

# KANSAS FISH & GAME



May-June, 1977

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**Featuring . . .**

**Marsh Spring  
Squirrel Hunting  
Bass Length Limits  
Bullhead Fishing  
Frogs and Toads**



**KANSAS**  
**Forestry, Fish & Game Commission**  
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# KANSAS

# FISH AND GAME

May-June, 1977

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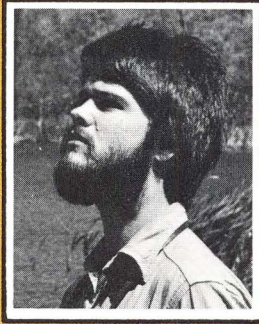
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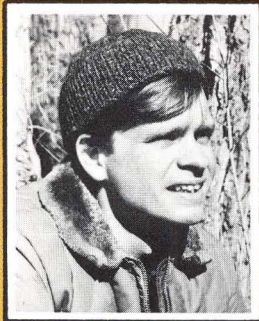
Largemouth bass and prairie coneflower by Ken Stiebben



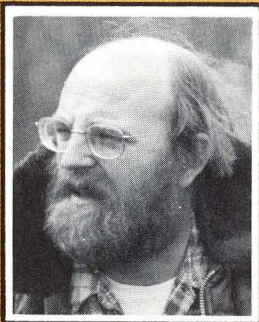
# Editorial PREVIEW



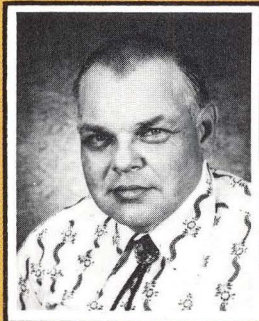
Shipley



Madson



Collins



Valyer

It's May and the Kansas marshes have come alive with color, sound and movement. Red-winged blackbirds, mallards, teal, bullfrogs and muskrats—all are becoming more active with the lengthening spring days. Frank Shipley, guest author, has captured it all beautifully in a piece entitled, "Marsh Spring." In addition, he's supplemented the article with outstanding color photography. Shipley graduated from Colorado State University with a degree in wildlife biology. He's now a graduate student and teaching assistant at Kansas State University in the division of biology. A managing editor for the Bird Populations Institute, Shipley has published natural history writing and photography in several magazines. "Marsh Spring" should delight all who are interested in our Kansas outdoor heritage.

May traditionally has been the month when large numbers of bass—both big and small—are taken from Kansas waters. Chris Madson, staff writer, has worked up an article entitled "New Length Limits—Medicine for a Stunted Fishery." It's about the new minimum length limits that have been placed on black bass in various Sunflower impoundments—both state fishing lakes and federal reservoirs. Madson explains why the limits were implemented, how they'll work and what they should do for the black bass resource. It's must reading for all bass fishermen.

Our next guest author is no stranger to the pages of *Kansas Fish & Game*. Joseph T. Collins, vertebrate zoologist with the Museum of Natural History at the University of Kansas, had a piece on snakes in the July-August issue of *Kansas Fish & Game*. Now he gives us an interesting article on our native frogs and toads. The story is accompanied by his excellent color photographs. In addition to publishing more than 50 articles on amphibians and reptiles. Collins is the author of *Amphibians and Reptiles in Kansas* and co-author of *Fishes in Kansas*. He currently serves on state and national committees concerned with amphibians and reptiles, is editor of *Herpetological Review*, a member of the editorial board of the *Journal of Herpetology* and an elected officer of the Society for the Study of Amphibians and Reptiles. He is also president-elect of the Society. Collins is an accomplished photographer who has traveled throughout the world to study, photograph and speak about amphibians and reptiles.

Squirrel season opens June 1 and with a daily bag limit of five, it offers a lot of sport as well as some excellent eating. A mess of young pan-fried squirrels with fried potatoes, biscuits and gravy is awfully hard to beat. But then if you're a squirrel hunter, you already know what I'm talking about. If you're not a squirrel hunter, George Valyer, staff writer, provides you with more than enough information to get you started. His article "Bushytail Bonus" is a well-done piece on an often overlooked form of outdoor recreation.

Also overlooked by many outdoorsmen is the bullhead. Often viewed simply as a kid's fish, the bullhead on light tackle can provide the angler with a surprising amount of sport when other more glamorous species aren't hitting. Again, Valyer gives the reader all he needs to know about fishing for bullheads in his article, "Those Beautiful Bullheads." After reading the piece, catching a few bullheads and frying them up, you're likely to agree with the author that "bullheads are beautiful."

Inside the back cover you'll find a short item called "Progress?" by Chris Madson. Read it slowly. It'll probably have you asking some questions of your own about "progress."

**Vic McLeran**  
Public Relations Director



# MARSH Spring



Story and Photos by Frank Shipley

**A** TIGHT BUNCH of small ducks follows a speeding, weaving course six feet over the marsh. They fly as if to buck a gusty fifty mile-per-hour wind, in spite of the existing calm. Wheeling like a flock of pigeons, they pitch in as only teal can—kamikaze-like with a reckless sidling for position and a delicate flashing of pinions at the instant of landing.

In the surrounding cattails, male red-winged blackbirds are posted at regular intervals. They droop their wings, pulling back the covert feathers, and blaze scarlet epaulets at each other. The air rings with their raucous territorial decrees.

The male red-winged blackbird is truly a symbol of the marsh. In the spring, the air is filled with the musical three-toned screeching of its territorial call.







Mud flats and marsh edges support numerous wading shore birds, which arrive in April and May. Some remain to breed in Kansas and some pass through. Among those common at Cheyenne Bottoms in the spring migration are long-billed dowitchers.



The outlandish feet of least bitterns allow them to creep silently through the thick cattails where they nest. Here the bird nervously surveys the vicinity of its nest from a willow.

From thick algae and duckweed in the shallows near the teal, bullfrog eyes protrude. They suddenly disappear when a muskrat, with a few new green cattail shoots clenched in its teeth, pushes through the floating green mat.

These are the scenes of marshes. They may vary in detail, but from the huge migratory bird refuge to the smallest river slough, marshes are characterized by one thing—life so diverse and abundant that each spring's blossoming is like a quiet explosion.

In the dead of winter there isn't a hint of the abundance to come. The quiet is interrupted only by distant haggling of crows, fighting the wind in ragged flocks. Cattail seed heads protrude from frozen mud on winter-browned, rattling stalks. A line of frozen coyote tracks crosses the open ice. Life is present, but largely invisible. It is buried in the mud, deep in a burrow, or in a few hardy cases, up and about.

As early as February, the first signs of change can be recognized. Now the first male redwings appear. Though it will be three months before breeding begins in earnest, these males are already defending real estate for their future nesting mates. Because of the weather and scarcity of food, they can sometimes only spend several freezing hours a day watching over their small abutting territories, energetically screeching.

With the passing of lengthening, warming days, the redwings are joined by other species. High strings of mallards float northward, and as ice becomes open water, some pause to dabble in the shallows. By April they are joined by gadwalls, shovellers, and others, all snapping up the new duckweed and straining the mud.



The spring waterfowl migration is quite different from that in the fall. It is less hurried and more fragmented. The birds seem not to be pushed, in contrast to their flight from the imperatives of fall cold fronts and freeze-ups. Further, spring brings the ducks in nuptial plumage—the bright new feathers of birds seen in paintings. And with this comes the distinctive behavior of pairing, which begins even before the birds reach their northern breeding grounds. Flights of pintails, for example, whistle through dizzying aerial maneuvers, with perhaps a dozen males in pursuit of one female. Never is the art of flying more superbly exhibited, than by these hurtling groups on a windy spring day.

**Shore birds now begin to appear:** snipe, dowitchers, avocets, and a rash of sandpipers. They variously probe, skim, and peck the mud for food, which includes the larvae of insects which begin to emerge in abundance.

The smallest of these birds, known collectively as “peeps,” are actually of several species. The semipalmated plovers are perhaps the most distinctive here, the single black ring around the chest and shoulders being characteristic. Their movements are very quick but very dignified. They cruise the mud like over-wound toys on wheels, pausing in an upright posture seemingly calculated to elicit admiration.

**During this time, the mud has begun to stir.** Snapping and painted turtles, bullfrogs and crayfish have emerged from their retreats. Dragonfly larvae crawl from the water up stalks of new reeds and, in their metamorphosis to the adult stage, leave their skins clinging like ghosts. The adults skim over the water with quick dipping pauses, each dip leaving an egg deposited on a bit of floating vegetation. The spring awakening of the marsh is now in full swing.

By late May, the marsh produces enough insects to allow the red-winged blackbirds to mate with assurance that their young will be fed. The sparrow like females have now joined the territory-guarding males, and have begun to weave nests in thick clumps of cattails. Several females may build on a single male's territory, each becoming his mate.

**When each female redwing finishes her nest,** she lays three or four pale blue eggs, each with a delicate chocolate lacing. For ten days, she does little besides sit on them, venturing forth only for food. Meanwhile, the male carries on his rivalries with neighbors, the fruits of his three-month vigil guarding a territory finally coming to bear.

All of the female's eggs hatch over the course of two days. The nestlings are tiny, naked, and unable to see,

The shoveler is one of the numerous waterfowl species which use the marsh as a stopover during the spring migration. Its large spatulate bill enables it to filter from the marsh very small sorts of food like plankton.







The smaller, sparrow-like female redwing nests in the territory defended by a male. Females are much less conspicuous, but may be seen constantly shuttling insects to the young in the nest.

but they are very good at one thing—begging for food. The female now spends a good deal of time (and more as the young get older) in foraging for insects to feed the hungry mouths.

**In only ten days the weight of each young increases ten-fold, and the brood becomes more active all the while. Then, early one morning about ten days after**

hatching, a nestling—usually a female—hops to the edge of the nest and bravely jumps out. She may be followed immediately by the entire brood, or the larger but less active males may wait until the following morning to leave the nest. Once out of the nest, they scatter in all directions and sit quietly hidden.

Unfortunately, the nestlings don't know any more



about feeding themselves after leaving the nest than they did upon hatching. The female, and now sometimes the male as well, therefore must hunt down the scattered nestlings to feed them. The nestlings make it a little easier by cheeping when one of the searching parents is getting warm, but this is nevertheless a very difficult time. It is so difficult, in fact, that many nestlings don't make it. The ones that perhaps didn't get enough to eat in the nest just don't have enough fat to get them by the lean times after leaving the nest, before they learn how to capture their own food. It's a tough life.

**In contrast to redwings, least bitterns** are elusive, quiet birds. They may never be seen in an area where they have nested for years—unless one knows what to look for. Upon being approached, bitterns may assume what is known as the "reed posture," with their long bill straight in the air and their neck outstretched with brown-streaked underside toward the intruder. Remaining perfectly motionless, they look decidedly un-birdlike, and in an environment dominated by a vertical pattern of emergent growth, they become all but invisible.

Because of these things, I felt lucky one year to find a nesting pair of least bitterns which allowed me to

approach fairly closely, as long as I was careful to remain hidden.

**The nest was in the thickest cattails** of a small marsh, built a foot or two over the surface of nearly waist-deep water. I made several trips to the nest before I was able to see the adults. Even then I caught only fleeting glimpses of a sneaking long-legged form, moving through the dense emergent growth by clutching bunches of vegetation in its long toes.

Eventually both adults became accustomed enough to me to allow closer observation. They resemble small herons, with long wading legs and a long, chisel-like bill. The female is marked by subdued browns, and the male is more boldly colored, with a dark slate cap and back.

**At the nest they took turns incubating** the eggs, trading off the duty for foraging excursions, and in the case of the male, for periods of look-out duty in some nearby willows. This changing of the guard at the nest was accompanied by a peculiar behavior. The male, having perhaps been off eating frogs, would quietly approach the female, sitting on the eggs. In his beak he would bring a twig or a dry cattail leaf which, upon approaching the nest, he would present to the female. The female

After emerging from the mud in early spring, bullfrogs fatten in the weedy shallows, eating insects which emerge from aquatic larvae.







Teal are often among the later migrants each spring. Quite small and trim in appearance, the blue-winged teal is told by the white crescent on the head.

would grasp the offering in her beak and tuck it beneath her as added nesting material. As nearly as I could tell, the nest never needed this attention, being well-formed and sturdy. I believe that the offer and acceptance of the piece of nesting material was a ritual. By the offering, the bond between the pair of parent birds is periodically renewed, like the offerings of an appreciative husband, in chocolate or flowers, to his loved mate.

The activity at the bittern nest changed greatly when the eggs hatched. The parents seemed to be more vigilant and cautious, and seldom was the nest left entirely unattended as it had been prior to hatching. And now four gawking balls of fluff demanded food in quantity.

**The feeding was an intricate process.** One of the adults would return to the nest to confront expectant, quiet, seemingly well-behaved nestlings. But as the adult came within beak range of the nearest nestling, the nestling would lash out and latch on to the adults beak. Twisting and pulling, the nestling would pull the parent bird to within range of the other nestlings, whereupon they would gang up on the parent, twisting and pulling the beak. All this stimulated the parent to regurgitate food which it had stored in its crop while foraging. Up would come a whole frog, small fish, or other treat, to be devoured on a first-come, first-served basis by the brood.

The food quickly disappeared except when an especially large offering prevented immediate consumption. On one such occasion, the young passed a sunfish around

for fifteen minutes, each attempting in turn to down the morsel. For a while the sunfish was being swallowed from the head by one nestling and from the tail by another. They gave up when they met in the middle. To my surprise the sunfish was eventually swallowed by the largest young; it just slid right down with a shaking of the nestling's head and a fierce gulping, followed by an intense shudder and an expression of bloated surprise.

**On such fare, the nestlings grew** quickly, becoming more curious and active by the day. And one day when I approached the nest they were gone. Although I caught several glimpses of the still-fluffy adolescents creeping silently through the cattails, I never again was able to observe them closely.

So it goes in the marsh, each species reproducing according to its own particular pattern inherited through the millenia. As a result, life peaks each season in a green profusion of plant growth and an abundance of animals and their activities. But overriding this is change: birds noisily flock and depart, green turns to brown, and life retreats underground with the coming of another season, to complete the cycle.

**Kansas offers all of these things** to the observer of her marshes. They take place in the big migratory waterfowl refuges like Marias des Cygnes and Cheyenne Bottoms. But they also occur in thousands of farm ponds, irrigation ditches and river sloughs throughout the state. All that is required for their enjoyment is an excursion in May, with binoculars and bird book, or with a fishing rod or camera, or perhaps with just an interested eye.



# New LENGTH LIMIT

MEDICINE FOR A STUNTED FISHERY



By Chris Madson

Photos by Stiebhen

**Ah,** THE TRIALS of a fisherman. He swats mosquitoes, shoos horseflies, dredges up hidden snags, pulls down overhanging limbs, untangles blacklashes, endures the righteous criticism of his wife, and most of the time doesn't catch many fish. I think I've learned more about patience and cussing at the end of a fishing rod than I have anywhere else in life. And in all the time since I first slipped out to wet a line, I think the greatest trial to

my patience has been the pan-stinker bluegill. I imagine you know the kind, not big enough to eat, just enough to stink up the pan. They've stolen my bait in farm ponds all over the Midwest and jumped on the hook before anything bigger had a chance to look it over.

I always figured there had to be a big, black-hump-backed granddaddy out there on the edge of that mob of pan-stinkers. All he needed was a little time and a







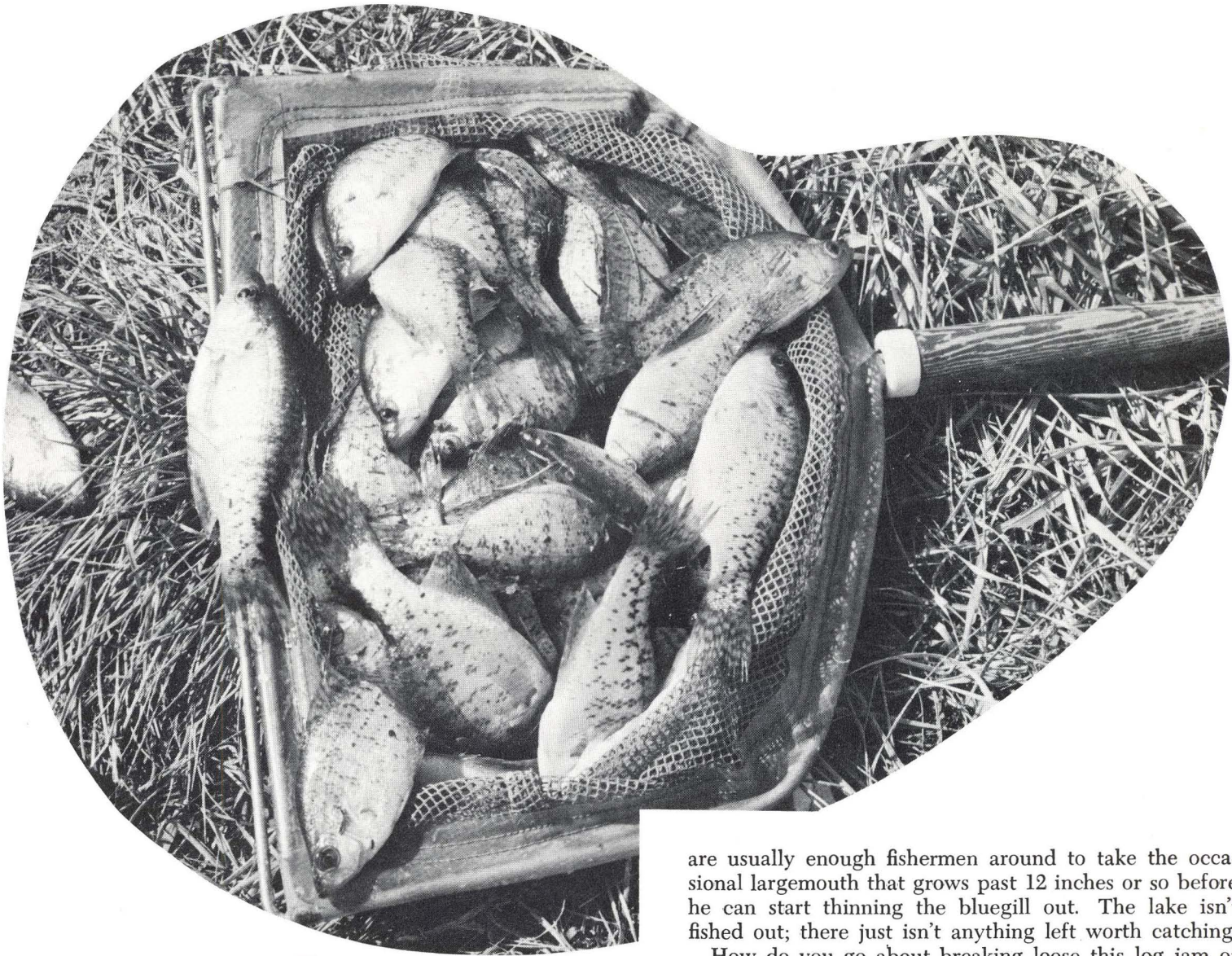
little room, and he'd grab that worm. I've pushed at least one bait shop into a higher tax bracket with that line of thinking, and it's turned out to be dead wrong. The only thing outside that ring of midget bluegill is more midget bluegill, midget bass, and maybe a few midget crappie. It's a frustrating situation, but it's not one that a fisherman has to live with. A lake with these symptoms just needs some big bass to get well.

**Bass predation on overcrowded bluegills** benefits both the bluegill and the bass. Starving bluegill don't grow. Every year, the bluegill that hatch grow until they start competing with other fish, then they stop. A log jam of panfish develops with bluegill of different ages all trapped at the same size because of nutrition. Eliminate a few bluegill and the food supply for the rest increases. And there isn't a better way to eliminate surplus bluegill than to have a few big bass cruising the area. The bluegill that are left grow and prosper, and the bass obviously do well for themselves, too. The final result of bass predation is a lake with fewer, much larger bluegill and a healthy population of bass.

Then comes the fisherman. He may be a bass specialist or a worm dunker looking for a good stringer full of anything he can hook. In either case, he has a much greater impact on the lake than he realizes. Studies have shown that the largemouth bass is not too long on smarts. While the bluegill and other fish may learn to avoid a hook after a few unpleasant encounters, there is a substantial proportion of the bass population that never seems to make the connection. Creel censuses on recently stocked Kansas lakes have shown that 70 percent or more of the bass originally stocked may be taken in the opening season. Missouri biologists have reported a near elimination of the originally stocked bass at the end of two years of fishing on a new lake.

**With no largemouths to keep it in check**, the bluegill population explodes, and the lake fills up with pan stinkers. And that's not all. Bluegill overpopulation hits the lake's bass as hard as it does the bluegill. Bluegill compete with small bass for insects and other invertebrate foods. If the bass fry manage to survive their first months, they may still have trouble finding food. Starving bluegill seldom reproduce. As a result, there are practically no bluegill fry in an overcrowded lake for teen-age bass to feed on. The lake fills up with starving, stunted bluegill and starving, stunted bass. And there





are usually enough fishermen around to take the occasional largemouth that grows past 12 inches or so before he can start thinning the bluegill out. The lake isn't fished out; there just isn't anything left worth catching.

How do you go about breaking loose this log jam of stunted fish? Close the season or the area? Without large predator bass to thin out the bluegill, the situation can't change; there just isn't enough food for the fish to grow on. Stocking large bass would help, but only if they were protected from the fishermen who cleaned out the original bass stocking. And at \$2.00 or so for every 12-inch bass shipped out of the hatchery, there must be a better way. A creel limit? With fishing pressure what it is today, fishermen would "nickel and dime" the bass population to death no matter what the limit was.

Kansas fisheries biologists faced with this situation felt that they had three problems to solve. First they wanted to give the fisherman a chance to take home the real bragging-size largemouth when he catches it. Second, they wanted to leave a healthy number of big bass to keep the bluegill in check. Third, they wanted to thin out the smaller bass. In order to solve all three problems, they decided to test a protected length range on six state fishing lakes—Brown, Cowley, Jewell, McPherson, Montgomery, and Nemaha.

Studies have shown that it takes a 12-inch (approximately  $\frac{3}{4}$ -1 lb.) bass to eat the average 4-inch, pan-



stinker bluegill. With that in mind, the biologist figured that protecting the 12-15 inch bass would take care of all three problems. This protected length range would give the meat fisherman a chance to take bass from the crowded population under 12 inches, cutting it down to a healthier, faster-growing size. At the same time, the trophy fisherman will be able to take home the lunkers over 12 inches. And to top things off, there should be more of those black, hump-backed, lunch-plate sized bluegill around, too.

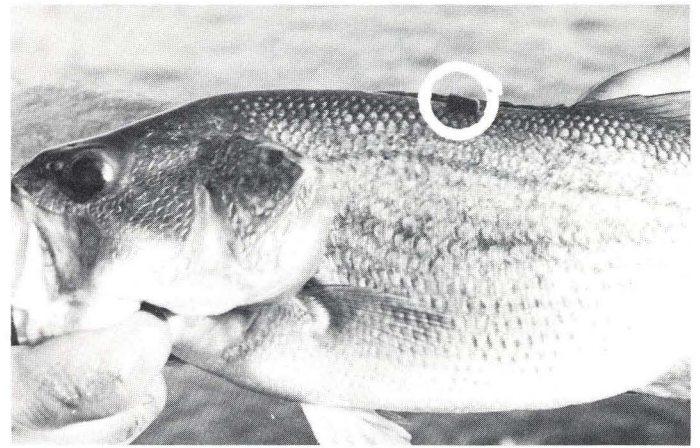
With some alterations, the length limit concept can help solve other, slightly different fisheries problems. Reservoirs, for example, don't usually carry a surplus of small bass. The major problem is that bigger largemouths are overfished. As a result, bass food fish, especially gizzard shad, have a chance to get too large for growing bass to take. There are few places for small bass to live and forage in one of these big lakes, and their hunting is often hampered by murky water as well. What it all comes down to is that it's tough for a young largemouth to survive in many of Kansas' reservoirs. The last thing these young fish need is the added pressure of heavy fishing. So, instead of setting a protected length range, the thing to do is establish a length limit to protect younger bass and help provide more large predators to thin populations of large shad and bluegill. Following this line of reasoning, fisheries men have established a length minimum on two reservoirs—Melvern and Milford. They've also set a 14-inch minimum on Wilson State Lake because its population of small bass, like those in the reservoirs, is a little low.

In order to test the theory against the reality of the situation the biologists will be monitoring the fish populations in these lakes and reservoirs for the next three years to find out if the new length regulations are working the way they expect them to. Among other things, they'll be watching the growth rates of bass and bluegill hatched into the lakes each year. They'll also keep an eye on the number of fish of each age.

**Bass and bluegill, if they're healthy and well-nourished, will grow all their lives.** When samples show that one species or age-group isn't growing or isn't even present, the biologist knows something is wrong. If, for example, bluegill are scarce but are growing and reproducing well, it may be a sign that there are too many big bass. In such a situation, a lower length limit for bass might be in order. On the other hand, if bluegill of different ages are all about the same small size, it might be time to raise the length limit to provide more predator-size bass. The bass length limit could also be used to help balance the populations when changes in lake level affected the reproduction or survival of shad or bluegill. In short, the length limit and protected length range regulations give the fisheries biologist a chance to fine-tune the fish populations in a lake or reservoir in a way he never could before.

The underlying reason for the new regulation is simple—we're breeding fishermen faster than we can breed fish. Like any renewable resource, the largemouth can take only so much pressure; after that, you either back off or do damage that may take years to repair. And, after all, this regulation is a state version of the oldest conservation concept around—throw him back and let him grow awhile. That way, the bass will provide more sport for more people, and he'll probably be around, a pound or two larger, when you hit the lake next year.

And if you're looking for a way to fill the holes in your stringer left by those released bass, try dragging an O Mepps or a fly rod popper past a bluegill. Why, a couple of half-pound bluegills on the end of an ultralight spinning rod will make you wonder why you come out looking for bass in the first place.







Northern crawfish frogs live in crawdad burrows.

# Kansas FROGS & TOADS

Story and Photos by Joseph T. Collins

**F**ROGS AND TOADS are amphibians, terrestrial vertebrate animals that require water or moisture to breed and complete their life cycle. Unlike reptiles such as turtles, lizards and snakes, the eggs of amphibians have no shell and quickly dry up and die when removed from water. Due to dependence on water, amphibian reproduction is vastly different from other land-dwelling animals. All Kansas frogs and toads lay their eggs in ponds, ditches, streams or other suitable bodies of water. The eggs may be laid singly, in clumps, or in strings, and are surrounded by a clear, jelly-like covering. The eggs hatch into larvae called tadpoles which live, eat and grow in the water until they develop legs and lose their tails, a process called metamorphosis. At a suitable point in their life cycle they change into miniature

adults, and crawl out on land to sit around waterways with other frogs.

Male frogs make noise. Anyone who has been out on a warm, rainy April night has heard them, and under optimal weather conditions a chorus of these creatures can create a deafening sound. Each kind of frog makes a distinctive mating call. For example, the toad has a long trill, vastly different when compared with the clicking of a cricket frog or the snore of a crawfish frog. Generally, female frogs respond only to the calling of males of their own kind. This helps prevent a great deal of confusion when several kinds of frogs are calling at the same pond. Once a male frog has enticed a female into his area, he clasps her and fertilizes the eggs as the female extrudes them.



**Toads are frogs. Frogs are toads.** That's confusing, but true. Actually, toads are simply frogs that are better adapted to live in drier areas because they maintain body water balance and reserves more efficiently. Anyway, a frog is a frog, and all adult Kansas frogs (and toads) have four legs, a moist skin (more or less), and lack a tail.

Approximately 80 kinds or species of frogs and toads live in the United States, of which 18 are definitely known to occur in Kansas. Western Kansas, with its arid plains, low rainfall, and lack of tree cover, is not optimal habitat for frogs and toads. Eastern Kansas is a little better because it is wetter, and has more swamps, woodlands and other good places for amphibians. Twelve of the 18 kinds of frogs and toads found in Kansas have

been successful in establishing large populations in the state. Indeed, over half of them have invaded the hostile plains of western Kansas and occur nearly statewide. These twelve kinds of Kansas frogs and toads belong to five major frog groups called families, and they are briefly discussed below according to those groupings.

**One of the common groups is toads.** There are five species of true toads in Kansas, but two are very rare and are not discussed in this article. The other three kinds are those toads most commonly seen and heard, and are called the American toad, Great Plains toad, and Rocky Mountain toad. All have rough, relatively dry, bumpy skin, and grow to four inches in body length. The American toad prefers to live in upland, wooded areas and breeds very early in spring. It is found from

**Plains leopard frogs are found throughout Kansas.**



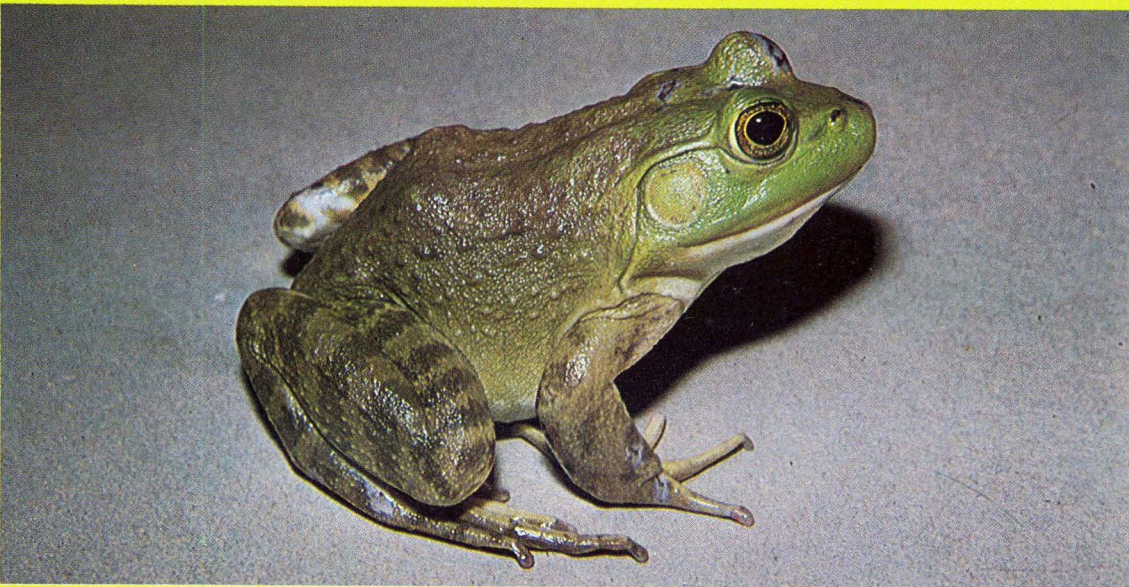
**The Great Plains toad prefers upland, grassy habitat.**







Western chorus frogs breed earlier than any other frog or toad.



Bullfrogs eat anything they can stuff in their mouths.

the Flint Hills east in Kansas. The Great Plains toad inhabits open, grassy uplands while the Rocky Mountain toad likes to breed on floodplains. Both occur nearly statewide. Despite these observations on habitat preference, occasionally I have found all three kinds of toads breeding at the same time and place on the Kansas River floodplain near Lawrence. This is due to unusual weather conditions (a late spring) plus habitat alteration by man. When these conditions occur, male and female toads of all three species get a little confused, sometimes resulting in a new generation of toads that defy all attempts to identify them. Given time and a chance for habitat stabilization, however, the toads eventually sort themselves out to their preferred environments and begin to produce more normal toadlets.

Another type of Kansas "toad" which really isn't a true toad is the Plains spadefoot toad. Actually, it's not at all related to the toads just discussed, although it shares their habitat preference on occasion. Plains spadefoot toads like to breed in temporary pools during and shortly after heavy rain. When not breeding, they burrow beneath the ground and, although common in many areas, are rarely seen. This amphibian differs from true toads because its skin is relatively smooth. Also, when exposed to strong light, its eyes become vertical slits, a character it shares with no other frog or toad in Kansas. Finally, Plains spadefoot toads differ from most frogs and toads because they have highly developed, hard, black "spades" on the underside of their hind feet which enable them to burrow easily into the earth.





# Kansas Fish & Game NEWS



## LARGEMOUTH BASS RECORD BROKEN

TOPEKA--Step aside Shorty Prewett. Make way for Kenneth Bingham.

Bingham, a Topeka angler, just broke Prewett's 12-year old record on largemouth bass. The Topekan's fish weighed 11 pounds, 12 ounces, topping the previous record by nine ounces. The new record bass had a girth of 19 inches and measured 25 inches in length.

The old record was taken January 6, 1965 from a private lake in Bourbon County. Prewett, formerly of Pittsburg, used a spinning outfit with a Johnson spoon and porkrind to land his record.

Bass anglers with thousands invested in sophisticated bass tackle will be surprised to learn Bingham took his lunker with a Zebco 33, a pencil bobber and a small minnow. "I also had on some cheap 12-pound test line that I bought at K-Mart," the new record holder said.

Bingham, a 37-year old truck driver, caught the fish in a Jefferson County farm pond about three acres in size. "It was the first time I'd ever fished that pond," Bingham said. "The farmer who owns it told me there are even bigger bass in there."

The record fish was weighed on scales legal for trade at a

Topeka Kwik Shop in the presence of two witnesses. The lunker was then certified as a state record by the Commission's fisheries division.

The Topekan has been fishing most of his life and he's no stranger to big fish. Last year he hauled a 6¼ pound crappie from one of the many farm ponds he fishes. Unaware that the fish would have been a new state crappie record, Bingham ate the fish. He also took five channel catfish last summer that weighed between 17 and 25 pounds. His largest previous largemouth bass were "several in the six to eight-pound class."

The day he caught the new record fish, Bingham and his brother were fishing specifically for bass although they had an outfit rigged for channel catfish. His brother caught two nice-sized bluegill and a small bass--the only other fish of the day.

The record bass was a female with eggs. "Her stomach was packed with crawdads and bluegills," Bingham said. He's having the fish mounted by a local taxidermist. The Topeka angler will receive a state record fish certificate from the Kansas Forestry, Fish and Game Commission for his lunker catch.

-McLeran-

## ANTELOPE HERD SHOWS STEADY INCREASE

HAYS--Since antelope hunting became of age in Kansas the herd has continued to grow and this year was no exception.

The Kansas Forestry, Fish and Game Commission recently completed the annual winter survey of antelope in northwest Kansas. According to biologists who conducted the aerial counts, 812 antelope were sighted. Antelope sighted represent the minimum number of animals since all antelope are not visible during any one count. During the 1976 winter survey a total of 790 pronghorns were counted.

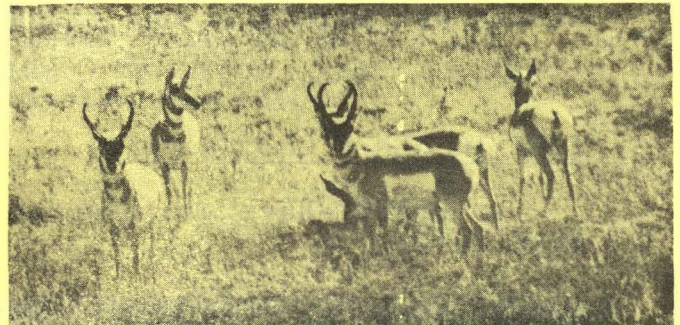
"Most of the antelope were in bands of near 20 or less although one herd of 59 were observed", said Kent Monte, Hays, biologist in charge of

the Kansas antelope program. "The animals all appeared to be in good condition."

According to the antelope biologist the past years production was good in the area with 63 fawns per 100 does. A summer survey will be conducted to determine this year's production success.

During the 1976 firearm antelope season which allowed 80 Kansas sportsmen to hunt antelope a total of 72 pronghorn were collected. The first archery antelope season was held in 1976 and a total of 7 bowmen scored on their antelope.

The Kansas Fish and Game Commission estimates the antelope population in Wallace Thomas, Sherman and Logan counties to be 900 animals.



## COMMISSION TO MEET APRIL 21

PRATT--Recommendations for the 1977 deer and antelope seasons will be considered by the Kansas Forestry, Fish and Game Commission at their April 21 meeting in Pratt.

The meeting will be held at commission headquarters, east of Pratt and will begin at 9 a.m., according to commission director, Jerry Conley.

Commissioners will also consider a petition by a group of muzzle loading rifle enthusiasts for a special muzzle-loading deer season to be held prior to the regular firearms season.

Director Conley will be attending his first regular commission since assuming his new duties on April 1.

The meeting is open to the public.

## TURKEY PERMITS MAILED

PRATT--Successful applicants who will be eligible to participate in the spring turkey hunting season have been mailed their permits and tags, according to the Kansas Forestry, Fish and Game Commission.

A total of 839 applications were received and a drawing was conducted to select the 500 eligible turkey hunters. Any hunter not receiving their permit and tag by April 15 are ask to contact the commission as soon as possible.

The Kansas turkey season will open April 23 and run through May 1.



WARMOUTH BASS RECORD  
ESTABLISHED BY STATE

PRATT--The State of Kansas has another new fish record for anglers to shoot for. Anyone interested in taking on the challenge will have to beat a 14 3/4 ounce Warmouth Bass, according to the Kansas Forestry, Fish and Game Commission.

That's right! Ounces not pounds, but don't start laughing yet. The world record Warmouth bass weighs two pounds and comes from Georgia.

Until recently, Kansas did not have an official record listing for the warmouth because none had been submitted. That problem was corrected when Craig Sonka of Parsons, fishing a Labette county farm pond caught the record member of the sunfish family on a minnow. The fish tipped official scales at 14 3/4 ounces, was 10½ inches in length with a 9 inch girth.

Warmouth bass are brown and yellow, with red eyes and brown streaks on the head. According to Frank B. Cross at the Museum of Natural History at Kansas University, warmouth bass in Kansas usually are six ounces or less. Maximum weights in Kansas are placed at one pound with a length of 11 inches.

###

TIME TO RENEW SUBSCRIPTION

PRATT--Have you enjoyed the past years issues of this magazine?

If your subscription expires with the May-June issue then you should have your renewal card and it's time to send it in. If you don't you could miss the July-August issue. We will only be sending you the one renewal so if you've misplaced it be sure to clearly mark your check RENEWAL and if possible send us a label from one of your previous issues when you renew your subscription.

The Kansas Forestry, Fish and Game Commission reminds all subscribers to the magazine that renewals must be received at least one month in advance of publication date to insure that the next issue will be mailed.

The magazine mailing list is computerized and additions to this list, either new or renewal, must be programmed ahead of time. For example, if your renewal date is July 1, the deadline for renewal is June 1.

There are some interesting articles upcoming in the KANSAS FISH AND GAME Magazine and we don't want you to miss any of them.

###



BULLFROG SEASON  
OPENS JULY 1

PRATT--Crappie is good, walleye is excellent and there are those that enjoy turtle meat. But if you've never tried frog legs you can have a go at it starting July 1. The Kansas bullfrog season opens on that date.

The bullfrog season, as established by the Kansas Forestry, Fish and Game Commission, opens July 1 and runs through September 30. The daily creel limit is eight bullfrogs. A valid fishing license is required for any person to take, catch or kill bullfrogs, except those persons exempt by law from having such a license.

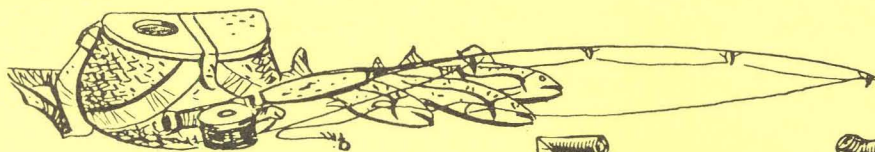
If you have an aversion to mosquitoes, getting wet or sidestepping an occasional water snake you might not like frog hunting. Hunting conditions are generally not ideal but the reward of a mess of frogs legs make the effort worthwhile.

The only legal methods for taking frogs in Kansas are by hand, dip net or by hook and line. Firearms, gigs, spears, bow and arrows and all other methods are prohibited.

###







# KANSAS FISH RECORDS

## BASS, LARGEMOUTH BLACK

Weight: 11 pounds, 12 ounces  
Length: 25 inches  
Date: March 20, 1977  
Place: Farm Pond, Jefferson Co.  
By: Kenneth M. Bingham, Topeka, Ks  
Tackle: Spinning rod & reel with minnow

## BASS, SMALLMOUTH

Weight: 3 pounds, 9 ounces  
Length: 17¼ inches  
Girth: 14½ inches  
Date: February 27, 1976  
Place: Cedar Bluff Reservoir  
By: David Hudson, Ellis, Ks  
Tackle: Rod & reel with white jig and minnow bait combination

## BASS, SPOTTED (Kentucky)

Weight: 4 pounds, 2 ounces  
Length: 19¾ inches  
Date: September 9, 1973  
Place: Council Grove City Lake  
By: Newell Julian, Council Grove, Ks  
Tackle: Rod & reel with jig & worm

## BASS, STRIPED

Weight: 33 pounds, 12 ounces  
Length: 37½ inches  
Girth: 27 inches  
Date: June 1, 1975  
Place: Cheney Reservoir  
By: Carl G. Hooker, Wichita, Ks  
Tackle: Rod & reel with yellow "hellbender" with black stripes

## BASS, WHITE

Weight: 5 pounds, 4 ounces  
Length: 17 inches  
Date: May 4, 1966  
Place: Spillway area below Toronto Reservoir  
By: Henry A. Baker, Wichita, Ks  
Tackle: Rod & reel (spincasting) with "Tiny Tot"

## BLUEGILL

Weight: 2 pounds, 5 ounces  
Length: 11 inches  
Date: May 26, 1962  
Place: Scott Co. farm pond  
By: Robert Jefferies, Modoc, Ks  
Tackle: Rod & reel with worms

## BUFFALO

Weight: 54 pounds, 4 ounces  
Length: 45 inches  
Date: May 24, 1971  
Place: Farm pond north of Tescott, Ks  
By: Randy Lee, Minneapolis, Ks  
Tackle: Bankline with worms

## CARP

Weight: 35 pounds, 4 ounces  
Length: 42½ inches  
Girth: 27½ inches  
Date: May 2, 1970  
Place: Sandpit near Lyons, Ks  
By: W. Amos Henry, Lyons, Ks  
Tackle: Rod & reel with corn

## CATFISH, BLUE

Weight: 33 pounds, 12 ounces  
Length: 42½ inches  
Girth: 23 7/8 inches  
Date: June 21, 1974  
Place: Kansas River near Lawrence, Ks  
By: Harold Hunsinger & Gordon D. Chappell, Jr., Lawrence, Ks  
Tackle: Bankline with goldfish

## CATFISH, BULLHEAD

Weight: 5 pounds  
Length: 18½ inches  
Date: June 2, 1974  
Place: Fish & Game Strip Pit (Unit 15)  
By: Mary Louise Sachetta, Scammon  
Tackle: Rod & reel with worm

## CATFISH, CHANNEL

Weight: 32 pounds  
Length: 40½ inches  
Date: August 14, 1962  
Place: Gardner City Lake  
By: Edward S. Daily, Gardner, Ks  
Tackle: Throwline with small sunfish

## CATFISH, FLATHEAD

Weight: 86 pounds, 3 ounces  
Length: 55½ inches  
Date: August 24, 1966  
Place: Neosho River near St. Paul, Ks  
By: Ray Wiechert, Brazilton, Ks  
Tackle: Trotline with sunfish



**CRAPPIE, BLACK**

Weight: 4 pounds, 10 ounces  
 Length: 22 inches  
 Date: October 21, 1957  
 Place: Woodson County State Lake  
 By: Hazel Fey, Toronto, Ks  
 Tackle: Rod & reel with live minnow

**CRAPPIE, WHITE**

Weight: 4 pounds, ¼ ounce  
 Length: 17½ inches  
 Date: March 30, 1964  
 Place: Farm pond in Greenwood Co.  
 By: Frank Miller, Eureka, Ks  
 Tackle: Rod & reel with live minnow

**DRUM**

Weight: 28 pounds, 2 ounces  
 Length: 32 inches  
 Date: August 12, 1974  
 Place: KOP Dam near Parsons on  
 Neosho River  
 By: Tony J. Fornelli, Arma, Ks  
 Tackle: Trotline with crawfish

**GAR**

Weight: 31 pounds, 8 ounces  
 Length: (not known)  
 Date: May 21, 1974  
 Place: Outlet at Perry Reservoir  
 By: Ray Schroeder, Topeka, Ks  
 Tackle: Rod & reel with yellow 1/8  
 oz. beetle

**GOLDEYE**

Weight: 1 pound, 14½ ounces  
 Length: 17½ inches  
 Date: May 20, 1973  
 Place: Milford Lake  
 By: Kris Eenhuis, Wakefield, Ks  
 Tackle: Rod & reel with white  
 spinner

**PADDLEFISH**

Weight: 74 pounds, 8 ounces  
 Length: 67½ inches  
 Girth: 33½ inches  
 Date: May 15, 1973  
 Place: Dam below Chetopa, Ks  
 By: Joseph D. Plummer, Chetopa,  
 Ks  
 Tackle: Rod & reel (snagged) during  
 2nd open snagging season

**PERCH, YELLOW (Ring)**

Weight: 12 ounces  
 Length: 11½ inches  
 Date: July 12, 1970  
 Place: Lake Elbo, Pottawatomie Co.  
 By: Merlin Sprecher, Manhattan, Ks  
 Tackle: Rod & reel with "Gold  
 Nugget"

**PIKE, NORTHERN**

Weight: 24 pounds, 12 ounces  
 Length: 44 inches  
 Girth: 20 inches  
 Date: August 28, 1971  
 Place: Council Grove Reservoir  
 By: Mr. & Mrs. H. A. Bowman,  
 Manhattan, Ks  
 Tackle: Rod & reel with silver spoon  
 & skirt

**STURGEON**

Weight: 4 pounds  
 Length: 30½ inches  
 Date: November 17, 1962  
 Place: Kaw River near Topeka  
 By: J. W. Keeton, Topeka, Ks  
 Tackle: Rod & reel with worms

**SUNFISH, GREEN**

Weight: 2 pounds, 2 ounces  
 Length: 12 inches  
 Date: May 28, 1961  
 Place: Strip Pit in Cherokee Co.  
 By: Louis Ferlo, Scammon, Ks  
 Tackle: Rod & reel with "Abu"  
 spinner

**WALLEYE**

Weight: 13 pounds, 1 ounce  
 Length: 31½ inches  
 Date: March 29, 1972  
 Place: Rocky Ford fishing area  
 By: David Watson, Manhattan, Ks  
 Tackle: Rod & reel with jig

**EEL, AMERICAN**

Weight: 3 pounds, 0 ounces  
 Length: 34 inches  
 Girth: 6 ¾ inches  
 Date: October 12, 1976  
 Place: Big Blue River near Manhattan  
 By: Jack J. Humbert, Manhattan, Ks  
 Tackle: Rod & reel with beef liver bait

**BASS, WARMOUTH**

Weight: 14¾ ounces  
 Length: 10½ inches  
 Girth: 9 inches  
 Date: April 5, 1977  
 Place: Farm pond, Labette Co.  
 By: Craig Sonka, Parsons, Ks  
 Tackle: Rod & Reel with minnow





SQUIRREL SEASONS  
OPEN JUNE 1

PRATT--While most Kansas sportsmen are busy trying to catch the one that got away last summer, the first Kansas hunting season opens June 1.

The Kansas Forestry, Fish and Game Commission reminds hunters that the squirrel season opens June 1 and will continue through December 31, 1977. The daily bag limit is five with a possession limit of ten. Shooting hours are from one-half hour before sunrise until sunset.

Hunters should find a good supply of both fox and gray squirrels in the timbered areas of Kansas this season. During a normal production year, squirrel populations more than double from spring to fall. Many die from natural causes even if they weren't hunted so the annual surplus squirrel crop can be safely utilized without harming the squirrel resource.

###



CHANGE OF ADDRESS NOTICE

KANSAS FISH & GAME has a new computerized magazine subscription process which starts with the July-August 1976 issue.

If you move or have a change of address, but want to continue receiving KANSAS FISH & GAME, it is imperative that we have the address label from your July-August 1976 issue or from later issues.

Address labels from issues prior to the July-August, 1976 can not be processed. Simply cut the address label from your July-August issue, attach it to the form below and send it too:

KANSAS FISH & GAME  
P.O. Box 1028  
Pratt, Kansas 67124

Thanks.

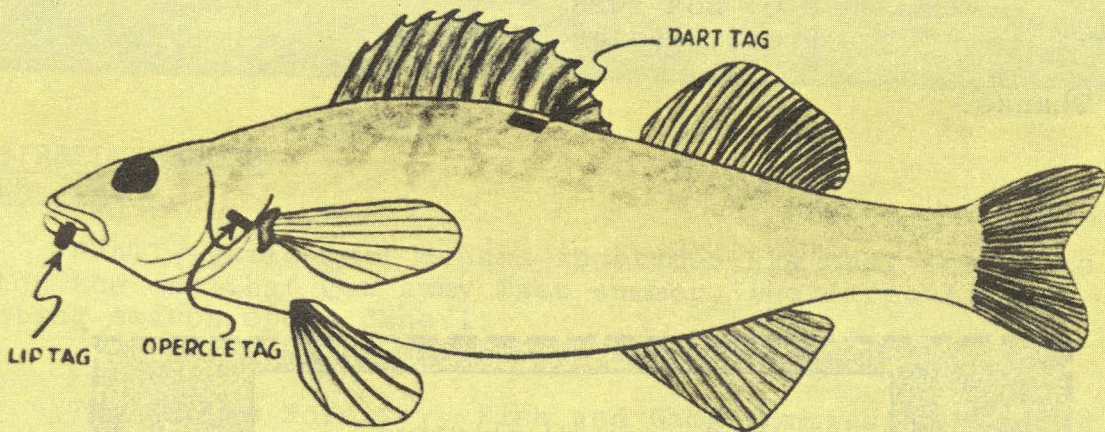
Attach magazine address label here.  
Address label MUST come from July-August 1976 issue, or from subsequent issues.

	1st Initial	2nd Initial	Last Name
NAME	<input type="text"/>	<input type="text"/>	<input type="text"/>
FIRM, TITLE, BOX NUMBER (Leave blank if not applicable)	<input type="text"/>		
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CITY	<input type="text"/>		
STATE	<input type="text"/>		ZIP CODE <input type="text"/>



# Attention Fishermen!

## BE ON THE LOOKOUT FOR TAGGED FISH



### WHAT TO DO SHOULD YOU CATCH ONE ?

#### 1. WRITE DOWN:

- a.) The kind of fish
- b.) The kind of tag
- c.) Its tag number, if any
- d.) Area of lake or reservoir where caught
- e.) Date of catch
- f.) Approximate the length and weight

#### 2 PLEASE GIVE INFORMATION TO:

- a.) Game protector
- b.) Marina attendant
- c.) Area fisheries biologist

#### OR MAIL INFORMATION TO:

Kansas Forestry, Fish and Game Commission  
Box 1028  
Pratt, Kansas 67124

Your cooperation will assist the Kansas Forestry, Fish and Game Commission in providing you with better fishing

Thank you



The Plains narrow-mouthed frog is another unusual and wide-ranging Kansas frog. It has a very rare relative, the eastern narrow-mouthed frog, which occurs only in Cherokee County, and which may be extinct in Kansas due to habitat destruction by man. These creatures are very small, reaching a maximum body length of less than two inches. They are quite secretive, spend most of their life beneath large rocks, and have some strange characteristics. For example, their call is very distinctive—a chorus of males sounds like a herd of bleating sheep. Their diet consists almost solely of ants. They look strange, too! Narrow-mouthed frogs have a pointed head, and a fold of skin across the back of the head. No other Kansas frog or toad resembles them.

There are five members of the treefrog family recorded from Kansas. One of these is now probably extinct in Kansas due to habitat alteration by man. The other four are still fairly plentiful. Treefrogs don't necessarily live in trees. In fact, only one Kansas species climbs into trees—it is called the gray treefrog and is found in the forests of eastern Kansas. It has adhesive toe-pads on its front and hind feet which enable it to cling and crawl just about anywhere. It does share a characteristic common to true toads and the Plains spadefoot toads. All have a somewhat toxic skin secretion that is irritable to humans. This does not mean that these frogs and toads are dangerous to man. It just means that if you catch and hold these animals, please use common sense.

Gray treefrogs cling and crawl just about anywhere.



Spotted chorus frogs are found in south-central Kansas.





Wash your hands immediately afterward so you don't accidentally rub some of the secretion around your eyes. The skin secretion of these amphibians will not irritate human skin, but can be painful if it gets on mucous membranes (eyes, nose and mouth). Other members of the treefrog family in Kansas include two kinds of chorus frogs, and the cricket frog. The cricket frog is the smallest frog in Kansas, reaching a maximum body length of under 1½ inches. It is quite common and found everywhere in the state. The remaining two members of this frog group are the spotted chorus frog and western chorus frog. The spotted chorus frog is most common in south-central Kansas, whereas the western chorus frog ranges across most of the state. Both are only slightly larger than the cricket frog. Chorus frogs breed earlier than any other kind of frog and toad in Kansas. Early spring rains in late January or February are sufficient to start these animals chorusing, and a marsh full of them can raise a mighty din.

The last major group or family of frogs found in Kansas is the true frogs. Members of this family reach the largest size of any frogs in the state. There are five kinds of true frogs in Kansas, but two are extremely rare and may disappear from the state if not protected. The remaining three species have wide distributions in Kansas. The most familiar of these frogs is the bullfrog.

Bullfrogs like to live around ponds and lakes, and eat almost anything that will fit in their mouths. Since this amphibian can grow to a body length of eight inches, it can choose a wide variety of prey items to stuff in its mouth. The Plains leopard frog is as wide-ranging in Kansas as the bullfrog, but only grows to about four inches in body length. The third member of the true frog family is the northern crawfish frog, a species found only in the eastern third of Kansas south of the Kansas River. This secretive frog is rarely seen, and is apparently diminishing in numbers in our state. It frequents crawdad burrows in and around low wetlands, and is being eliminated from our fauna because of wetland alteration and drainage programs.

Frogs and toads are a fascinating and varied part of Kansas wildlife, and are an important segment in the ecological pattern of the environment. They consume incredible quantities of insects. Many other animals, in turn, eat them. Unfortunately, frogs and toads are highly susceptible to aquatic pollution, and their disappearance from a Kansas waterway almost always indicates that something has gone wrong with the environment. Kansas has had its aquatic habitat totally altered statewide, and frogs and toads have suffered. We must be cautious—if these harmless little animals become extinct, a precious sound of spring will be stilled.

Plains spadefoot toads spend much of their life beneath the ground.



The American Toad breeds earlier than most true toads.







# Bushytail BOUNTY

By George Valyer

**H**AVE YOU ever tasted a fresh, juicy pear with just a faint blush of red tinting its yellow skin? If you just picked such a pear off of a tree in your garden, you know it is tree-ripened and contains all the sweetness and delicate flavor that mother nature intended for it to have. Its soft goodness tastes wonderful to a hungry lad who has just been released from that local detention center called a school-house.

To a farm boy who had spent his summer in the outdoors, that 9 a. m. to 4 p. m. session at the local country school-house was agony, especially when the sun was bright and there was just a trace of fall in the air. When winter had come, it was nice to relax around that old coal stove at the back of the school room and study about exotic lands where elephants roamed and tigers awaited the unwary along every jungle trail.

But, right now, the leaves hadn't even colored. The apples were ripe and the fall pears were at their sweetest. When I got home, I would take my lunch pail into the kitchen, plop it on the table and head for the pear tree at the edge of the garden to appease the appetite which had been building all during history, geography and spelling classes that afternoon.

When I opened the back door that evening, Mom asked "Are you going outside before supper? If you are, you might see if there are any squirrels in the pear tree. There have been two or three out there all morning and I think they have been eating the pears."

It didn't take me long to get the .22 rifle off the rack and ease quietly around the house. By the time I got to the pine tree in the side yard, I could see a squirrel moving along a branch about half way up the tree and he had a pear in his mouth. The bushytail paused a

moment in a crotch at the trunk of the tree and I lined up the sights. At the crack of the rifle, down came the squirrel and the pear.

Please don't misunderstand, I didn't carry any grudge against squirrels. But, I did resent their intrusion into our pear tree when the fruit was as good as it was that year. After all, there were plenty of walnuts a short distance away along the creek and there was a whole field of corn just east of the creek bend.







Photos by Stiebhen

Growing up on a farm in eastern Kansas during the 30's was a great adventure. There was always plenty of work to do but there was plenty of fun to be had, too. Between chores, there was fishing in the spring and summer, hunting in the fall and winter and, on days when it was too rainy or cold to be outside, there were outdoor magazines to be read close to an old wood-fired heating stove. I feel sorry for the youngsters of today who grow up knowing only the squirrels and birds in a city park and thinking that pears, apples and nuts can only be obtained from the supermarket. Sure, it was a hard life for my Folks who had to get our living from 80 acres of land during the drouth and depression of that time but, as far as I am concerned, it was an ideal life. What you never had—you never missed. Besides, what you missed, you were probably better off without.

That squirrel out of the pear tree was a tough one! He had to be six or seven years old. I had never skinned a squirrel before and I waited until after supper before tackling the job. I learned later that this was a mistake—the quicker you tackle the job, the easier the task.

When times were hard, you didn't waste any food and, since I had shot the squirrel, it was my duty to dress the critter. It was the first time I had ever killed a squirrel and I didn't know the easy way to separate the animal from his pelt. I quickly learned that you don't skin 'em like you do a muskrat. By the time I had separated the hide from the carcass, there wasn't much of the meat left that wasn't slashed up quite a bit. It wasn't till many years later that I learned the easy way to skin a squirrel.

To begin with, a squirrel should be field-dressed as soon as possible after he is killed. This is accomplished easily by cutting through the base of the tailbone on the underside and then making a short slit through the skin from the tail down the back of each hind leg. Place your foot firmly on the tail and grasp the hind legs and pull up. If you have done this properly, the skin will peel off up to the shoulders and the front feet. The only skin left should be a tab from the breast bone to the back legs. This should be peeled off from the front to the rear. Now, just cut off the head in front of the shoulders



and sever the feet. A slit from the chest cavity to the anus will expose the viscera which can then be removed. Now your squirrel is field-dressed and ready to be placed in a plastic bag. When you get home, it is a simple process to wash the carcass, cut it up into pieces and put it into the freezer or cooking pot.

Personally, I like to soak any wild meat in a brine solution overnight in a refrigerator. A young squirrel is delicious fried like chicken but an older squirrel is better boiled before being browned in a skillet or put in a squirrel stew.

But first, you have to get the squirrel.

If you live anywhere in the eastern half of Kansas, getting a mess of squirrels shouldn't be a difficult effort. If you live in the part of the state where there is an abundance of hardwood forest with dense undergrowth, then you may have your choice of two squirrel species, the gray and the fox. Only the extreme eastern portion of Kansas has the necessary habitat for the gray squirrel and, even there, he is on the western limit of his range. The gray squirrel prefers dense stands of trees in large blocks with plenty of hickory, pecan and oak trees. Only in the eastern two or three tiers of counties will you see any in the Sunflower State.

The entire state is within the range of the fox squirrel. He ranges from border to border and can be found anywhere there are large trees and adequate food. In western Kansas, this usually means along creeks and rivers. That is usually the only place there is enough timber available to attract Mr. Bushytail.

Almost every city and town in the state has its squirrel population. A squirrel soon loses its caution in an urban situation and is quite prone to getting his dinner from a back yard bird feeder or from any place where food is available. A friend of mine who lives in Topeka learned this soon after he made his annual Fall trip to the country to collect walnuts. He put a sack of these goodies in his garage which was all well and good. However, he had the habit of leaving the garage door open each morning when he went to work. After a week or two, he noticed his supply of walnuts slowly diminishing. His wife, Janice, provided the clue which solved the mystery. Each morning and afternoon she noticed a frisky squirrel in the vicinity of the garage. One morning when she walked out the back door to carry some trash to the alley, there was "Mr. Frisky" leaving the garage with a walnut in his mouth. The mystery of the disappearing walnuts had been solved.

A friend of mine, Ralph Bailey of Isabel, has quite an affair going with a bunch of squirrels in his neighborhood. Ralph has his workshop in a small building at the rear of his home. When he goes out to reload a box or two of shotgun shells, he always puts a few nuts in his pocket. The squirrels in the neighborhood know of his generosity and always pay him a visit. Entering through the open door, they proceed directly to his workbench where they know they can expect a handout. They are tame enough to take his offerings directly from his hand.





**Believe me, not very many squirrels** are that tame. Get outside the city limits and away from human habitation and you'll find the bushytail an elusive but curious critter. If you walk briskly through the woods, chances are that if you spot a squirrel at all, he will be quite some distance away and will be in a hurry to get hidden.

So, how do you find 'em, you ask. Well, the answer is, you don't. You let them find you. Just casually saunter into an area where you know there are squirrels, then sit down quietly for 20 or 30 minutes. If there are any squirrels in the area, you'll soon see them or at least hear their activity. During good weather, squirrels are most active during the morning and late afternoon. This is when they will be feeding on various kinds of nuts, field corn, wild and tame fruits, osage orange hedge balls, and any type of vegetation that strikes their fancy. In early Spring, one of their favorite foods is young tree buds on elm, cottonwood, willow and sycamore trees. In summer, both gray and fox squirrels eat some insects so they are not strictly vegetarian.

In the book *Squirrels and Squirrel Hunting*, the author, Bob Gooch, says a good way to hunt squirrels is to look for a hickory or walnut tree where they have been feeding. You can see the shells and husks from the nuts on the ground under the tree. Plan to take a stand near the tree about daybreak or by mid-afternoon. Sit down against the trunk of a nearby tree and relax. Keep movements to a minimum and be ready when a squirrel shows. Gooch likes to use a .22 rifle with a low-power scope for squirrel hunting and I certainly agree with his choice. There isn't much sport in knocking down a sitting squirrel with a shotgun.





Of course, I realize that there are times and circumstances when a scatter-gun is necessary. If you don't have the patience to sit on a good stand and let the squirrels come to you, about your only alternative is to stalk them through likely woodsy areas. In this case, most of your shots will be at a running target and the shotgun is the desired firearm.

When I was a youngster, a neighbor had what I would describe a good squirrel dog. "Tippy" was a tan mongrel that Clyde Evans kept around to take care of the rat surplus. Tippy was a good ratter alright but he did love

to hunt squirrels. All you had to do was shoulder a gun and say, "Tippy, let's go squirrel hunting," and the old pooch got excited. When you got to the woodlot, he began sniffing for a trail and it wasn't long before he would have one located. Then he'd bark "treed" and it was a simple matter to ease over and collect another bushytail. Unlike some so-called squirrel dogs, Tippy would not tear a squirrel to pieces. Once that squirrel bit the dust, the old dog would immediately begin hunting for another.





On a bend in the creek at the northwest corner of our farm, there was an ideal place for squirrels. Dad usually planted that field to corn and, smack dab in the middle of that corn patch was a lone walnut tree, its branches usually loaded with walnuts in the Fall of the year. The squirrels made regular trips from the timber along the creek to the cornfield and the walnut tree. During the late 30's, the squirrel population along our section of the creek got so large that we had severe losses in the corn and nut crop. Coupled with the excellent food situation was the abundance of den trees along the creek which provided the essentials for a squirrel population explosion. Needless to say, squirrel hunting was encouraged in our neighborhood for a few years.

Although their preferred habitat is different, the gray squirrel and the fox squirrel have similar food preferences. Besides nuts, squirrels eat domestic and wild fruit, cultivated grain, hedge apples (osage orange) and, during the spring, the buds of trees. When squirrel populations are high, the squirrel and man often come into conflict with each other. To a farmer who is losing 10 percent of his corn crop year after year, the squirrel is a pest of the first order. However, neither gray nor fox squirrels reach a normal population of a density which poses that much of a threat to cultivated crops. An active adult male squirrel will tolerate other males only just so close to his den tree. Other squirrels which violate these invisible property lines are promptly driven from the area.

**Kansas game biologists agree that squirrels, generally are under-harvested in the state.** The annual take can safely be as much as 70 percent of the population in a given locality without hurting the reproductive potential. The harvest usually remains much less than this figure in the Sunflower State.

The most serious limiting factor on Kansas bushytails is lack of the proper habitat. This is not an easy factor to correct. A mature forest or woodlot with large den trees takes a half century to grow and a 30-year-old man who plants such forest will probably not live to see it develop into a good squirrel hunting area. His sons and grandchildren will probably be around to enjoy its bountiful squirrel population. Contrast this with the two or three years necessary to establish good habitat for quail or pheasants and you get an idea of the necessity of preserving adequate hardwood timber stands now. The recent large-scale use of herbicides to clear timber from southeast Kansas hills has resulted in significant losses to squirrel populations as well as to other wildlife species. But, it is hard to blame the cattle rancher. A couple of years ago when cattle were bringing \$50 per hundred pounds, grass grew abundantly on the defoliated hill-sides and produced tons of additional beef. The farmer and rancher have to make a living and only time can be the judge as to the long-term effects of this timber destruction.

**Area ranchers will be the first to point out that the major tree species affected by the spraying was the jackoak which is not the best of squirrel habitat.** This is true but many other species of trees were also destroyed, including many which are greatly desirable for all wildlife.

Somewhere there must exist a formula which will allow a balance between the needs of wildlife and the economic necessities of the farmer and landowner. When this formula is discovered and applied, the land will produce a good living for the farmer and the squirrels (or other wildlife) alike.

**If existing timber is not mature enough to have den trees, the interested individual can help increase the squirrel population by erecting den boxes.** The box should be at least 18 inches deep, 12 inches across and the opening should be from 3 to 4 inches in diameter. For gray squirrels, the 3 inch size is about right but for fox squirrels, you need at least 4 inches. Gray squirrels are about two-thirds the size of the fox squirrel and the smaller opening will be about right for them. One word of caution—don't erect the nest boxes too close together and place them in larger trees 18 to 30 feet off the ground.

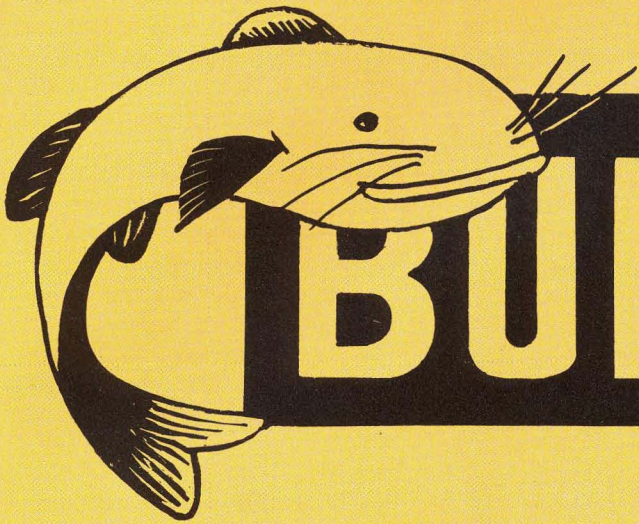
Both fox and gray squirrels construct leaf nests when den cavities are scarce. However, it is believed that these leaf nests do not provide enough protection for the survival of litters during the February and March period when the first litter is born. Squirrels normally have two litters per year—the first in late winter and the second in July or August. The young number from one to five per litter. Young squirrels grow rapidly and in eight or nine weeks, are ready to venture forth from the den and begin eating solid food. By 12 weeks, they are on their own and ready to assume the task of foraging for themselves.

**If you've never tasted a young squirrel pan-fried to a golden brown, then you are missing one of the epicurean delights of wild game.** Some prefer it to rabbit and, after a hard day's work, fried squirrel with baked potatoes and a green salad makes a mighty fine meal. Most game cookery books have several good recipes for preparing squirrel meat in several forms and one of these may prove to be your favorite. As far as I am concerned, pieces of young squirrel rolled in flour and seasoned with salt and pepper, then fried in deep fat, provide the ultimate in gastronomical delight. For a taste variation, you might use hickory smoke salt as a seasoning.

**With squirrels as plentiful as they are in Kansas, this is a meal which can be enjoyed frequently.** And, the taking is as much fun as the eating. No question about it! We truly have a bushytail bounty.



*Those Beautiful*



# BULLHEADS

**By George Valyer**

Photos by Stiebhen

**I**T WAS WARM and muggy on a June day. The southeast breeze was heavy with moisture and perspiration dripped from the forehead of a 15-year-old boy pumping water for the cattle and horses at the well behind the barn. Looking over his shoulder, his gaze lingered in the dark shade of the green trees lining the creek just a few rods away. In his mind were thoughts of how he wished he were under the shade with a fishing pole.

I know what his thoughts were because I was that boy. Next day would be a long one with the usual farm chores plus a sweaty time in the alfalfa field bucking hay into the stack. Dad was in the field mowing now and, come morning, the hay would be turned with a sulky rake. By early afternoon it would be cured enough so that the buck rake could be used to take the windrows into the stack. That was my job and I liked it most of the time but right now, I sure wished I could go fishin'.

About supper time, a dark cloud bank appeared in the western sky and by dark, thunder was rumbling and a fresh wind was moaning through the branches of the big pine tree just north of the house. Several times that night I was awakened by the sharp cracks of lightning and the pelting of rain against the window. When morning came, drizzle was falling but it soon let up and mid-morning saw the sun break through. A northwest breeze smelled fresh and clean and gone was the heat and mugginess of yesterday. There would be no hay stacked today—it was still soggy from last night's downpour. The creek was up and running, birds were singing, bait would be easy to find and I was going fishing. Life was beautiful!

*Fish and Game*





By dinner time, a can of fat garden worms rested on the back step, a new hook had been attached to the end of my fishing line and the pole rested against the door ledge as if it were expecting to go somewhere. It did.

It didn't take long to polish off the beans and cornbread that Mom put on the table and then it was off to the creek for an afternoon of bullhead fishing. The shade of the old elm tree which draped its branches over the water felt good in the warm afternoon sun and I hardly had time to glance at the woodpecker hole which was the home of the friendly little screech owl that serenaded me with his mournful twitter nearly every evening.

My attention was drawn to swirling eddy in the waters which marked the deep hole carved under the roots of the tree under which I stood. From past experience, I knew this would be the spot to put my bait with the creek running as it was today. Carefully, I eased my line with bait and bobber into the current so that it would be caught in the small whirlpool near the undercut bank. It hadn't been there long when the bobber disappeared below the surface and I hoisted out a flopping bullhead. This was going to be a memorable day.

The same action was repeated several times during the afternoon and by the time the shadows were lengthening, the bucket in which I kept my catch seemed alive with the black and muddy-yellow fish. There would be plenty for the whole family for dinner tomorrow and Mom knew how to fry them just right.

From the walnut tree at the edge of the cornfield just across the creek, a squirrel chattered scornfully at my intrusion and the screech owl popped out of his hole in the branch overhead to see what the fuss was all about. Dad was coming down the lane from the pasture where he had been fixing fence and I knew it was time to head for the house. There would be chores to do, fish to skin and supper to eat and I was hungry. But on the way to the house, I was already thinking about the pond down in the pasture. Maybe tomorrow after the alfalfa was stacked, there would be an hour or two when I could get away and see if the bullheads were biting there.

Looking back on it, I am thoroughly convinced that I was mighty lucky to have grown up on an eastern Kansas farm with a creek and pond handy. I also know that I was lucky to have had a mother who liked to fish and







Like all members of the catfish family, the bullhead has sharp dorsal and pectoral spines.

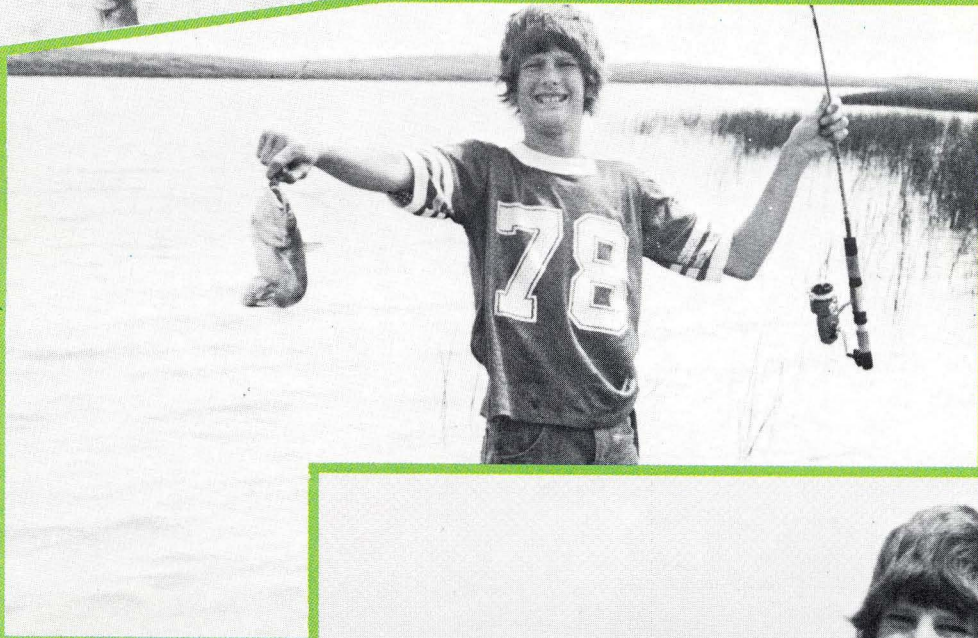
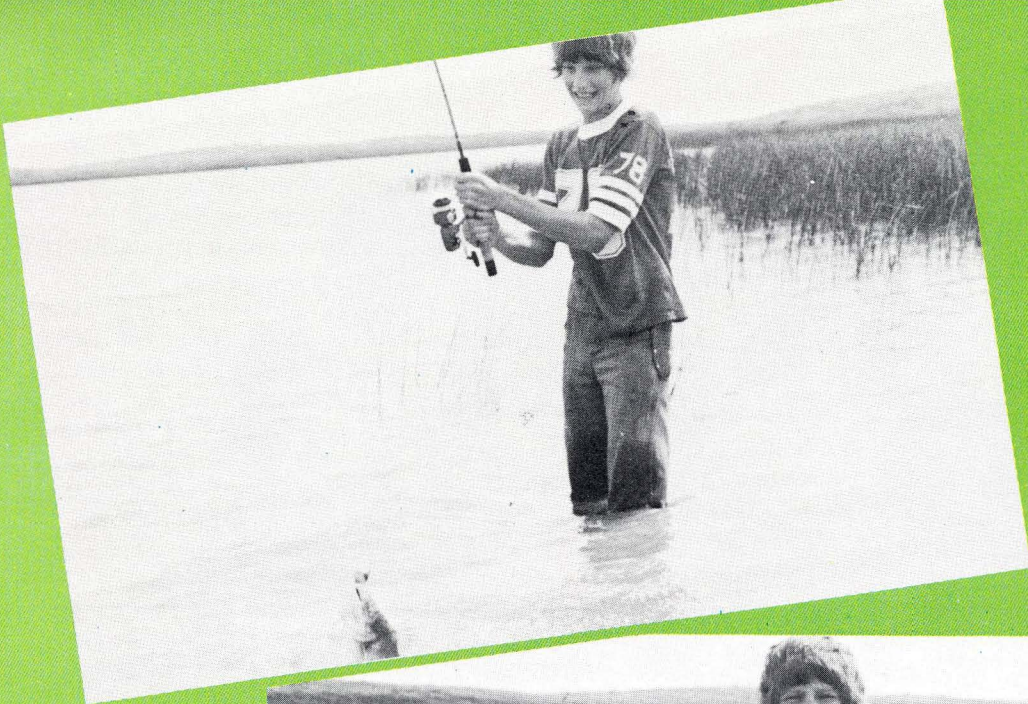
was willing to take her children along. My sister never caught the fishing fever (she is just a city girl) but some of my first vivid memories of treasurable moments involve trips to the creek with my mother, an old willow pole and the excitement of seeing a cork disappearing beneath the water. Bullheads were also one of my favorite foods on the table and I still enjoy them dipped in cornmeal and fried to a golden brown.

Since those days on the farm, I have fished for trout in the mountains, bass in the Ozarks, walleyes in the Northland and white bass in the large lakes and reservoirs of TVA but I still get a thrill out of fishing a Kansas creek for bullheads. There is still an excitement in the solid tug of a bullhead on a light rod and his dogged determination to escape the hook when he knows he is caught. And the wonderful thing about bullhead fishing is that you don't have to go very far from home to find it.

**Bullheads have a remarkable** tolerance for muddy water and can survive in places where other fish would find it difficult to live. Even in times of drought when many shallow pools dry up, the bullhead seems to carry on. Reportedly, he can burrow into the mud and, as long as his gills are wet, can survive until the next rain enlarges his habitat.

Like all members of the catfish family, the bullhead has sharp dorsal and pectoral spines. These spines can inflict a painful wound to the hand of anyone who doesn't handle him carefully. It usually doesn't take too many jabs from these needle-like fins before a young fisherman learns to hold a bullhead properly in order to avoid them. Even then, a seasoned fisherman can occasionally get punctured when trying to extract his hook from the gullet of old "mister whiskers." Also, his jaws can inflict abrasions to the fingers of a fellow who sticks







them in his mouth in an attempt to remove a barb which has become imbedded. When your fingers are inside, mister bullhead merely clamps down with a vise-like grip and his rasp-like jaws do the rest, especially if you try to jerk away. Fishing for bullheads is sometimes like blackberry picking. The fruit of your labor is mighty satisfying but watch out for the thorns.

There are two main species of bullheads found in Kansas—the black bullhead and the yellow bullhead. A few years ago, the U. S. Fish and Wildlife Service introduced the brown bullhead to the state and he was placed in some farm ponds and watershed lakes. A native of more eastern waters, the brown bullhead was considered less prolific than the native species and less likely to overpopulate impounded waters. Despite these introductions, chances are that the bullheads you catch will be either the yellow or black.

There is a relatively easy way to tell what species you have caught and it isn't necessarily by color. Black bullheads growing in muddy water have a tendency to have a lighter coloration while yellow bullheads coming from clear water may be darker than normal. However, you can look at the color of his whiskers or barbels and tell. The yellow bullhead has white or light grey barbels while the black bullhead sports black or dark grey barbels. Also, the anal fin is longer in the yellow species while the black has a more rounded anal fin. Either species is equally tasty when served hot from the skillet.

When the bullhead is confined in a fairly small body of water such as a farm pond or small lake, they have a tendency to overpopulate. When their numbers increase to the point where there is not enough food to go around, the result is a lot of small, stunted bullheads not large enough to be of much interest to the fisherman. This is especially true in water which remains muddy the year around. Newly hatched bullheads cannot be preyed upon by sight-feeding predator fish such as bass when the water is so turbid that the bass are not able to see their dinner. In clear waters, this problem is not so evident since most of the young are gobbled up by predator species.

Nevertheless, it isn't easy to keep bullheads out of ponds when the outlet overflow is close to a stream containing a bullhead population. During times of heavy rainfall when the spillway is up and running, small bullheads swim upstream from the creek, over the spillway and into the pond. Of course this also happens with other species of fish.

Because of his tolerance to muddy water, the bullhead is often placed in irrigation tailwater ponds in western Kansas. There he lives and thrives and provides fishing opportunities in many localities where fishing is scarce. Where agricultural sprays are consistently used, fishermen should be wary of a buildup of chemical pollutants which might be high enough to render the eating of these fish dangerous.

When it comes to eating, the bullhead has a few peers. Of the freshwater species I have eaten, only the walleye,

crappie and channel catfish might have a superior flavor. The pinkish white flesh of the bullhead is superb when dressed soon after it is caught. Just dip the fish in finely ground cornmeal, season to taste and fry in hot grease. The result is good enough to make a fellow drool just thinking about it. If you are lucky enough to catch some large ones, they can be filleted and you won't have to watch out for bones.

Bullheads come in all sizes up to a little better than four pounds. The Kansas record weighed five pounds and was taken from a Southeast Kansas strip pit in 1974. The world record came from New York state and weighed a whopping eight pounds. However, to most bullhead fishermen, a pounder is good keeping size and a two pounder is a whopper. If a pond or lake is not overstocked, bullheads seem to grow to a larger size in impounded waters. A newly formed lake or reservoir with its sudden increase in fish environment often produces exceptional strings of bullheads for the first few years until the population of predator fish gets large enough to control the bullhead explosion. Thereafter, the surviving bullheads, although not so numerous, are generally of a large size.

In Kansas streams and rivers, turbidity normally prevents the predation and more of the bullheads survive. However, clear-running streams allow sight-feeding predators a chance to gobble up the newly hatched bullheads. If you do catch a bullhead from a clear creek or stream, it will probably be a dandy.

How do you fish for bullheads? What bait do you use and what type of tackle? The answers to these questions would depend on who you are talking to. To the barefoot country boy, any rig will do even if it's no more than a piece of light package twine, a hook and makeshift pole cut from a sapling along the creek bank. However most youngsters today are not satisfied unless they have a "store bought" rod and reel, an assortment of hooks, plastic bobbers and other sophisticated equipment which would have been beyond the dreams of a kid growing up in the "dirty thirties" and early forties. Not that there weren't rods and reels in those days—it was just that they were beyond the reach of most youngster's finances. I'll never forget the day when Dad decided that I had worked hard enough to earn the price of a genuine solid steel rod and a casting reel complete with braided linen line. It was a great thrill to be able to cast far out in the pond to where the "big ones" always stayed.

But enough of this nostalgia.

My favorite bullhead rig today consists of a good quality spincasting reel with pin pickup, a light six-foot fiberglass rod and a terminal consisting of an egg slip sinker with a split shot stop about eight inches above the hook. If you keep the egg sinker less than one-half ounce, a bobber can be clipped on the line to keep the bait just off the bottom if you desire. Don't use too large a bobber—one just big enough to support the weight is





enough. I have quite a laugh when I see someone using one of those teacup size monstrosities some people use. A bobber that size may have its uses but is surely isn't for fish weighing less than 10 pounds.

How about bait? That's an easy one. Almost anything handy will do but I suspect that more bullheads are caught on worms than any other bait. Other good baits are peeled crawdad tails, grasshoppers and a hunk out of the side of some other fish. Bullheads seldom if ever take artificial lures. Although his cousin, the channel catfish, feeds by smell and by sight as well, the bullhead apparently feeds only by smell. Therefore, natural baits are about your only choice.

**In the northeast part of the United States, the bullhead is called a horned pout and is looked upon by many anglers as a trash fish. However this attitude is slowly being displaced by one of tolerance and even respect by those who have tasted his flesh. In Minnesota and Wisconsin, those who used to disdain the bullhead and cast him aside now are beginning to realize that they have been throwing away some mighty good eating. A friend**

of mine who is a native of Wisconsin tells me that, when he was a youngster, nobody bothered with the bullhead. Now, it's a different story. When a bullhead is caught, he is placed on the stringer just like the walleye and bass.

Apparently even those anglers of such fabled regions as Minnesota, Wisconsin and Michigan are learning what I found out a long time ago. Bullheads are mighty good eating!

**The bullhead may not be the most spectacular fighter on the end of your line, but neither is the crappie. He may not take artificial lures but there are times when a bass or walleye won't either—only natural baits will entice them. He isn't the biggest fish in the water but he can live and thrive in small streams where other species find conditions too difficult.**

**Whenever I am sitting on a creek bank under the soft shade of a tree, I am thankful that the Creator, in his wisdom, took care to make sure that there are bullheads to catch. They say that beauty is in the eyes of the beholder and, to me, bullheads are beautiful.**





# Progress?

Jim Bridger was seventeen when he joined Major Ashley's mountain man crew. By that time of his life, the young Bridger was already an experienced frontiersman, familiar and comfortable with wild country. Kit Carson was about the same age when he took to the New Mexico mountains in search of prime beaver. These adolescent mountain men may seem strange now, but they were not exceptional in their time. The land they lived in demanded an early maturity of them, and, in spite of the danger, there was something to be said for the wilderness way of coming of age. In the nineteenth century, a boy of fifteen was ready for some adventure; he had the skills, and he was prepared for the risks.

It doesn't seem to me that boys of fifteen have changed much since the time of the Bridgers and Carsons, but there isn't much doubt that the times themselves have undergone a metamorphosis. The adventurers are still with us, but the adventures themselves have all but disappeared.

I suppose I was luckier than most of my contemporaries. I lived at the head of a valley a couple of miles from the Mississippi River bluffs. Ours was the last house on the road. After our back yard, there was nothing but oak timber and limestone-bottomed creeks. What adventures I had as a kid I found in those woods.

The experiences were small enough by my grandfather's standards or even my father's. There wasn't any room in that little valley for a squirrel-hunting boy and a .22, and there wasn't enough water to support any fish. Mostly I just wandered around down there, sometimes with a couple of buddies, sometimes alone, sometimes with great building plans for a lean-to, sometimes not. Whatever the activity, I ended up spending most of my time running the ridges, exercising my legs and imagination. As a result, I learned to extract my adventures from goat prairies on bluff crests, from mushroom hunts and red-tailed hawks hanging over the woods. They were little adventures, ones I found without the benefit of the prairie vistas and free mountain ridges that drew the mountain men on. My adventures depended on my eye's ability to restrict itself and filter out everything but the essence of wildness.

In twenty years, I've gotten surprisingly good at this sort of adventuring. Oh, I look back on the high, wild times with regret now and then, but they were like nothing I've ever known. I guess it's not possible for me to miss them too much. People tell me that what we have forged from the old wild land is more valuable than the land itself. They say that I have sacrificed my chance to be another Bridger in a wild America in order to bring the world to a new frontier. I suppose it's a reasonable swap, Bridger's great adventures for my small ones, in the interest of progress.

I paid a visit home the other day after a three-year absence. I walked out back to look over what used to be a ten-acre weed field that lay just in front of the bluff woods. There's a subdivision going up in that field now. The developers are loading the wooded hilltop beyond the field into dump trucks; the dirt will go for fill in another subdivision. In the eyes of the developer, this is progress: two house sites where there were none. From my side of the valley, it looks like progress, too; now there are no woodlots where there were two.

When I compare what I have with what Bridger and the boys had up in the Wyoming Absarokas, it seems that I have given up just about my fair share of the wild places. I'd hate to think I was throwing a monkey wrench in the works of Progress, but before we go much further, I'd like someone to tell me just how much smaller my adventures have to get.

—Chris Madson



