove to a landowner that he or she appreciates them and respects their property. This means putting into practice the hunter ethics principles taught in the hunter safety course.

The award is most commonly earned by offering assistance to a landowner, such as Edmund Peters did for Orville Rogers. Another method is by performing a good deed for landowners, such as C. Warren Hunt, Wellington, who receives more than his share of vandalism to his land in Sumner County. When a

More than 55,000 students have successfully completed the Hunter Safety Course.



thoughtful and courteous lad like Stan Randall, 15, of Winfield, comes along, he is glad to recommend him for the award.

"We have had numerous problems with motorcyclists and campers who have felt the urge to cut fences and leave gates open to their own advantage but not to ours," Hunt said.

"This young man has repeatedly herded our cattle back into our pasture and has also offered his services to repair and build fence, which is unusual this day and age. He has displayed good common sense and a background of good teaching."

The first hunter ethics award went to Kent Mahanna, Hoxie, who was 11 years old at the time he came to the assistance of landowner Paul N. Mills, Studley, Kansas. When Kent discovered cattle out on the road, he helped to herd them back into the pasture and passed up a chance to hunt teal on a nearby pond. Mills recommended him for the award.

This award is not restricted to boys. Mary Ellen White, Geneseo, was the first girl in Kansas so honored.

Mary Ellen had completed the hunter safety course in 1973 under Paul Petterson, Little River, a certified instructor. Later, while in the vicinity of the Ed Byard farm, Route 5, Lyons, the teenager discovered two calves out on a public road. She notified Byard, then returned to the scene and herded the calves into his pasture.

"I think this was a very kind and thoughtful deed," said Byard in nominating her for the award.

There are many ways a young person can earn the hunter safety award, according to Royal Elder, hunter safety administrator. For example, if a landowner friend is sick, he could offer his services in assisting with the chores. If a pasture is on fire, he can pitch in to help put the fire out. If he discovers someone has scattered litter on a landowner's property, he can get busy and clean it up. The list is endless.

Some youngsters even work for a landowner to earn the right to hunt on their property, such as David Harding, 11, Route 1, Cheney. He helped put up hay last summer and at

roundup time, helped herd cattle out of the pastures.

A special public relations effort is put forth by John Robertson, 12, Winchester, to work with his landowner friend, Hurlbert Graves, Haigler, Neb. John comes out before daylight to help with the morning chores so Graves can join in the hunt.

"How many hunters, especially boys, will come out two hours early in the dark to help, so a farmer can join their group for a day's hunting?" Graves asked. "John has, and in my book, he is tops."

"Having hunted beside him, I find him to be a true sportsman, handling a gun properly, taking the breaks, never trying to crowd in ahead of another hunter, passing up shots that might cause danger and always identifying his bird before shooting," Graves continued.

The examples above illustrate what the hunter safety program has done to combat anti-hunting sentiment and deteriorating hunter-landowner relations and how it has improved hunter responsibility.

The hunter ethics award and the effort that goes into winning it gives real life examples that most hunters do care about the rights of others and are honorable individuals who will show they appreciate the privilege of hunting on someone's land.

Hunter ethics award winners have been well publicized by local news media. Some have been honored at special school assemblies, called in their honor and attended by officials of the Forestry, Fish and Game Commission. Local newspapers have carried pictures along with a short story pointing out their good deeds. Where TV and radio stations are nearby, they too have provided generous coverage.

In October, 1974, a red rocker or brassard was added to the attractive certificate to be awarded hunters ethics winners. The rocker bears a white star and is designed to be worn under the Kansas Safe Hunter shoulder patch. This new insignia helps to identify the recipient.

In addition to the young people, the rocker and star are worn by volunteer instructors who have taught a student

who qualified for the hunter ethics award.

Hunter safety instructors in each county have been asked to nominate the outstanding man and lady instructor to be honored at the first convention workshop planned for this spring in Salina. An honor society known as the Order of the Buffalo has been formed for this elite group of instructors.

Each instructor so honored will receive a beautiful certificate plus the official pin or tie tack in the form of the buffalo. One member of the Order will also be honored as outstanding instructor for the year 1974 by the Kansas State Rifle Association at their annual convention.

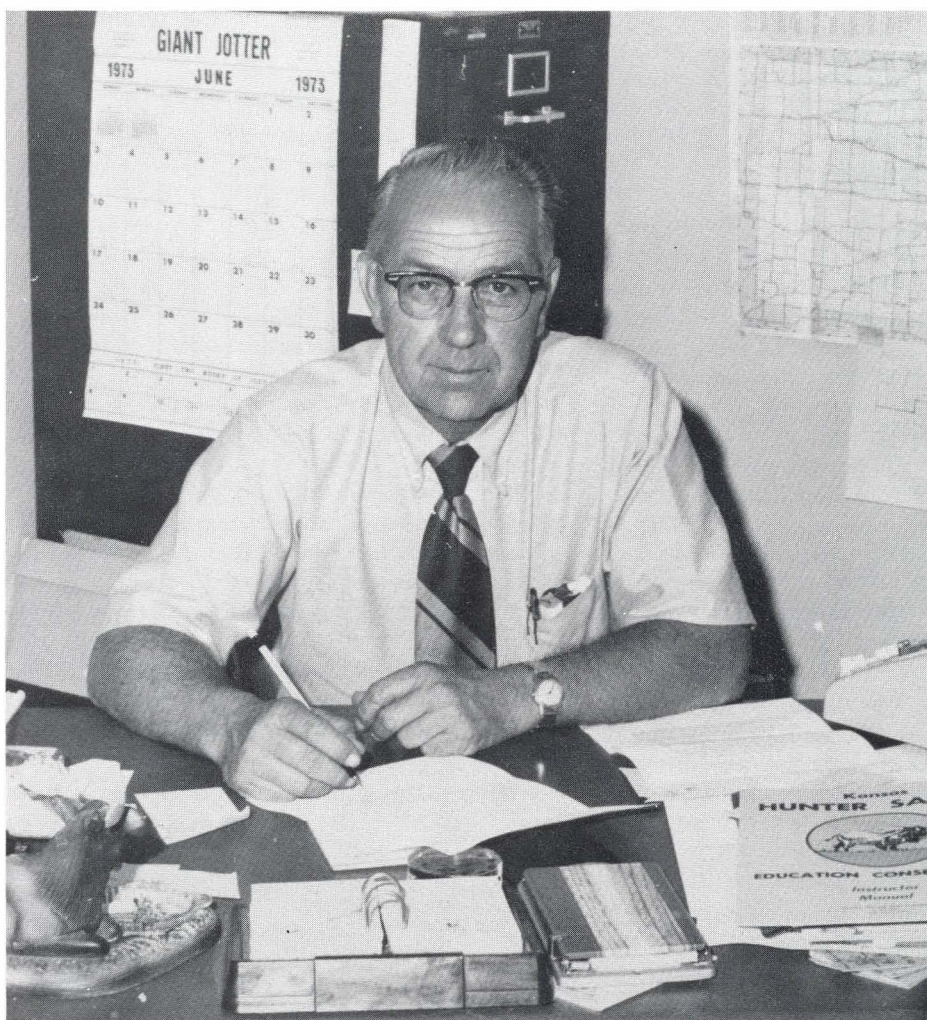
According to a law passed by the 1972 Kansas legislature, anyone who was born after July 1, 1957, must successfully complete the Kansas Hunter Safety Course in order to buy a hunting license or hunt on lands other than his own.

Responding to this mandate from the legislature, the Kansas Forestry, Fish and Game Commission established as one of its goals under Project SASNAK the development of a firearms training program for Kansas youth.

Royal Elder, a 12-year veteran game protector of the Manhattan area, was selected in November, 1972, to spearhead the new program. The course was set up to cover a minimum of eight hours of classroom instruction in four main areas: safe handling of firearms (home and afield), wildlife conservation, hunter ethics and responsibility, and first aid and survival.

One of the basic purposes of the firearms training program was to reduce accidents. Before it was introduced, Kansas averaged 47 firearm hunting accidents annually. Of the more than 200,000 licensed hunters, three died from shooting accidents and 26 were injured in 1974. So while results are evident, more work remains to be done.

Elder noted that two careless errors have caused almost one-half the hunting accidents: swinging on game out of the zone of fire and carrying firearms in vehicles.



Royal Elder, hunter safety administrator, has guided the firearms training program since November 1972, when the program was launched.

Live firing of guns is optional in the course, but where facilities and qualified personnel are available, Elder strongly recommends it.

Youth 16 years of age or younger from out of state who want to hunt in Kansas must also have successfully completed a hunter safety course that meets standards similar to the Kansas program. Those under 16 years old need not have a hunting license but must have in their possession the "certificate of competency" issued upon successful completion of the course.

The Kansas Legislature made graduation from the eight-hour course mandatory for all youth who had not reached their sixteenth birthday by July 1, 1973. Before buying a hunting license, these youths have to show

their hunter safety graduation cards to the license vendor.

The firearm training program operates under the Commission's Information-Education division, rather than under law enforcement, as in many states. In 1974, it was selected in the top five out of 21 states and two Canadian provinces competing for the annual international hunter safety award. These citations are presented by the International Association of Fish and Game Commissioners and donated by the National Rifle Association.

The Kansas program, now beginning its third year, has been labelled by many as the most vigorous and well balanced program in the nation.

Elder said the program is competing

with states that have been in the business of hunter safety for several years. It is significant that the Kansas program has been ranked in the top five during its first two years of existence.

The hunter safety administrator gives credit for the success of the program to the volunteer instructors who conduct the training courses for the young hunters. There were more than 4,100 volunteer instructors in Kansas as of January 1, 1975.

There are volunteer instructors in each of the 105 counties. It is interesting to note that they come from many walks of life, including teachers, lawyers, doctors, veterinarians, ministers, mechanics, law enforcement officers, morticians, truck drivers, engineers, salesmen, ranchers and farmers, including quite a few landowners.

Women and retired persons are also serving as hunter safety instructors. Homemakers, teachers and nursing home operators are among the professions represented by the 150 women volunteers.

In several cases, community effort has promoted the hunter safety program. For example, the Jaycees of Baldwin, sponsor it similarly to the way many groups sponsor little league baseball.

There were 13 local Jaycee members trained and certified as hunter safety instructors. The state approved hunter safety course was offered to the youth of Baldwin during the spring and summer of 1974. A total of 56 young hunters were graduated from these courses. As a result of this effort, a course was incorporated into the junior high conservation class, where about 20 additional students were trained.

The Jaycee community project was entered into regional competition, where it was chosen one of the two top youth assistance projects. The Baldwin City Jaycees then received a third place award in the area of youth assistance at the national Jaycee convention in San Diego.

During its first year in Kansas, the classes were taught to more than 35,000 students. This was an outstanding total, as it was estimated about 20,000 would graduate, based

upon figures from other states with similar programs.

Many of the courses are conducted by school teachers, and guest instructors, in the high school systems on school time. As optional or free-period classes, instructors reported a high number of students with little previous interest or background in hunting became enthusiastic over the course.

A new hunter safety liaison officer program to expedite the firearm training for youth was developed and put into operation December 1, 1974, by the Commission. It was formulated by Elder and the agency's administrative staff.

An agency employee was appointed as a liaison officer in each county. This program was developed for three basic reasons:

1. To create and maintain the best possible line of communication between an agency employee and master hunter safety instructors in each county.
2. To insure the appointment of a certain employee who will be responsible for making sure the hunter safety program is being carried out successfully in each county.
3. To reduce travel time of some employees who must travel a great

distance to perform hunter safety duties.

The Kansas hunter safety program has surpassed all expectations, both in quality of instruction and in quantity of workload. Even the national representatives did not expect Kansas to cover a program of this magnitude in such a short time. But with 55,000 students having successfully completed the course, the results are obvious.

And the hunter ethics award has provided an added incentive that should present a challenge both to students and instructors for years to come.

Kent Mahanna, Hoxie, received the first Hunter Ethics Award in Kansas. On the left is Gene Smerchek, one of Kent's instructors and at the right is Wes Wikoff, district game protector.

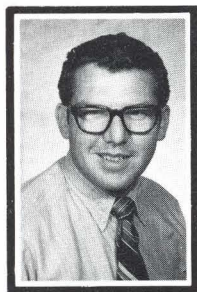


Leroy Lyon

Take Care Of That Gun

By Farrell Brewer,
Staff Writer

ONE OF the saddest sights in the world is a neglected gun. The gun that hasn't been given proper care shows rust where it should have a solid coat of gun blue, and pitting where it should be smooth. And the thing about it that's really sad is that it belongs to a shooter who no longer cares.

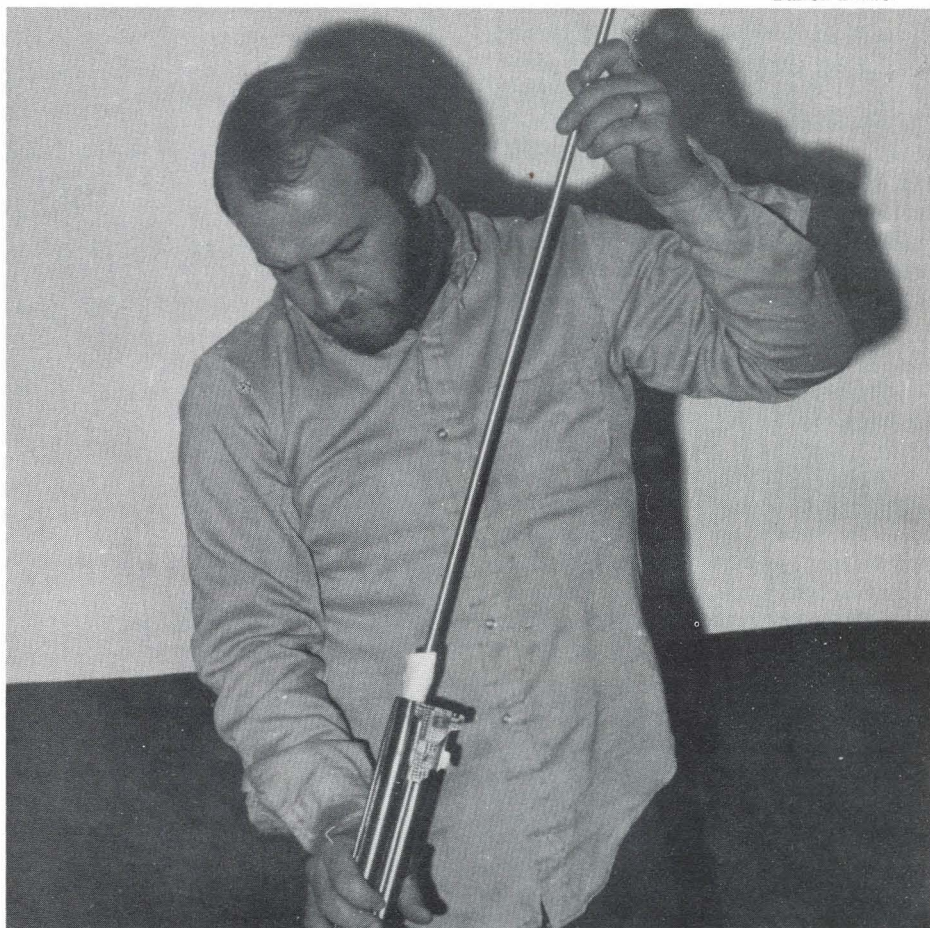


Brewer

Many a soldier grumbled when his drill instructor gave him extra duty for not having his rifle spotless. He grumbled until he realized that you must take care of your gun if you expect it to take care of you.

A gun is reasonably easy to care for, and doesn't require a great deal of time or equipment. You're going to find two different kinds of care that your gun, whatever type it is, will need.

These are preventive, or routine maintenance and corrective maintenance.



John Ford, Newton, applies a dry swab to his Winchester 101.

nance. Your preventive maintenance will keep things from going wrong, provided that it is properly applied, and on a regular frequent, programmed basis.

Why does everyone harp on keeping your gun in good shape? You probably received a lecture from your dad when he gave you your first gun. If you were in the service, I'm sure you received many hours of training on gun care. Again, why?

One reason is basic economics. The gun I purchased ten years ago sold for \$149.00; today the same gun sells for \$299.00. If this gun has received proper preventive maintenance it will hold its value and can be traded on a new one for more than the original purchase price.

I checked with Ronald "Rusty" Rust, head of the David's sporting goods department. He said many guns that people bring in to him for

trade aren't worth taking home and he flat refuses to trade for a badly abused gun.

He said two of the main items he checks for when trading for a gun is a bulged barrel and to see if there has been any welding or brazing done on the gun.

Rusty said the main cause of bulged barrels is by a hunter falling in the mud or snow and not stopping on the spot to clean the obstruction from the barrel. He also said the user is lucky if all that happens is a bulged barrel from mud or snow as guns have been known to blow at the breech near the shooter's face and hands.

All guns are worth more now than when they were originally purchased if they are properly cared for, according to Rusty.

Rusty recommends oiling a gun down before you go afield and a

thorough cleaning upon return from a hunt.

One of the hardest hunting encounters you can put your gun through is a day in a duck blind. The gun is subjected to damp weather and without proper care will rust before you know it.

If you have abused your gun all is not lost as they can be refinished. Stocks can be refinished by the individual gun owner if he will use good judgment and the proper methods. Just like everything, there is a right and wrong way to do it. If you don't know how, go to a library and check out a book on a gun stock refinishing or check with a reliable gunsmith.

Rebluing a gun is a horse of a different color. It will not hurt the trade in value of your gun if done properly. However for a good hot blue job, special equipment and preparation of the metal parts are necessary. Another note of caution is that there are very few outfits equipped to reblue over-and-under and double-barrel guns. The reason is that special care is necessary due to the silver solder used to adhere the barrels together. Check the company's reputation before sending your gun to them.

There are some tips in gun use that will help care for your gun. Rusty said one of his pet gripes is the hunter who uses his gun's receiver to push down barbed-wire fences. Don't lean your gun up against a vehicle; someone will close a door on the opposite side and knock your gun to the ground. This bends barrels, chips stocks and causes other damage. Don't set your gun in the seat beside you; not only is this dangerous as the gun might fall but it will wear the blue as the vehicle vibrates. The proper method is to unload the gun and place it in a case for transportation.

If you are getting ready to trade in your gun, don't waste your time in merely dressing up your gun with cosmetics. A cold blue job won't enhance the trade in value. If you go to a good gun trader he will spot cosmetic dressing as quickly as a good jeweler will spot a glass substitute for a diamond.

Adjustable chokes installed on the end of a barrel will decrease the value of your gun. People are skeptical of

this; it stands out like mag wheels on a hot rod; they think the gun has been abused.

Enough about the don'ts; let's move on to some do's. The first item you should purchase right along with your gun is a cleaning kit. Be sure it is the proper one for your gun. With this kit you can keep your gun factory new and prevent rust damage from moisture and temperature changes.

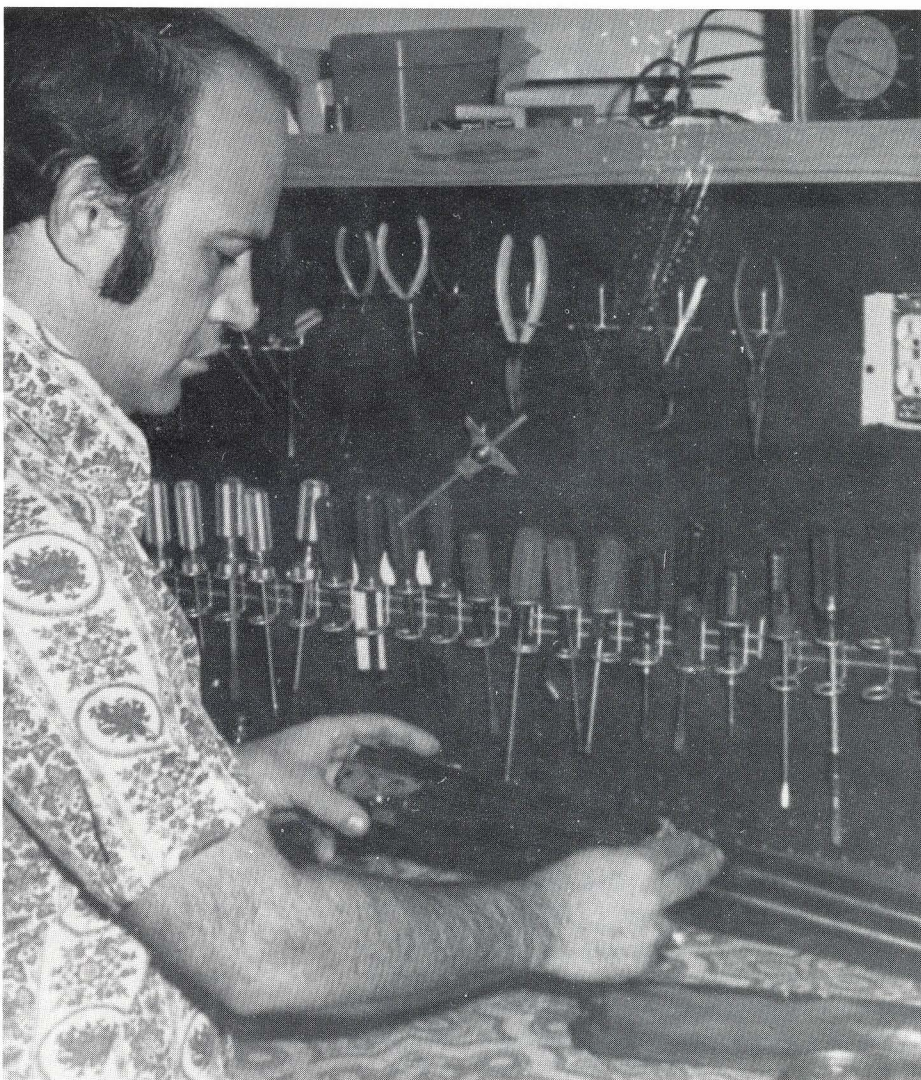
When should you clean your gun? The best rule is after every use. Not after you fire it once and are going to shoot it again in a few minutes, but definitely at the end of the day.

Here are seven easy steps that can be used for one type of cleaning.

1. Make sure your gun is unloaded. Open the breech and look through the barrel. Check to be sure there are no shells left in the magazine. If a pump or automatic, remove the barrel, if a double or single barrel, remove the barrel from the stock, if a bolt action gun, remove the bolt. Always clean a gun from the breech, never from the muzzle.

2. Always clean a new gun before firing. Screw a bronze brush into the end of a cleaning rod. Saturate the brush with powder solvent, pushing brush through the barrel from breech to muzzle ten full strokes. This will remove streaks of lead and powder deposited in the barrel.

Tom McAdow, Newton gunsmith, recommends that a gun be torn down and thoroughly cleaned at least once every two years.



Farrell Brewer

3. Remove brush and attach patch tip. Saturate patch with powder solvent, working back and forth through barrel ten times. Make sure the patch is not too snug in the barrel as the muzzle diameter is smaller than the breech. Rest barrel on pad of newspapers to prevent patch from coming out of muzzle.

4. Repeat operation number three using a clean patch. If any lead or fouled spots appear repeat operations number two and three.

5. Now using a very loose patch saturated with gun oil, swab the inside of barrel. Barrel should be held in horizontal position while oil is applied.

6. Clean action and slide mechanism with powder solvent and wipe dry. Apply very sparingly gun oil or gun-grease to these parts. **NOTE:** Some automatic actions are designed to work dry; check specific instructions for each gun.

7. Before any gun is fired after cleaning or storage, enough patches should be passed through the bore and chamber to remove all grease or oil present. Be sure bore is clean before firing.

Cleaning a gun in the manner described above each time it is used is entirely adequate during the hunting or target shooting season when it is being fired at frequent intervals. After a gun barrel has been cleaned and oiled in this manner, it is safe from rust for a month or perhaps more. When it is to be put away at the end of the season for a number of months, a considerably more thorough procedure is advisable. Many shooters use boiling water for these extra thorough cleanings. It is a good deal of trouble to do this every day, but hot water cleaning is unbeatable for efficiency.

Cleaning by the hot water method involves pouring boiling water through a gun barrel in considerable quantities. Of course the water must not be allowed to get into the gun's action or touch any other part except the interior of the bore. With a little inge-

nuity, this can be arranged without difficulty.

The hot water method probably gets the gun barrel cleaner than any other, but it entails considerable trouble and is a bit messy. For those who object to it on these grounds, satisfactory results can be obtained by giving the bore of the gun an extra thorough scrubbing with power solvent and flannel patches in the manner described earlier. After the gun barrel has been cleaned thoroughly by either method it should be completely dried and a coating of heavy gun oil or gun grease applied. Firearms treated in this manner should be safe from rust for months. To ensure there has been no failure to apply a uniform coating to the interior of the bore, the shooter would do well to look at the gun periodically as oil will dry out in time or he may have missed some spots in the original application. Any area not covered with a protective coating is subject to rust.

The manner in which guns are stored has a good deal to do with their safekeeping. They should not be stored in gun cases in which they are transported to and from the field, as these restrict the circulation of air and tend to attract moisture. The best place to store a gun is in a gun rack with muzzles always slanting downward, so that any excess oil may not drain into the wood of the stock where it may cause damage. If you do not possess a gun rack, you could improvise with nails padded so they will not damage the stock or barrel. Guns in storage are best kept in a room where the changes in temperature are as small as possible, as sudden and wide variations of heat and cold can cause sweating or condensation.

Also in the care of a gun the stock should be given attention at regular intervals. The greatest enemy of the stock is water. When the gun is new it is protected by usually a varnish or oil finish. To keep the varnish finish in A-1 condition use ordinary pol-

ishing wax, either in liquid or solid form. The same kind your wife uses on the furniture or wood floors will do the trick. On the oil finished stocks a periodic touch up with True Oil (a type of linseed oil) is necessary. When the finish is marred by deep scratches, cuts, abrasions and constant handling, enough water may be absorbed to cause distortion sufficient to affect the shooting qualities. So don't forget the wood parts when caring for your gun.

In checking with Tom McAdow, a Newton gunsmith, he had a few tips for the gun owner.

He said the main item he sees wrong with guns is that someone has used the wrong screwdriver to remove screws. He said damaged screws will also damage the value of a gun.

Tom recommends that a gun be completely torn down and thoroughly cleaned at least once every two years. This should be done by a competent gunsmith. In the interim years he recommends a field stripping of the gun, including taking out the trigger assembly, and giving the gun a good cleaning. Tom says this is no trick once you learn how but if you don't know ask someone who does to show you.

If you start stripping a gun without the proper knowledge you will probably wind up with a basket case and have to take it to a gunsmith to be reassembled.

Another tip from Tom is the use of silicone spray on a gun before going afield. This is a must, according to him, if you are going to be in freezing weather. He says that oil and grease will freeze and you will not be able to operate the action of your gun. This could really be a disappointment with a trophy buck in your sights.

Remember if you take gun care serious, your gun will last you a lifetime and will also hold its value. Neglect your gun and it will fail you and will also decrease in value.

Chiggers in Kansas

By Edward A. Martinko

State Biological Survey of Kansas

EDITOR'S NOTE: The following is a condensation of material which appeared in an informational bulletin of the State Biological Survey. It deals with a common summertime pest—the chigger. We felt the data would be useful to KANSAS FISH AND GAME readers in helping them prevent and treat chigger bites. The information is available in booklet form from the State Biological Survey, 2045 Avenue A, Campus West, Lawrence, Kansas 66045. It is reprinted here with permission.

Each year nature draws thousands of Kansans outdoors for picnics, camping trips, hunting, fishing and other recreational activities. After returning from these outings, many people find their ankles, legs and waistline spotted with chigger "bites" and that regrettable itch which lasts for days.

Chiggers are found elsewhere in the U. S. and are known to carry diseases in some parts of the world. Although chiggers in the U. S. don't carry diseases, several species are pests of man and other animals. This is a partial summary of what is known about chiggers which occur in Kansas.

Chigger or chigger mites are close relatives of spiders and ticks. Although many species are recognized, *Eutrombicula alfreddugesi* is the most common chigger pest in Kansas.

Many other chigger species limit their attacks to animals of various kinds—toads, snakes, mice, rats, bats, birds. There are even winter chiggers on rabbits and wood rats. Chiggers undergo a series of changes in their development from egg to adult. After the egg, there are three active stages—larva, nymph and adult. Only the second stage of development—the larva—is responsible for discomfort to man.

The Attack

The chigger's small size allows it to climb on shoes or clothing unnoticed. On very close inspection the observer might detect a small red speck the size of a pin point against dark contrasting colors. The chigger's search for a suitable area begins with an upward ascent to moist skin and areas where the clothing fits tightly against the skin. The bases of hairs, the armpits, the groin and areas under waistbands, neckbands and the tops of socks are especially favored.

The common belief that chiggers burrow into the skin and suck blood is untrue. When the chigger larva has found a suitable

location, it inserts its mouth parts into the skin and becomes firmly attached. A digestive fluid is then injected, causing destruction of cellular tissue around the bite. The skin reacts to the digestive fluid by hardening the cells around the bite. This localized hardening of the skin forms a tube which functions much like a drinking straw and helps the chigger drink the liquified skin tissue. The walls of the tube are hardened and often are as long as the chigger itself. The chigger feeds on the liquid nourishment until it is engorged. When feeding stops, the chigger drops off, if not previously removed by scratching.

The itching of the bite is a reaction to the digestive fluid. The itching begins several hours after the mouth parts have been inserted and the digestive fluid has begun working. The itching gets worse for a day or two and may even continue for several weeks. Swelling of the skin around the attached chigger begins even though the chigger remains on the surface of the skin. Close inspection of the bite before scratching begins might reveal the presence of a minute red speck in the center. Most often the chigger is scratched off before its presence is realized. The absence of the chigger, the presence of the discolored feeding tube and the continued itching and swollen tissue lead to the misconception that the chigger burrowed into the skin.

Area Control

Because chigger infested areas have a spotty local distribution, the first step in area control is locating the infested areas. Their presence may be determined by placing a black rectangular plastic or cardboard plate (6 inches x 3 inches) on edge on the soil surface. Smooth black plastic jar lids are also effective and are more obtainable. If chiggers are present, they'll crawl up the plate or lid within a few minutes.

The second step in area control is deciding whether the number of chiggers present really warrants the use of pesticides. Pesticides can be more dangerous than beneficial, especially when used where children, pet or particular plants could be harmed. Again, it should be noted that areas with large numbers of chiggers one year might be free of chiggers the next. A serious problem should exist before any pesticide is used.

In lawns, gardens and similar areas, suitable sprays and dusts can be applied to kill chiggers. Lindane, chlordane, and toxaphene are the commonly recommended chemicals for use in small or large areas, usually in combination with other agents. There are federal, state and local laws concerning pesticide use and it's necessary to determine

whether the intended use conforms with current regulations. Various sprayers and power equipment are available for application. The directions for application must be followed precisely.

Personal Protection

The larval attack often starts at the shoes or pant cuffs in areas with low vegetation although in tall grass and brush, the attack may start at the waist or above. From the site of attack, the larvae migrate upward to moist skin areas of the legs, waistbands, and armpits. As a result most adults find more chigger bites lower on their bodies, at the ankles and on their legs and fewer in the armpits. Children are not as tall and often have a more uniform distribution of chigger bites over their bodies. For these reasons, it's best to avoid sitting or lying on the ground during chigger season, especially if the ground is covered with vegetation.

Many commercially available mosquito repellents kill chiggers and provide adequate protection from attack. The best repellent against chiggers is diethyltoluamide, although dimethyl phthalate, demethyl carbamate, ethyl hexanediol and benzyl benzoate are also effective. Various brand name mosquito repellents contain many of these chemicals.

Repellents generally retain their effectiveness for long periods when applied to clothing, tops of shoe, socks, pant cuffs and waistbands. When applied directly to skin, the effectiveness of repellents diminishes rapidly due to perspiration and rubbing. Be sure to read the instructions carefully before applying a repellent. The old method of dusting the skin and clothing with sulfur kills or repels attacking chiggers but the odor in clothing and on the skin is strong and undesirable to most people.

When returning from areas infested with chiggers, bathe or shower as quickly as possible, especially if repellents were not used. Wash several times with thick lather, followed by a rinse each time. This will kill most of the attached and wandering chiggers. Various local antiseptics are available from a druggist for welts that may have formed. The antiseptic usually kills the chigger and prevents infection.

Disease Potential

Although severe and almost incapacitating cases of chigger bites do occur elsewhere, chigger mites in the U. S. are not known to carry diseases that affect humans. The common pest chiggers that attack man here simply cause welts and irritation of the skin. Occasionally excessive scratching will cause a secondary infection.



Fish and Game Forum



Q. Why doesn't the Commission stock more quail?

A. Stocking pen-raised quail treats the symptom which is low quail abundance. It does not treat the real cause—lack of adequate habitat. Adequate habitat must include the right kinds, combinations and amounts of food and cover for quail, since the two go hand in hand. Increase habitat and you increase quail numbers. Decrease habitat and the number of quail drops. However, the magnitude of increase or of decreases in quail populations will be modified by weather conditions such as sleet storms, extended periods of snow or ice cover and cold wet springs.

We're fooling ourselves if we expect tame, pen-raised birds to survive where even native wild birds cannot. This has been proven repeatedly by biological studies in Kansas and in other states. Biologists have taken two plots of ground with similar terrain and habitat and stocked one, leaving the other unstocked. When checked a year later, the two areas had similar quail populations. It made no difference whether the birds were stocked in the spring or fall.

Fall-stocked birds had extremely high death losses. Few birds survived to the following spring. Quail released in the spring had poor production records and added little to the population. Both fall and spring stockings disrupted the territorial behavior and natural reproduction of native birds.

In addition, stocking quail is an expensive practice. It takes more than the price of a hunting license to produce one pen-raised bird. If these birds were stocked in the fall on a public hunting area, the cost for each bird bagged would be approximately \$20.

EDITOR'S NOTE: Each month, hundreds of letters reach Fish & Game Commission headquarters with questions regarding various phases of the department's activities, policies, projects and plans. In addition, we receive numerous queries about hunting, fishing, trapping and wildlife. As space permits in future issues, we'll publish some of these questions and their answers to provide Sunflower sportsmen with a greater appreciation and understanding of their Fish & Game Commission and the Kansas outdoors. If you have a question, mail it to FISH & GAME FORUM, Box 1028, Pratt 67124.

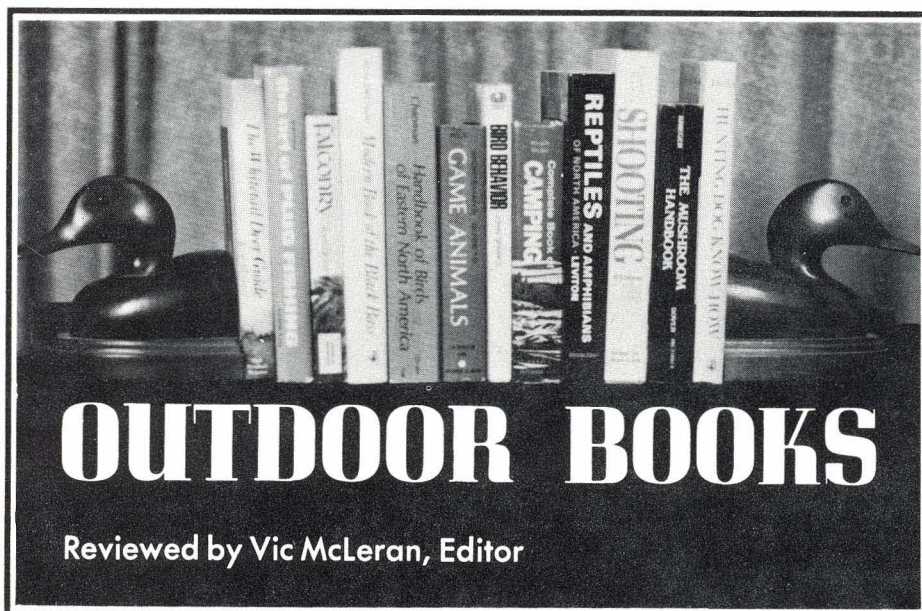
Q. This past winter I saw a large white owl while duck hunting at Cheyenne Bottoms. Exactly what kind of owl was this?

A. The bird you saw was a snowy owl, a rare winter visitor to Kansas. Natives of the arctic tundra, these big owls move southward periodically when their natural food supply of lemmings becomes low. Although the snowy owl's plumage is mostly white, it's occasionally spotted or flecked with dark brown. The snowy owl is slightly larger than our native great horned owl, but it lacks the latter's prominent ear tufts. This large white owl is dependent upon a variety of rodents in the North for its food supply. Many of these rodent populations are cyclical in nature. This means their numbers reach "highs" or "lows" in cycles of four to six years. At the low end of the cycle, when there aren't enough rodents to support the predators, goshawks, snowy owls and other meat eaters are forced southward in their hunt for food. Records of wandering snowy owls exist as far south as the Carolinas and Florida. Like all raptors, the snowy owl is protected in Kansas by both state and federal laws.

Q. Last summer while picking black-

berries a few miles south of Topeka, I came across a dark spotted snake that hissed at me and had a "hood" like a cobra. What kind of snake was this?

A. From your description and location, the reptile sounds like a non-venomous eastern hognose snake. Although the reptile may have acted hostile, it was mostly bluff since they're really quite harmless. The impression of a hood is created when the snake flattens its neck. It may even give a couple of half-hearted strikes but the mouth is usually closed. Violent hissing is also part of the threat display. When all this fails to intimidate the observer, the hognose snake may go into a series of contortions, disgorge recently eaten food, roll over on its back, belly up and play dead. Should the snake be placed back in its normal position it will immediately return to the "belly-up" position. The eastern and western variety of hognose snakes, both of which are found in Kansas, are named for their up-turned snouts which the reptiles use in digging for toads—their primary food source. Since toads often swell their bodies with air when attacked by predators, the hognose has developed a peculiar adaptation to deal with the toad's defensive behavior. On each side of the snake's upper jaw at the rear of the mouth is an enlarged tooth which enables the reptile to puncture and deflate the swollen toad. Both reptiles are extremely beneficial and should not be harmed. Joseph T. Collins, in his book, *Amphibians and Reptiles in Kansas* lists 38½ inches as the largest eastern hognose recorded in the state while the largest western species taken in Kansas measured 30¼ inches in length.



SNAKES OF THE AMERICAN WEST by Charles E. Shaw and Sheldon Campbell; Alfred A. Knopf, Inc., New York; 1974; 330 pages, \$12.50.

This is unquestionably the finest book of its kind on snakes that I've ever seen. Dealing comprehensively with every species of snake native to the eleven western states, it includes many species common in Kansas. Virtually everything known about them is presented in this book—their habits and habitats, their appearance and characteristics, how they catch their prey, shed their skins, raise their young, see and hear and smell and move. There is even a chapter on how to trap snakes and keep them as pets. Brilliant four-color photographs, keyed to the text by a special numbering system, make identification easy and certain.

Laced with colorful anecdotes and firsthand experiences and observations of the authors, *Snakes of the American West* is a far cry from some of the dull textbooks on herpetology and reptiles. A sampling of chapter titles includes: Of Snakes and Men, General Characteristics, Keeping Snakes as Pets, Encountering Venomous Reptiles and Legends About Rattlesnakes. There is an especially interesting chapter on rattlesnakes. The chapter on general characteristics includes a great deal of interesting, basic information including some startling recent research which has proven conclusively that snakes can hear. It was previously thought that reptiles "heard" only through sensing vibrations with sensitive nerve endings on their sides and belly.

Snakes of the American West is an excellent guide or handbook for snake fanciers, biology instructors, nature lovers or hikers.

THE HUNTER'S COOKBOOK by Betty Melville; Little House Press, 4300 Shoalwood, Austin, TX; 1972; 141 pages, \$7.95.

For those Kansas hunters who still have game in their freezers from last fall, we've found another dandy little cookbook. The author, Betty Melville, worked with General Mills and later became a high altitude test cook for Betty Crocker. With more than 25 years experience in wild game cookery, Mrs. Melville has collected and tested hundreds of wild game recipes.

The Hunter's Cookbook includes recipes for exotic species like antelope, grouse and pheasant as well as scores of recipes for common game like deer, rabbit, squirrel, turkey and dove. There are recipes here for game animals that were once staple food for the American frontiersman and which are now becoming popular: species like buffalo, elk, opossum and raccoon.

This cookbook provides the hunter and cook with far more than just a listing of recipes. Special sections on field dressing and meat processing methods (including carcass charts) describe the best ways to prepare wild game before it even reaches the kitchen. Canning is discussed and the long forgotten old-style recipes for jerky and the nourishing Indian pemmican are given. Even a section on seasonings tells what herbs, spices and wines are best used in wild game cookery.

The Hunter's Cookbook is a culinary handbook for the sportsman and his wife.

MISSOURI WILDFLOWERS by Edgar Denison; Missouri Department of Conservation, Jefferson City, Missouri; \$4.00; 270 pages.

This book is a handy little guide that describes nearly 400 flowering plants which are native to Missouri. Two hundred fifty of these are depicted in color plates and the remainder are handled in the text. Although the book is designed primarily to help Missourians identify their native wildflowers, many of the species covered occur in Kansas, especially in the eastern part of the state.

In order to make identification as simple as possible, the author has arranged the flower pictures by color. There is also a color index tab on the margin of the picture pages to aid in locating the various color groups. It works like this: let's say the reader sees a yellow wildflower which he'd like to identify. He simply opens the book to the section with yellow margin tabs, and thumbs through the pictures until he finds the flower he is trying to identify. The only complaint I have about the book is the fact that some of the color photos are rather blurred and would seem to be of little help in identification. But even with this shortcoming, *Missouri Wildflowers* is a book that Kansans, especially eastern Kansans will want for a guide to many of our native wildflowers.

GUIDE TO FAMILY CAMPING by George S. Wells; Stackpole Books, Cameron and Kelker Streets, Harrisburg, PA 17105; 188 pages; \$2.95.

This little Stackpole presentation is a refresher and up-dater for experienced campers, and an all-encompassing handbook for beginners that details such items as: how to pick a campsite with something-for-everybody appeal; choosing family-fitted gear; planning a camping budget; plotting a family-oriented itinerary; how to avoid the stir-crazy syndrome of car-cramped kids; and managing with the baby along.

Going beyond obvious summer camping fun, the author covers the special joys and techniques of winter camping, ski-trekking, weekend jaunts and fly-and-camp trips. He reviews realistic costs in every category to reassure family budget keepers and he suggests weather trips to stretch family fun outdoors beyond the fall of the first leaf. All the basics are here on space-permitting luxuries, order-of-use packing, food and shelter requirements, check-lists for vital items whose omission would ruin a camping trip.

And for those who would like to push back the horizon, there's information on how to go around the world in easy ways. It includes details on camping in Europe, Canada, Mexico, the Americas, New Zealand, Australia, North Africa and the Middle East. There's also advice on cost, availability of foreign campsites, food, safe water, permits; where to write lists of foreign and domestic agencies for information and maps on specific areas and camping organizations where friends of the road share memories and information.

