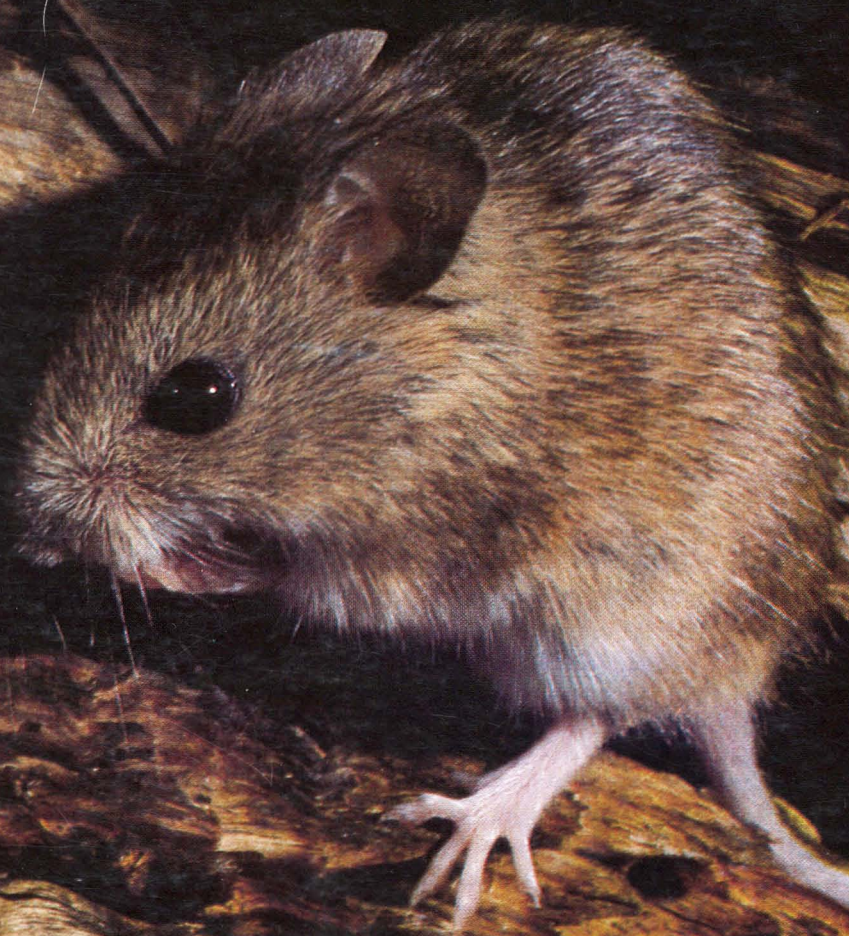


# KANSAS WILDLIFE

MAY/JUNE 1984



single copy \$1.50

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KANSAS WILDLIFE (ISSN 0279-9030) is the official bimonthly publication of the Kansas Fish & Game Commission, Rural Route 2, Box 54A, Pratt, Kansas 67124 (316) 672-5911. Subscription rates: one year (6 issues) \$5.00; two years (12 issues) \$9.00; and three years (18 issues) \$12.50. Single copies are available at \$1.50 per copy.

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Postal I.D. Number: ISSN 0279-9030

## Editorial

What would you think of a proposal to transfer conservation moneys into the criminal justice bailiwick? Thanks to Peter Rodino, such an absurdity has been under consideration for several months.

Rodino is a New Jersey congressman who's long been vociferous in his opposition to private gun ownership. In 1983 he introduced a bill (H.R. 3498) that would divert the 10 percent excise tax on handguns from conservation programs into a fund designed to compensate victims of violent crime. It would reduce the amount of Pittman-Robertson money available to state wildlife agencies by 30 million dollars annually. About 75 percent of that 30 million in handgun tax receipts is now used to finance wildlife restoration projects, the remainder going into hunter education programs which each year train 750,000 students in the safe, ethical use of firearms.

Now, is Rodino really sympathetic to crime victims? Or is he just being vindictive, getting his licks in with the pro-gun lobby? If the latter is true, he is tacitly admitting that lobby comprises not maniacs with a perpetual twitch in their trigger fingers, but responsible outdoorsmen who are, predictably, outraged the most by misappropriation of P-R funds. Sadly, Rodino's obsession with gun control may compromise not only firearms safety courses designed to minimize accidental shooting deaths, but state natural resource management as well.

This has been a quiet election year as far as gun control is concerned. President Reagan has said little about it, though his record shows he strongly supports private gun ownership and opposes handgun licensing and similar restrictive measures. The Democrats are watching their step, unwilling to risk ostracizing a large segment of the population by tackling an issue where feelings run high and everyone seems to have a conviction. After all, why climb out on a limb when you don't have to? Problems like unemployment, the federal deficit, even nuclear arms are much less hazardous to address. For one thing, each is so complex that few people are knowledgeable enough to render immutable judgments. Opinions exist, surely. And some are strong. But nobody would argue against lower unemployment, more manageable deficits, and fewer warheads. The real arguments concern means to those ends. By concentrating on ends in their statements, politicians avoid excessive heat.

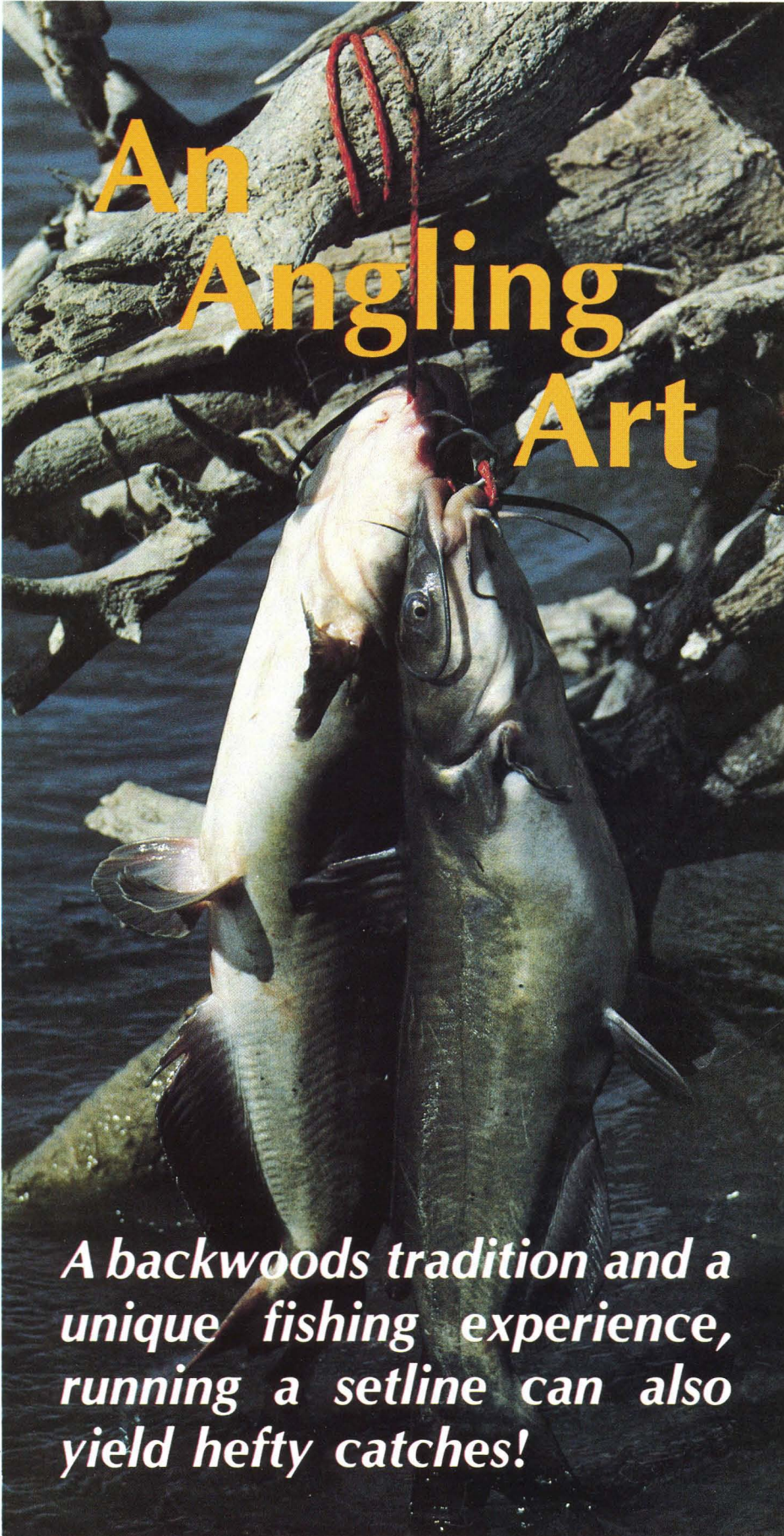
Gun control does not lend itself to side-stepping. That's because it is really not an end. At least, it wasn't. And certainly it shouldn't be. It is the means by which some say we can effect crime control. Crime control, of course, should be the issue, but a few legislators have lost sight of that, attacking instead a constitutional freedom held dear by a great many Americans. Since the ill-conceived Gun Control Act of 1968, opposition to further firearms restrictions has been strong. That opposition has itself entrenched anti-gunners. Reducing crime is not, it now appears, their goal. It has become instead justification for disarming the American public, for beating the opposition. As with so many emotional issues, the urge to win has obscured the reason for conflict. Sacrificing our wildlife resources on such a battlefield would surely be tragic.

The idea of crime victim compensation—no matter how it is financed—smacks of an unwieldy, ultimately unworkable plan for distribution of public moneys. Thirty million dollars is a lot of cash, and many would be those clamoring for a piece of the pie. As with welfare, fraud would be rampant, administrative costs exorbitant. Even if the funds used in such a program were to come from someone else's pocket, the scheme seems wasteful. And crime itself remains unaffected. Is Mr. Rodino saying that we can't do anything about crime? That we, as a society, simply have a moral responsibility to make life more comfortable for its victims?

A roll-over-play-dead attitude will not reduce lawlessness here or anywhere. For the victims of violence, cash will not repair permanent injuries or bring back loved ones. To control crime, we must attack the criminal, not subsidize his profession with payments to his prey. A leaner, tougher judiciary could alleviate much of the suffering perpetrated by the habitual offender. It should cost us no more than we are already paying for court services. And it would address the real problem.

Whatever crime reduction proposals are in the offing, it is only reasonable that they be budgeted within the criminal justice system. Taking dollars from conservation projects and hunter education programs—even for *workable* crime prevention—is a gross misappropriation of funds. Neither our resources nor our youth should be deprived for the purpose of bridling the criminal. And certainly not for subsidizing his activities.





Gene Brehm photo

*A backwoods tradition and a unique fishing experience, running a setline can also yield hefty catches!*

Rob Manes

I was in my teens before I realized that catfish could be caught on anything but limblines and trotlines. I once thought fancy bait-casting rigs and fly outfits were for city folks who usually didn't catch many fish.

Then I was introduced to graphite rods, fast-retrieve reels, and five-dollar lures—a new dimension in angling. I learned to enjoy more refined pastimes—walleye, black bass, and crappie fishing. Soon I was the owner of several rods, including one very expensive boron stick, given by a friend who was concerned about my social development.

What would become of the naive country boy with river mud caked behind his ears? Would he ever return to his angling roots? You bet your leaky waders!

It wasn't long before crowded reservoirs, a fortune in snagged crank baits, and memories of huge catfish sent me back to a familiar stretch of the Smoky Hill River. I remember that trip as the rekindling of an old and dear friendship. The musty night air was full of hair-raising toad screams and an occasional coyote call. The eerie chorus added to a titillating fear of the dark that followed me as I waded the black waters.

The fish were biting that night, and I was thankful for the chance to harvest part of the river's abundant crop—a true wild experience. Even thieving turtles, which ate one big channel cat off my hook, didn't add a sour note to my night on the river.

It was only after this solo trip that I began to learn the intricate art of setline fishing. I knew the basics: good bait, good water, and good timing. But, as I would discover, there is more to a setline than just a piece of string and a 3-0 hook left to dangle in the water overnight.

On a river, log jams or other obstructions direct the current to erode deep holes, which are home to channel cats, flatheads, and other fish. Bigger holes generally hold bigger fish. A deep channel leading to the hole ensures predatory larger catfish a passage to the bait. Whether the water is turbid or clear, catfish don't seem hampered in their search for food.

Many impounded waters afford opportunities for setline fishermen, especially in upper ends of lakes and ponds, where water feeds in, and along submerged stream beds. Smaller impoundments typically yield channel cats, with few flatheads. Some larger Kansas lakes hold monster flathead catfish for those with the persistence to pursue them. Catching large flatheads requires hours of waiting for the voracious predators to take live bait.

One of the most important things to consider when fishing for catfish is rising water. When runoff carries nutrients and forage into a swelling river or lake, catfish go into a feeding ferment, with their barbels stimulated by countless sensations that signal food. As my granddad once advised me, "Fish when the river is rising. After it crests, you might as well split wood for a couple of days."

Perhaps second in importance to good water is proper bait. For flatheads, two- to six-inch green sunfish, small bullheads, toads, frogs, and crawdads work best. Like flatheads, channel cats especially favor crawdads and frogs; but shad, shiners, and prepared baits also work well. Two fine catfish baits that may be hard to procure are mudpuppies (aquatic larvae of salamanders) and green worms, a species of earthworm found in wet, clay soils of northeast Kansas.

Keeping live bait on the hook is a difficult but important task. Flatheads usually ignore dead or prepared baits, and larger channel cats seem more aroused at the presence of something that moves. This consideration makes hardy green sunfish and bullheads attractive bait. It is best to hook these and other bait fish just below and behind the dorsal fin.

Crawdads are best hooked through the base of the tail, by pushing the hook through from the underside, so that it curves up toward the carapace. Many veteran anglers claim that "de-pincher" the crayfish makes them more attractive to predators. Frogs are generally attached by the lower jaw or through a bony protrusion of the lower back.

A backwoods story illustrates the flathead's taste for living food: A squirrel hunter was easing his way along the banks of the Arkansas River one fall day. He bent low to see past the streamside foliage. Downstream several yards he could see a fox squirrel on the end of a log cantilevered over the channel. The squirrel palmed a walnut, gnawing intently to get at the meat inside. The hunter shouldered his rifle and, as he centered the crosshairs on his target, a mammoth flathead boiled from the riffles below and swallowed the hapless squirrel whole. The astonished shooter kept his scope fixed on the spot. Momentarily, the big flathead emerged with a walnut in its mouth and left it on the end of the log. . . .

To most anglers, choosing the proper site and bait for catfish is elementary; the true art in setline fishing lies in making each set. A set must afford strength to hold the catch, without being so rigid as to allow it to pull loose. Techniques for building these qualities into a set vary with the type of setline used, which is often dictated by the nature of the water being fished.

Trotlines, banklines, and limblines are used most often in rivers. A trotline in Kansas may bear as many as 25 hooks. The rig generally consists of two chest-high poles, connected by ten to twenty feet of heavy nylon cord or light steel cable. Dangling from the main line are slightly lighter lines, about sixteen inches long, each connected with a large barrel swivel, which supports a nylon or steel leader and large hook. Trotlines are readily available in most sporting goods and bait stores, but they are also easy and inexpensive to make at home. The hooks should be spaced so they will not become entangled when the main line is stretched, and the poles should be long enough to allow a secure hold in the stream bottom, while keeping all hooks at the desired depth. Trotlines are usually stretched across a channel near some cover, such as a brush pile or undercut bank.

Banklines are popular in rivers because they can be used without the aid of a boat where the water is too deep for wading. A simple ten-foot cane pole with an equal length of nylon cord attaching a hook is often all that is needed. Most serious bankline users thread the line through a slip sinker, with a large barrel swivel tied below the sinker to keep it from sliding down to the hook. A length of stout leader connecting the swivel to the hook allows the bait to suspend above the bottom, where catfish are likely to find it. Some baits, such as toads and frogs, are best left to splash on the surface. Banklines can be cast into the channel upstream from cover, with the butt end of the pole forced into the bank to anchor it.

Limblines may be the most popular choice of river fishermen. They are simple—just hook and line. As with other setline rigs, a barrel swivel may be used to separate a slip sinker from the leader and hook. A swivel allows large fish to roll when hooked, without twisting the line.

A term of utmost importance in setline fishing is "flexibility." With

the trotline, flexibility is provided by the long main cord, and the cane pole allows some flex in a bankline set. Limblines gain flex from green, pliable branches which overhang the water. Limbs of surprisingly small diameter can be employed, if the knot is tied properly. A setline that "gives" will encourage the fish to fight to exhaustion without tearing loose or breaking the set.

In reservoirs, juglines are often used to suspend bait in desirable habitat. The jug, usually a plastic bleach bottle, is tied with a piece of cord to an emergent tree stump or other stationary object, with the baited hook hanging below the jug at the desired depth. The buoyant container provides the all-important flex in this system. Using indelible ink, an angler can mark his floats with his name and address, information which is required on all setlines in Kansas.

A less common type of set is the throwline. Such a device may have up to 25 hooks. Generally longer than a limblines or bankline, a throwline is tied to a stationary object on shore, and the weighted, free end is hurled into the water. As with a limblines, elasticity can be provided by splicing a length of bicycle inner tube into the line. Wire wrapped tightly around each end of the tube affords a means for tying the splice in place. Heavy rubber tie-down straps will also work.

**S**etline tackle can be unpretentious. A half-pound coffee can with a slit across the lid and a loop of string for a handle can be tied to a belt loop and filled with enough bait to supply the one trotline or eight other setlines allowed each person by law. The opposite-side belt loop can support a small compartmented tackle box containing hooks, swivels, sinkers, and nail clippers. Hip pockets will hold a stringer and a roll of braided (not twisted) nylon cord, and your front pockets can carry a folding knife and the ready-made lines. By rolling

each line separately around your hand and placing them one at a time in a front pocket, they can be removed with minimal tangling. With equipment thus arranged, your hands are free to reach for tie-on limbs and perform other tasks. Seasoned setline anglers have developed techniques for tying knots one-handed.

A miner's head lamp is a great convenience, whether you're wading, guiding a boat, or stumbling through bank vegetation in the dark. A flashlight should only be used when fishing in pairs or by those adept at holding the light in their teeth, between their thighs, or in their armpits. All equipment can be dispatched from a sandbar base camp, which might include a camp fire, buckets to sit on, sleeping bags, food and drink, and bug spray.

Many setline fishermen stop here in their study of the art, but the adroit angler pursues the fine points—such as those of his hooks. This simple device must perform several tasks. First, it must penetrate and hold the bait. A shaft which is too thick will cause undue injury to live bait and will more likely tear loose. Stainless steel is desirable because it provides strength without bulk, and it doesn't rust.

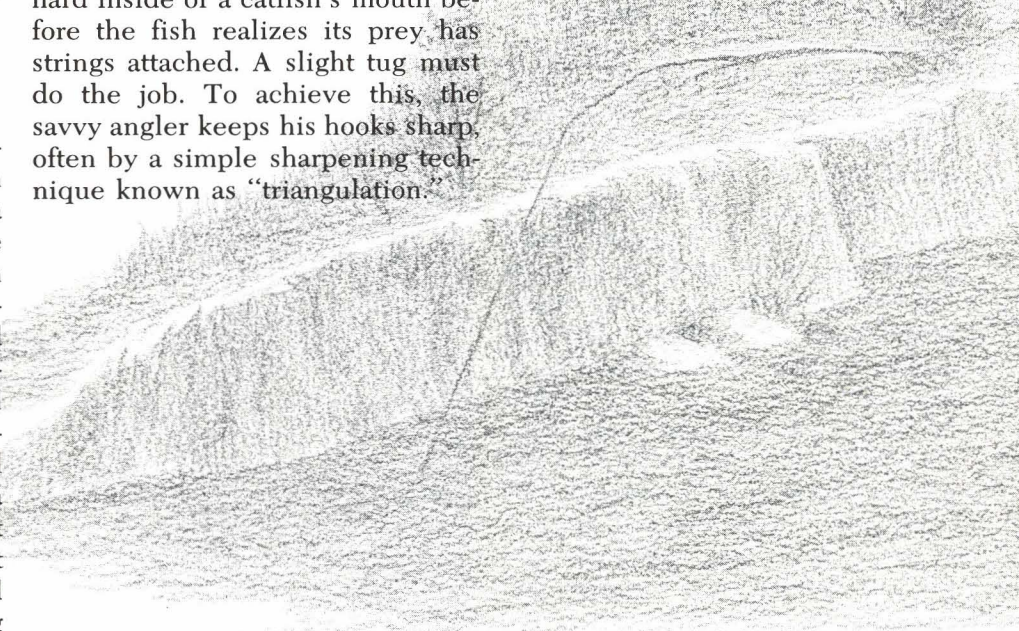
A hook must also penetrate the hard inside of a catfish's mouth before the fish realizes its prey has strings attached. A slight tug must do the job. To achieve this, the savvy angler keeps his hooks sharp, often by a simple sharpening technique known as "triangulation."

Holding the shaft of the hook in one hand, with the curve resting on a firm surface, you can draw a file across the back, or inside, of the barb, forming one facet of the pyramid-shaped point. The other two facets are filed on the outside of the point in the same manner, creating a keel which terminates at a super-sharp point. The serious setliner will sharpen his hooks before each outing.

Even the sharpest hooks and most clever sets won't hold big catfish for long. While the law requires that lines be checked only once every 24 hours, those who bring home impressive catches run their lines at least hourly throughout the night.

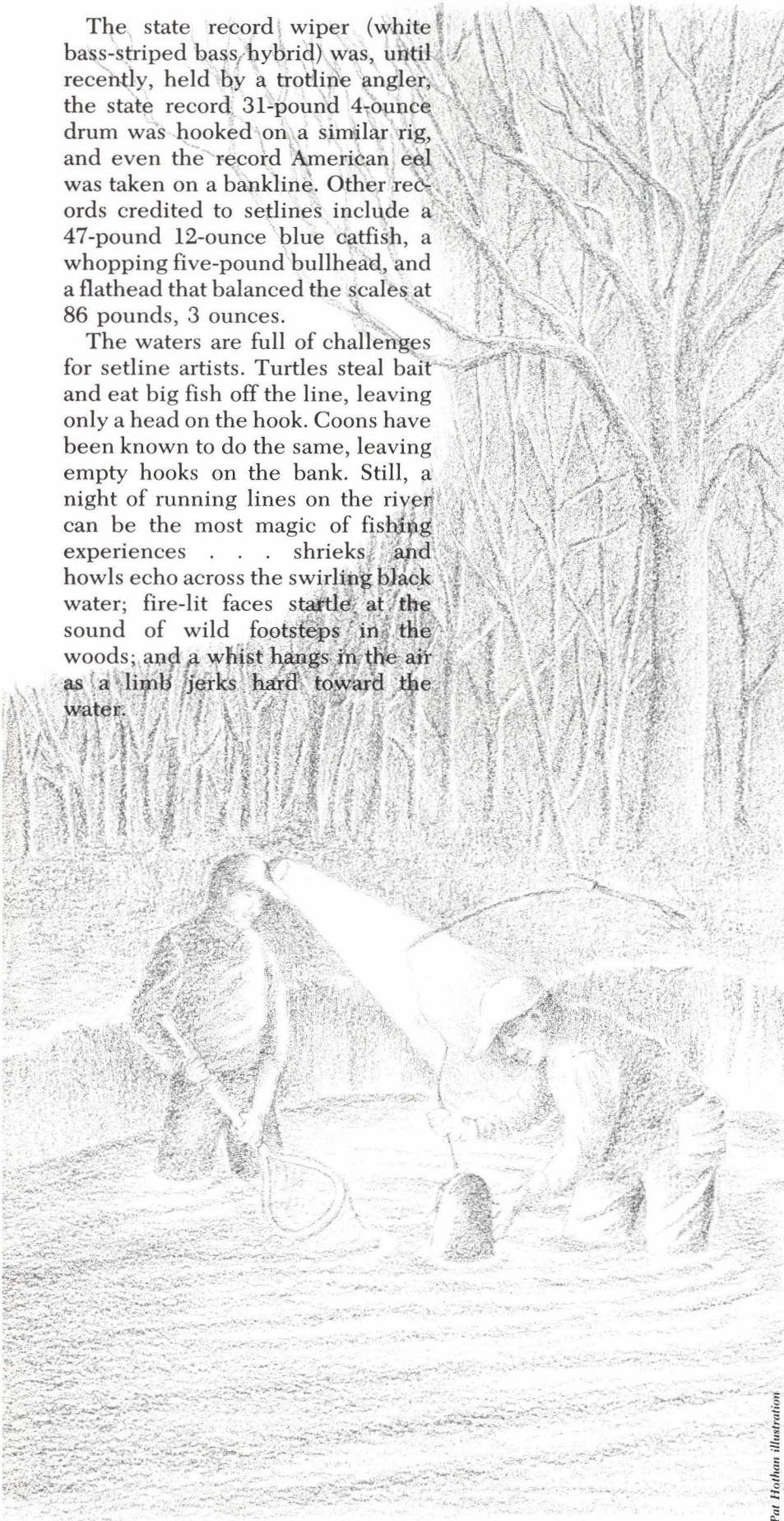
Once a fish is hooked, proper care must be taken in removing it, or it will likely escape. Using a stringer (aluminum loops aren't reliable for big catfish), the fish should be secured before it is lifted completely out of the water. It is safest to place the fish in a burlap sack or dip net before handling it at all. Many sad stories are told by setline anglers who learned too late that a big cat was hanging by a whisker!

If success is measured by the size of the fish on the stringer, setline fishing should top the list. The number of state records owned by setline artists is testimony to the effectiveness of this angling method.



The state record wiper (white bass-striped bass hybrid) was, until recently, held by a trotline angler, the state record 31-pound 4-ounce drum was hooked on a similar rig, and even the record American eel was taken on a bankline. Other records credited to setlines include a 47-pound 12-ounce blue catfish, a whopping five-pound bullhead, and a flathead that balanced the scales at 86 pounds, 3 ounces.

The waters are full of challenges for setline artists. Turtles steal bait and eat big fish off the line, leaving only a head on the hook. Coons have been known to do the same, leaving empty hooks on the bank. Still, a night of running lines on the river can be the most magic of fishing experiences . . . shrieks and howls echo across the swirling black water; fire-lit faces startle at the sound of wild footsteps in the woods; and a whist hangs in the air as a limb jerks hard toward the water.



Pat Holman illustration

### LAW OF THE LINES

In the hands of a skilled angler, setlines can be very effective tools for harvesting fish. Because the Kansas Fish and Game Commission is responsible for conserving the state's fish resources, the agency enforces regulations to prevent overharvest and to give every angler a fair opportunity to enjoy his or her sport.

Each angler may set one trotline bearing not more than 25 hooks; or, instead of the trotline, a fisherman may set eight other lines with no more than two hooks on each one. Setlines may not be used within 150 yards of any dam or the mouth of any stream, and they must be checked at least once every 24 hours by the person using the lines. The use of setlines is prohibited in many small public impoundments, including state fishing lakes and many city lakes. All unattended lines must be securely tagged with the angler's name and address. This provision does not apply to setlines used in private waters.

In Kansas, only the Missouri, Arkansas, and Kansas rivers are under public domain. These three may be fished without the permission of adjacent landowners, but permission must be acquired before crossing private land to access the waters of these streams.

All other Kansas fishing regulations also apply to the use of setlines.

*This giant tusker was photographed at Lake Paradise in 1925. The sharpness and overall technical excellence of Martin's photos are a great credit to him, considering the difficulties imposed by African field conditions.*



# **The Kansans Who Brought Adventure Home**

Wayne van Zwoll



I stared at the old black and white photograph. The people in it wore dowdy khaki, but their smiles were brilliant—a window into the souls of true adventurers. The time-ravaged print had not lost the exuberance in their faces.

Beside the photo lay a Winchester rifle, its stock polished by hard use in sweating hands, darkened by oil and time. I had seen rifles like that before. Like old trees, they were mute, unsensing witnesses to times now past, adventures that could not be relived.

Had the people in the photo worn Stetsons instead of pith helmets, this room could have been one of many Western Americana galleries. But you don't find acacia trees on the Great Plains. This place was different, a window itself into the lives of two of Kansas' greatest pioneers. . . .

Why is it that many of history's most notable men rise from an obscure background? What makes the aberrant child a candidate for greatness? Can it be fate or circumstance? The desire to achieve that which is so poignantly lacking? Or, perhaps, a sense of adventure spawned by the knowledge that there is little to lose? Near the turn of the century a young Kansas man had, it seemed, all the requisites. His name was Martin Johnson.

Johnson was the son of an Independence jeweler, groomed to take over his father's business. But the lad had no use for such sedentary pursuits and developed an early interest in photography. Expelled from school for using cameras to embarrass his teachers, Martin journeyed briefly to England, then returned to his father's jewelry business.

He lasted only a couple weeks. Jack London, already a noted author, was putting together a crew for an around-the-world cruise on his vessel the *Snark*. With thousands of other adventurous boys, Martin applied for one of seven vacancies on board. Fate smiled. He was hired as a cook.



Oryx (gemsbok) and zebras share a Kenya waterhole in 1926. Though plains game like this is still common in many districts, populations of large, dangerous game are now at much-reduced levels.



Leopards are notoriously tough to photograph. This one was surprised at night on a giraffe kill in 1925.

All photos courtesy the Martin and Osa Johnson Safari Museum, Chanute, Kansas.

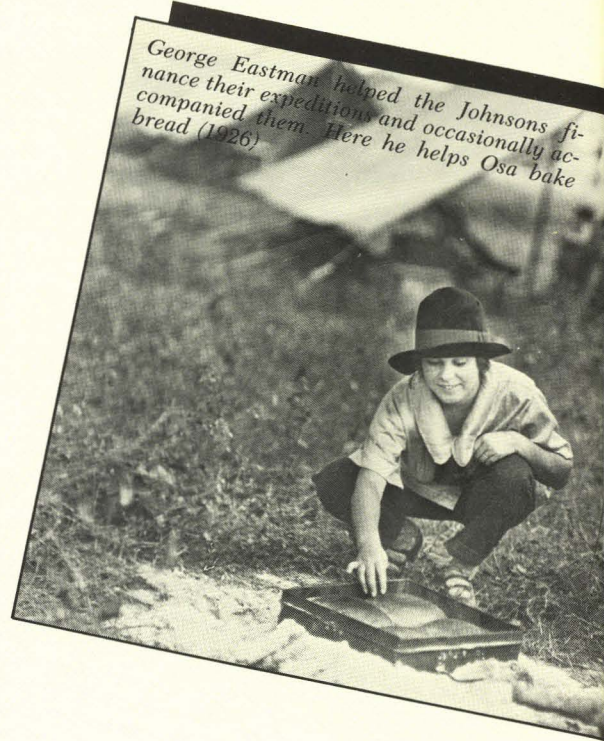


*Osa was a fine wingshot. Though she used a 12-gauge on this crested guinea-fowl and black-bellied bustard, later photographs show her with a custom-built Ithaca 20-bore double. (1921)*

The cruise was short-circuited by London's illness, but was long enough to whet Johnson's appetite for travel. Back in Kansas, he met Osa Leighty, a young singer from Chanute. They eloped in 1910. Osa was 16.

Together they toured the states, Martin showing photographs of his cruise, Osa doing a Vaudeville skit. Eventually they had enough money to outfit their own expedition—a trip to the South Seas.

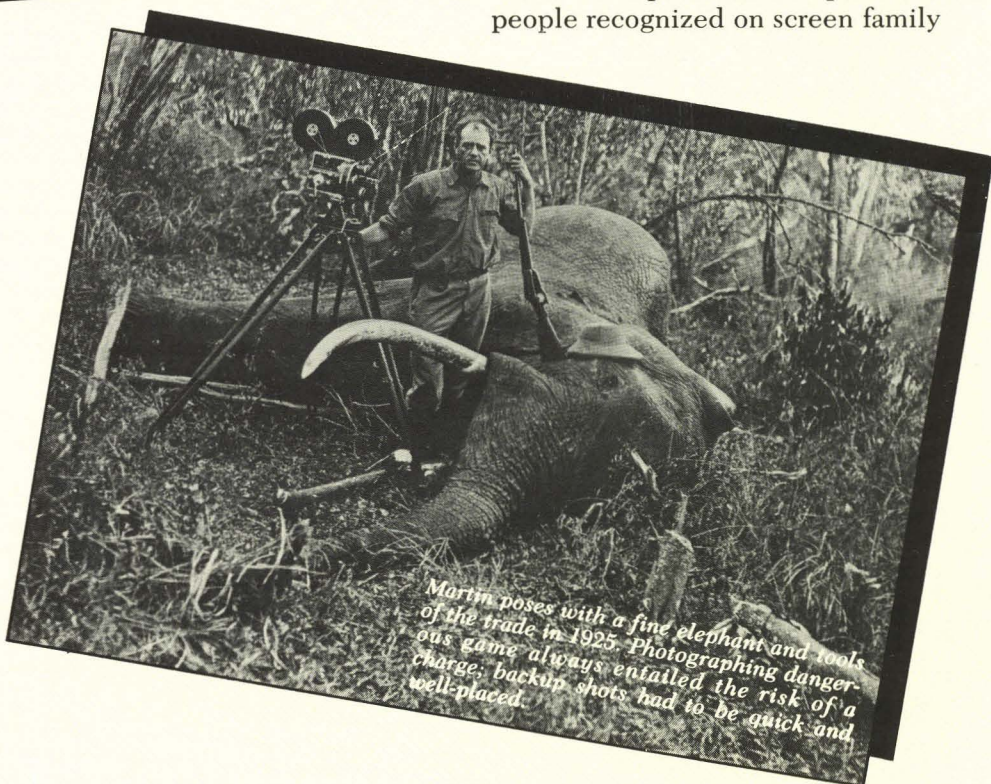
It was 1917, the age of automobiles, machine guns, and assembly lines. At least in the United States. In the South Sea Islands, however, the Johnsons found conditions quite different. Taken captive by cannibals, they narrowly escaped death. Still, they procured photos and si-



*George Eastman helped the Johnsons finance their expeditions and occasionally accompanied them. Here he helps Osa bake bread (1926)*

lent movies of the hostile Big Namba people—visual records that are to this day unique. The Johnsons returned, with artifacts, to a lecture tour in the States.

Their work was met with enthusiasm, though it was two years before proceeds from the tour allowed another South Seas cruise. They renewed acquaintances with the natives, setting up a screen and showing the films they had taken on the 1917 trip. When the primitive people recognized on screen family



*Martin poses with a fine elephant and tools of the trade in 1925. Photographing dangerous game always entailed the risk of a charge; backup shots had to be quick and well-placed.*



In 1927 the Johnsons traveled to Tanganyika, in 1929 to the Belgian Congo. Their last major trip was a "flying safari" in 1932.

Any travel in interior Africa was frightfully expensive and difficult prior to the second world war. Roads were few and only seasonally passable. Many porters were necessary to carry on foot the gear required for extended expeditions into the bush. Special arrangements had to be made for the heavy yet fragile camera equipment. Just the logistics of maintaining a camp the

in .30 WCF (.30-30) beside the camp meat. The Johnsons did little hunting for sport, though lions and other dangerous game occasionally fell to their bigger rifles.

How were their trips financed? Martin and Osa struggled financially for several years, their lecture tours, full-length motion pictures, and books bringing in just enough to cover outfitting costs. As their work drew a wider audience, sponsors offered to help. Probably the most



*Osa Johnson killed this lion in 1929. Though most often pictured with Winchester lever rifles, Osa also used bolt guns like this Mauser.*

members who had died in the interim, they were awe-struck. The 1919 visit provided the Johnsons with much more footage for audiences back in the States. They completed their trip with a stop at Borneo.

**B**y this time, Martin and Osa were becoming well known. Carl Akeley, noted explorer and then in charge of the African exhibit at the American Museum of Natural History in New York, urged Martin to visit the dark continent. Akeley was convinced that African wildlife was in jeopardy, that volatile political conditions, expanded native farming, and the white man's double rifle might soon eliminate some species. His proddings launched the Johnsons on their most extensive photographic safaris.

In ensuing years, Martin and Osa made several trips to Africa and acquired thousands of still photographs of the peoples, cultures, places, and wild creatures there. A journey to points west of Nairobi, Kenya in 1921 was followed two years later by a safari to Lake Paradise, the latter partially financed by George Eastman of Eastman Kodak.

size of a small city required constant attention. Meat had to be procured daily, prodigious meals cooked, equipment repaired, and travel plans revamped to fit changing weather and water conditions and photographic needs. Safari leaders were, of necessity, doctors, hunters, mechanics, linguists, athletes, and psychologists. Each expedition required adequate, if not professional skills in all these areas, whether led by one man or several.

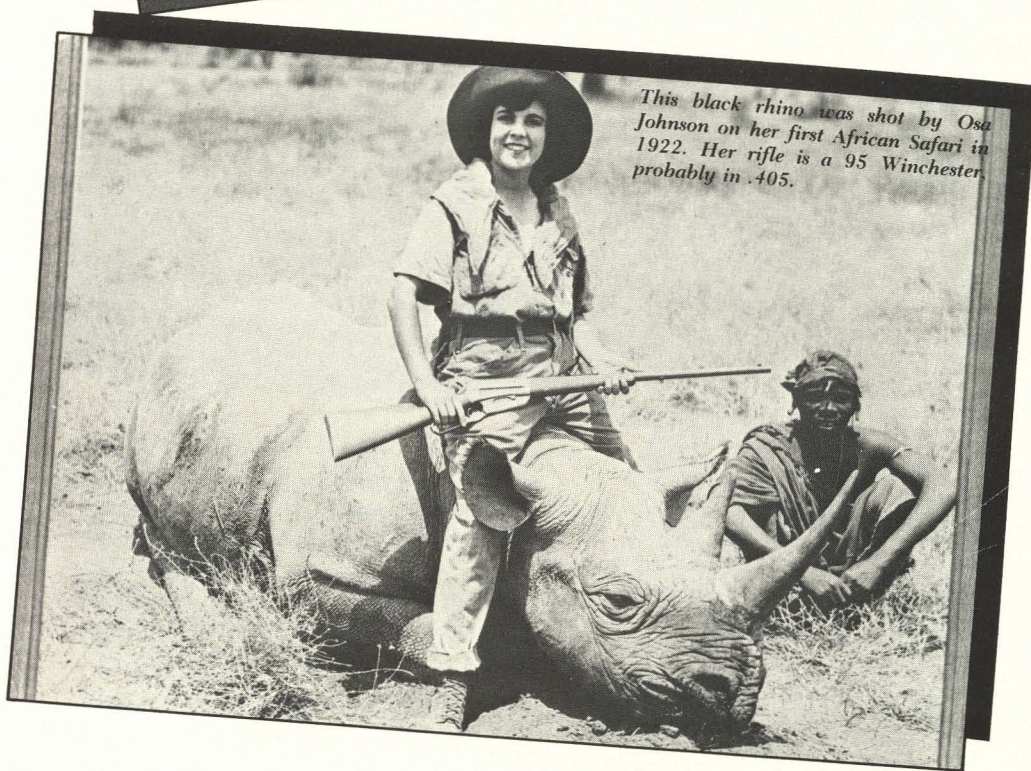
Martin Johnson was the consummate photographer, diminutive Osa reportedly a crack rifle shot. Indeed, many of Johnson's photos of dead game include Osa and her favorite 94 Winchester saddle-ring carbine

generous was George Eastman, though the Willys corporation and other domestic firms also paid to have their logos flashed in Johnson films.

Adventurers in the true sense of the word, Martin and Osa both were pilots and the first on record to fly around Mount Kilimanjaro. For the 1932 expedition, they adapted Sikorsky airplanes, an S-38 and S-39, for aerial photography. Both were powered by super-charged engines and were painted to serve as ground blinds when not in flight. Martin's craft was a 450-horsepower twin-engine, Osa's a 375-horse single-prop. They rigged special harnesses to allow them to lean free of the planes to photograph wildlife below.



Perhaps the most well-known photo of the Johnsons, this print was used to promote the films. (Zaire, 1929)



This black rhino was shot by Osa Johnson on her first African Safari in 1922. Her rifle is a 95 Winchester, probably in .405.

The last Johnson expedition was to Borneo in 1935. Though other trips were no doubt planned, a plane crash in 1937 killed Martin and severely injured Osa. Ironically, it was a commercial flight.

Osa regained consciousness in the hospital to be told that her husband was dead and that she likely

would never walk again. With great resolve, however, Osa overcame her injury, standing, then walking. She kept herself solvent by lecturing and doing promotions. In 1940 she published her first book, "I Married Adventure." Others were to follow, augmenting Martin's writings of previous years.

Osa Johnson died in 1953. In 1961

the Martin and Osa Johnson Safari Museum was established in her home town of Chanute. It remains a non-profit private corporation, supported by memberships, donations, admissions, and sales from its gift shop.

In 1972 the museum received a gift of West African artifacts collected by Pascal James Imperato, noted epidemiologist. In 1980 the Stott Explorers Library was added, featuring rare volumes of natural history literature as well as original works on mammalogy, ornithology, and anthropology. The Selsor Gallery of Fine Art was included in 1981.

Kansas may not have much in common with the jungles of Borneo or the veldt of East Africa. But through the lenses of Kansans Martin and Osa Johnson, not only mid-westerners, but peoples of many nations have seen primitive societies that have vanished during the twentieth century, animal life that may never exist in such abundance again, and adventure that is rapidly being drained from a computer-chip world.

It is indeed fortunate that the memorabilia of the Johnsons has been preserved in the Chanute Safari Museum. With the Imperato collection, it is an account of primitive Africa unrivaled even in major museums. Unpretentious on the outside, the Chanute facility is bulging inside, its every inch of floor, shelf, and wall space crammed with priceless artifacts, photos, and books.

Next time you crave an educational diversion that is also interesting, take a drive to Chanute. Through Kikuyu spears, primitive wooden locksets, photos of cannibals, mounts of African animals, and Osa Johnson's .30 WCF carbine, the Safari Museum speaks of another era, another place. It will stir the adventurer in you. It may even make you wish for simpler times, the mystery that only uncharted lands and uncivilized peoples evoke. It will change you; you will return.

# problems and potentials for prairie ducks

reprinted courtesy *Naturalist and Natural History Society*



L. M. Cowardin, A. B. Sargeant, H. F. Duebbert

Gene Brehm photo

**T**he prairie pothole region is the primary production area for ducks in the Central and Mississippi flyways. Recruitment, the rate at which breeding hens produce young for the fall population, is alarmingly low in many areas. The purpose of this article is to identify the magnitude of that problem, the major reasons for its occurrence, and the challenge it poses to waterfowl management.

## **THE PROBLEM**

Increases or decreases in duck populations are determined by the delicate balance between births and deaths. For population size to remain constant, numbers of young recruited must equal numbers of adults that die. Waterfowl raise at most only one brood per year. Biologists refer to hen success as the percentage of hens that hatch a clutch of eggs. If the hen's initial nest is destroyed she may nest repeatedly. The proportion of initiated nests that are successful is

called nest success. Nest success is one of the most important factors affecting recruitment; if it is low, few young are added to the fall population. Recent studies show that, in most areas of central and eastern North Dakota, less than 15 percent of the duck nests are successful. Results for western Minnesota and eastern South Dakota reveal that nest success is very low in those areas also. In contrast, limited information from northwestern North Dakota and Montana indicates that nest success in those areas is relatively good, about 40 percent in two recent studies.

Recruitment is difficult to measure. During 4 years of the North Dakota study, radio telemetry was used to study 338 mallard hens from shortly after they arrived on the breeding grounds until we knew if they succeeded in rearing young. Radio-equipped hens provided information on nest site selection, nest fate, rate of renesting, and survival of ducklings.

Prairie wetlands are dynamic. Weather has a major impact because during drought years the number of ponds is reduced. This impact not only affects the number of pairs attracted to an area but also reduces the nesting effort. The telemetry study revealed that in dry years, on the average, hens attempted only one nest whereas in wet years they averaged 2.6 attempts. Water conditions, therefore, have a powerful impact on recruitment. Ironically, the very droughts that periodically devastate waterfowl production are also responsible for cycles of drying and reflooding that contribute to the fertility of wetland basins and allow high duck production in wet years. Prairie ducks have evolved in this boom or bust environment and are capable of maintaining their numbers provided that nest success is good when water conditions are good. Unfortunately, the telemetry study showed that nest success and, therefore, recruitment was not good during any year.

The prairie pothole region is one of North America's most intensively manipulated environments. Waterfowl biologists have known for years that drainage of wetlands and the less obvious agricultural impacts on wetland quality have gradually decreased the ability of the region to produce large numbers of ducks. Even more drastic changes have occurred on uplands where most dabbling ducks nest. During the past 100 years most of the native grasslands in the Dakotas and western Minnesota have been converted to croplands that are tilled annually. In North Dakota less than 20 percent of the original grasslands remain, and, of those that do, most are heavily grazed. The croplands, under current agricultural practices, are of little value to nesting ducks. On our central North Dakota study area, 38 percent of the area was cropland, but the cropland contained only 2 percent of the mallard nests. In addition, nest success was lower in cropland than in any other habitat. Native grassland and hayland furnished much of the remaining nesting habitat. Much of the grassland was heavily grazed which decreased its attractiveness to nesting mallards. The hayland attracted many hens, but most clutches were destroyed by haying operations. Hens often chose nest sites in odd areas such as fencerows, shelterbelts, and rock piles, but they were generally unsuccessful in these habitats.

The telemetry system revealed that an average of only 8 percent of the nests initiated were successful during the 4 years of the study. These results are similar to those of numerous other studies where nests were found by different methods. At this low rate of nest success only 15 percent of the mallard hens were successful in hatching a clutch, even with persistent re-nesting.

The principal reason for the low rate of nest success was predation. Seventy percent of the nest failures were known to have resulted from predation, and predators were implicated in many of the remaining

nest failures. In addition, predators killed a minimum of 20 percent of the nesting hens. Predators also were strongly implicated in duckling mortality. Twenty-six percent of the broods failed to survive the initial move to water and continuing loss of ducklings resulted in an average brood size of 5 at fledging. The reasons for mortality of ducklings were largely unknown, but predation was the known cause in some deaths.

The important question for waterfowl management is "What impact does the high rate of nest failure and loss of hens and ducklings have on population size?" It is possible to combine an estimate of recruitment and survival to predict population trends. Based on the available data, we concluded that the mallard population in central North Dakota should be declining. If it is not, it must be maintained by birds pioneering to the area from other regions. To obtain population stability, about 30 percent of the hens would have to be successful in one of their nesting attempts. For this to occur, nest success would have to be about 15 percent, as compared with 8 percent observed in the telemetry study.

### **THE REASON FOR THE PROBLEM**

Predation ranks high as an important factor in the evolution of prairie ducks. The effects of predation are evident in many characteristics of ducks, such as agile flight, keen eyesight, and cryptic coloration of hens and moulting drakes, as well as distractive behaviors to lure predators from young and feigning death to escape from predators. The anti-predator behaviors of each duck species vary to complement other aspects of their biology, but all are aimed at perpetuating the species. The most important strategy ducks have for coping with predation, and with other environmental stresses, is to produce maximum numbers of young—to overproduce. This strategy increases chances for survival of at least some young. The existence

of an annual surplus of ducks is the cornerstone of modern-day waterfowling.

At no time in the annual cycle of ducks is the risk of predation greater than on the breeding grounds. Returning hens space themselves out across the pothole region in the spring where hens on nests expose themselves to predators for about 35 days needed for egg laying and incubation. The risk associated with nesting is a chance that must be taken.

Although prairie ducks have always been subjected to considerable predation, the impact has probably increased in recent decades. In pristine times, ducks lived in habitats largely untouched by man. The impact of predators on duck populations represented a balance that evolved over a long period of time. However, as settlement of the prairie by Europeans progressed, the region and its predator populations were subjected to considerable change. We are still in the midst of this change—man has not yet completed his transformation of the prairie. The consequences of man's impact on prairie duck populations are becoming increasingly clear, and increased predation is one present-day result of that change.

As farming has become less diversified, field size has increased to efficiently utilize modern equipment. Economics has discouraged leaving land idle. These changes are clearly evident from drainage of wetlands, elimination of fencerows, tillage of road ditches, burying of rock piles, increased use of herbicides and insecticides, and new cropping practices. Intensive farming has reduced the amount of prey available to predators during the duck nesting season and has concentrated prey and predator activity in remaining untilled habitats—the same habitat that most ducks use for nesting. Results from a recent study of striped skunks in eastern North Dakota revealed this influence. During spring and summer the skunks foraged primarily for insects

and spent about 85 percent of their foraging time in grassland habitats (including road ditches, tree rows, and waterfowl production areas) that represented about 20 percent of the area. The foraging skunks destroyed many ducks nests; nest success on the area was about 10 percent.

Another major change affecting prairie ducks has been alteration of the composition and abundance of predator species. Although this change is related to habitat modifications, it also reflects direct human-inflicted mortality of predators. At present, predators having greatest impact on ducks in the Dakotas and western Minnesota include the red fox, striped skunk, raccoon, mink, and Franklin's ground squirrel. Species having lesser impact, but which may be important locally, include the badger, coyote, longtailed weasel, crow, and possibly some gulls and raptors. During pristine times many of these predator species were uncommon or scarce, but other species such as the wolf and kit fox that had an unknown impact on ducks were common.

Settlement of the prairie has benefited most present-day predators. For example, raccoons now have grain to eat and buildings in which to spend the winter and rear young, red foxes have diverse foods including sunflower seeds and livestock carrion during winter, crows and great horned owls have trees for nesting, and mink have impoundments to help them withstand drought. Together, these factors have favored the maintenance of a rather stable, diverse, community of mid-size predators that are highly adapted to prey on ducks, and their eggs and their young.

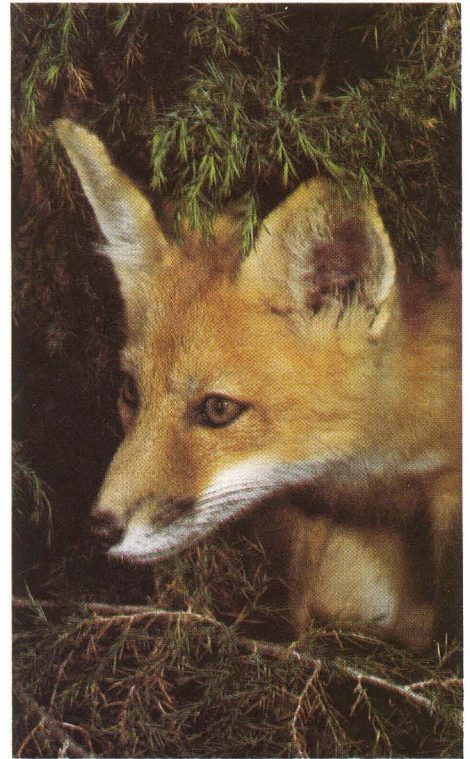
Direct human impacts have been a major influence on certain predator species; information is best for canids. Wolves suppress coyote populations and coyotes suppress red fox populations. Hence, it is no surprise that after wolves were largely eliminated by man from the pothole region during the mid to late 1800's,

the coyote population expanded greatly. Kit foxes disappeared at that time for reasons not fully understood and red foxes became very scarce. Because coyotes preyed on livestock, efforts were undertaken to reduce their numbers. As control became more effective during the 1930's and 1940's, the number of coyotes in farmland areas were reduced substantially and the red fox population began to expand. After 1940 the red fox became far more numerous than ever before in recorded history of the region and during most years occupied almost every square mile of prairie pothole habitat in the eastern Dakotas and western Minnesota. Recently, the coyote population has begun to reoccupy areas where it has been absent for many years and red foxes are becoming less numerous.

The increase in red foxes after 1940 was detrimental to duck production. Information collected during 1969-73 indicated that about 18 percent of the breeding hen mallards in North Dakota were taken annually by foxes. Most hens were believed killed on nests but some were scavenged. Other information showed that individual fox families often take 40 or more adult ducks in spring (mostly hen dabbling ducks) and that foxes have a particularly strong attraction to duck eggs. Information about the impact of coyotes on ducks is scant, but it appears that coyote predation on ducks and duck eggs is much less severe than red fox predation. The relatively high nesting success reported for northwestern North Dakota and Montana was in areas where coyotes were numerous.

### **WATERFOWL PRODUCTION POTENTIAL AND CHALLENGES**

When ducks arrive on their prairie breeding grounds each spring, they have available a mosaic of wetland and upland habitats in which to nest and rear their young. Intensive agricultural practices have resulted in a general deterioration in the wetland and



Gene Brehm photo

*Predators like this red fox account for many waterfowl on nesting grounds each year. Reducing expansive duck habitat to isolated pockets concentrates predators.*

upland habitat base for breeding waterfowl. Most biologists would agree that this trend is likely to continue, but some changes may occur that will benefit prairie ducks. For example, duck recruitment would be improved if land retirement programs could be modified to provide large acreages of undisturbed grass-legume cover for 3-5 years. Also, the current trend toward minimum-till and no-till farming methods may benefit nesting ducks. Managers of the wildlife resource have had little influence on major land-use decisions on private land, but they should be alert to ways that Federal farm programs were modified to produce benefits to wildlife. Waterfowl managers should also be sensitive to changes in predator populations that may occur as a result of disease, harvest impacts, or habitat change and thus affect waterfowl recruitment.

Under current farming practices and predator populations, waterfowl recruitment rates are low and are cause for concern. If the capability for waterfowl production on private

land continues to decline, increased recruitment of waterfowl on managed areas will assume greater significance. Fortunately, Federal and State agencies control a habitat base upon which management can be practiced to increase recruitment. Certain prairie ducks, especially mallards, are endowed with physiological and behavioral attributes that make them well-suited for the production of large numbers of young on small areas of habitat if adequate complexes of wetlands and uplands remain and high nest success can be assured. Natural prairie wetlands provide aquatic habitat of outstanding quality for supplying the spatial and food requirements of breeding waterfowl. Federal and State agencies have preserved many thousands of acres of wetlands and adjacent uplands to be managed for waterfowl production. Compared to the total area in the prairie pothole region, the amount of habitat that can be managed specifically for waterfowl is small but it is of high quality and has potential for producing large numbers of waterfowl.

Results of several research projects provide hope that high levels of waterfowl production, particularly that of mallards, can be attained on managed areas. One such study was conducted in the pothole region of north-central South Dakota during 1971-73. That study evaluated duck nest densities and success in 9 fields (40-100 acres) of undisturbed grass-legume cover. The fields were in an area with good complexes of natural wetlands and good populations of breeding ducks. Results of the study indicated that many more ducks, especially mallards, nested in the plots of managed cover than in farmed or grazed plots. Nest success was about 20 percent higher on the managed tracts than on unmanaged areas. The major finding of this study was that nesting ducks can be attracted to fields of tall, dense cover. In some instances, however, predators negate the positive effects of habitat management.

Highest duck production consis-

tently occurs in areas where habitat is good and predation is greatly reduced either naturally or by management. In the same region where the above study was conducted, 1,062 nests of 7 duck species were found from 1969 to 1974 on a single 125-acre field in an area where mammalian predators, especially red fox, striped skunk, raccoon, and badger, were controlled. Nest success was 94 percent when control of these predators was nearly total. At least 7,250 ducklings were hatched on the field during the 6 years of the study. There did not appear to be anything unique about the study area except for the removal of predators. This study illustrated dramatically the high reproductive potential of wild ducks, especially mallards, in good habitat if they are protected from the negative influence of predation.

Islands in certain lakes also provide examples of how large numbers of ducks can be produced on small units of habitat free of predators. In 1978 and 1980, duck nesting was studied on 15 islands in Audubon National Wildlife Refuge in North Dakota. On these islands (45 acres total area) there were 458 waterfowl nests of 10 species and nest success was 86 percent. Mallards and gadwalls were the principal species. One of the densest concentrations of nesting mallards ever found in North America occurred on an 8-acre island in Miller Lake in northwestern North Dakota. Duck nesting on this island was studied during 1976-80. In 1977, 385 mallard nests were found; over 200 nests were found in each of the other years. The principal nesting cover was 2 acres of dense western snowberry (buckbrush) and Wood's rose which contained 97 percent of the nests. During the 5 years, there were at least 2,560 duck nests on the island. Nest success averaged 85 percent and a minimum of 16,000 ducklings were hatched.

Islands and direct predator control have obvious implications for waterfowl management, but the application of these practices may be

curtailed by economic, ecological, or sociological considerations. Methods to separate mammalian predators from hens and eggs during the nesting season are needed. One technique that showed promise was the placement of electric fences around plots of high-quality managed cover. A study conducted in eastern North Dakota and western Minnesota showed that nesting success was increased markedly by protecting nesting cover with electric fences. Nest success averaged from 20 to 45 percent higher in the protected areas than in unprotected areas. Recent studies in North Dakota have shown even more dramatic differences between fenced and unfenced areas.

On the basis of the above information and what is known about the behavior and physiology of prairie ducks, it may be possible to develop effective strategies for high production. The mallard is regarded as the most highly sought duck by North American duck hunters and it is well-suited for intensive management. On the breeding grounds, pairs are highly mobile and will fly long distances from suitable feeding and loafing areas to utilize desirable nesting sites. Hens and broods are capable of long movements to utilize preferred brood-rearing habitat. Mallards are long-lived birds and hens that hatch a clutch of eggs will usually return the next year. If high waterfowl production is desired, management practices must be developed that allow prairie ducks to attain their innately high reproductive potential. Extensive knowledge is available on how to establish and maintain nesting cover, but at present there are few acceptable methods available for alleviating predation.

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*\* The authors are research biologists at the U.S. Fish and Wildlife Service's Northern Prairie Wildlife Research Center. Together their careers represent 70 years of study devoted to waterfowl ecology mostly in the upper midwest. This article is based on their recent studies in the Dakotas as well as those of their colleagues.*

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# the yellow pages

Edited by Rob Manes

## READERS WRITE

### OFFERS AND INVITES

Editor:

I just read Tom Shirley's letter in your January-February issue of KANSAS WILDLIFE. Could you send me his complete address? I have some land he can hunt on and would probably give him a bed to sleep in. In exchange I would like to hunt in Oklahoma.

Dale Lasey  
Oakley, KS

Editor:

After enjoying another information-packed issue of KANSAS WILDLIFE, I felt I should comment on Tom Shirley's letter in the Yellow Pages. The conditions he encountered are not confined to Kansas. In fact, Kansas farmers fall far short of the "clean farming" practiced in my home state of Illinois. I've come to appreciate the first-rate wildlife habitat found on many (Kansas) farms. Perhaps Mr. Shirley can look beyond his less-than-rewarding experience in 1983 and realize that only a combined effort of individuals, conservation agencies, and landowners can reverse the trend of habitat destruction.

So, Mr. Shirley, come on back . . . pay your \$50 for the opportunity to hunt Kansas.

Bob Straton  
Maywood, MO

### GIANT STRIDES

Editor:

I have read your publication for several years and just want to congratulate you on the giant strides you and your staff have taken in upgrading the quality of your magazine.

I am a "birder" and have enjoyed the articles on different aspects of bird-

ing as well as the information and photos accompanying the hunting and fishing stories. I was particularly touched by Mike Blair's sensitive piece, "Night-watch".

Judy Tanner  
St. John, KS

Editor:

I would like to say KANSAS WILDLIFE is, by a long shot, the best magazine I have ever read.

Ron Wilcox  
Chase, KS

Editor:

. . . I received my November-December issue of KANSAS WILDLIFE today. It is too bad it's not a monthly magazine.

John M. Pettey  
Kansas City, KS

### COUNTING BLESSINGS

Editor:

I have great respect for the State of Kansas and its outstanding farmers. They are the friendliest I have encountered in 30 years of hunting in many states. Kansas quail hunting is the best . . .

S.P. Soldner  
Farina, Illinois

Editor:

No doubt Kansas Fish and Game ranks among the very top in good (wildlife) management. We have gone from spotting an occasional pheasant to some of the greatest hunting; from never seeing a deer to excellent deer hunting; not to leave out the great fishing our state provides . . . and look at the

turkeys! I could go on and on.

For over 25 years I have bought a Kansas hunting, fishing, and trapping license. I am more than willing to pay the nominal fee that is required for this privilege.

In reference to Mr. Miller's letter in the March-April issue: It's too bad Missouri didn't raise their prices before us so they could take the blame.

Gib Suderman  
Hillsboro, KS

### STILL GOING STRONG

Editor:

I have been a subscriber to your publication since its origin. I feel this issue is one of the better issues published. I am enclosing my check for three years (subscription renewal). This will put me past four score years of age. I still do some hunting and fishing. In fact, for the past five years I have not failed to get my whitetail buck. Keep up the good work.

S.W. Stenzel  
Auburn, KS

Editor:

. . . I am going on 94 years, come April 5 . . . my father used to shoot antelope within one mile of where I am (Stafford). It's been a long time since I've seen them . . . he used to eat a good many of them, along with prairie chicken, quail, geese, and ducks, in the 1870s.

Glenn McComb  
Stafford, KS

### COMPLAINT DEPARTMENT

Editor:

I do not like the long hunting seasons . . . I do not give permission (to

hunt) any longer, and I do not ask permission.

I read your stories about how much money is spent by hunters each year. I do not get anything but the headache. The ones to make the money are the gas stations, bars, motels, and the ones who sell guns and shells, and last but not least—you boys (the Kansas Fish and Game Commission).

I wish that they (hunters) would drive through your yard, run you off your place at gun point, tear up your roads, and kill your cows like they do us.

Cecil Wayne Whitely  
Abilene, KS

Editor:

I respond to an article in the September 29 *Topeka Capitol Journal* entitled "Save the Marshes". A handful of farmers on the Delaware River in Jefferson County want to take all the grain off the (Perry Wildlife Area) public hunting grounds and drain the marshes. They say the marshes draw too many black birds, but these birds will migrate through and eat grain no matter what these people do. These are some of the best marshes . . . and public hunting areas . . . in northeast Kansas.

If these people get their way, a lot of young boys will miss the enjoyment of (hunting).

I believe, if these people succeed in closing this hunting area, they will close others.

J.W. Sanders  
Holton, KS

## HELP WANTED

Editor:

Would you know of a good bird book we could buy? I would like it in color, with a little information about each bird.

Mrs. Dale Peters  
Minneapolis, KS

Dear Mrs. Peters:

Your request for a good bird book is a common one. Available in both soft and hard cover, *Birds of North America—A Guide To Field Identification*, Chandler Robbins, et. al., (Golden Press, 1966) is one of the most popular books of its kind. It offers color illustrations and identification keys for all of the

birds which reside in or migrate through Kansas. Also included in the book are range maps and short descriptions of each bird, detailing special traits and habitat preferences.

Another popular bird book is *A Field Guide to Western Birds*, Roger Tory Peterson, (Riverside Press, 1961). Bird books range in price from about five to fifteen dollars.

Manes

Editor:

I'm hoping you can provide some helpful information. Can you recommend any book(s) on whitetail deer?

Jim Yerke  
Florissant, MO

Dear Mr. Yerke:

Those who have investigated the subject can testify there are countless books written about deer. Some of the most highly recommended works include: *Shots at Whitetails*, Lawrence R. Koller, (Alfred A. Knopf, 1970); *Shots at Mule Deer*, Rollo S. Robinson, (Winchester Press, 1976); *Hunting Trophy Deer*, John Wooters, (Winchester Press, 1977); *The Deer Hunter's Guide*, Francis E. Sell, (Stackpole Co., 1964); and *Whitetail*, George Mattis, (Outdoor Life Books, 1969).

Manes

## GOOD STUFF

Editor:

As a wife of a bowhunter and the mother of four sons who are also bowhunters, I really enjoyed your article ("To A Bowhunter's Wife") in last

month's magazine. As a non-hunter, it helped me understand these crazy men. Sometimes I feel funny telling people my family is out in the trees when it's freezing cold.

Janie Emberton  
Gardner, KS

Editor:

We were pleased to see a piece from the KANSAS FARMER about Walt Snell and Don Harden in the January-February issue of your fine magazine. Walt Snell is President of Kansas Outdoors Unlimited and is active in many outdoor issues. Don Harden is an elected State Director of K.O.U.

Both men do more than just provide for critters on some 3,800 acres in western Kansas. They work daily to provide quality outdoor experiences for all Kansans. Snell and Harden each received the coveted Kansas Bankers' Wildlife Habitat Conservation Award for Finney County in 1983.

Ted Cunningham,  
Executive Director  
Kansas Outdoors Unlimited

Editor:

The article "To A Bowhunter's Wife", in your November-December issue, was a joy to read. Being a bowhunter's wife, I related to every detail. Although my husband has been a bowman for only two years, his stories and outlook are the same as the veteran of eleven years. Their enthusiasm and appreciation for nature is tremendous!

Thanks, Mike Blair. Your warm story brought both smiles and tears to this wife.

Diane Morris  
Salina, KS



# THE LAW



## PAYING THE PRICE

A couple of Kirwin, Kansas men were the recipients of two of the highest penalties ever paid for poaching deer in the state.

It all started five or six months ago, when concerned sportsmen reported several deer shot and left to rot in the Kirwin Reservoir area. An investigation had failed to point out any culprit. Then, on November 19, a hunter in the area reported seeing two men chasing a deer with a pickup truck and shooting at the animal with what appeared to be .22 caliber rifles. The witness accurately described the truck and directed Fish and Game's area Law Supervisor Charlie Ward to the spot where he believed the deer had fallen. Sure enough, when Ward followed up, he found a nice eight-point buck the poachers had left behind. Using the savvy of a veteran law man, G.P. Ward removed the slugs from the dead animal, hoping they might lead to a break in the case.

For the next few days Fish and Game officers Ward and Jerry Bump were joined by Phillips County Sheriff's

officers and U.S. Fish and Wildlife Service agent Terry Tarr in staking out the area where the last deer was shot. Then, on the evening of November 21, Bump and Ward spotted a car in the same area where the eight-pointer had been left. They stopped the vehicle and discovered three men inside with a .30-06 and a .22—both rifles were loaded. The circumstances gave the officers reason to confiscate the .22.

Ward sent the rifle, along with the bullets recovered from the deer, to the Kansas Bureau of Investigation lab in Great Bend for ballistics analysis. On March 8 the results of the K.B.I. test came back—the bullets matched the gun, so G.P. Ward apprehended one of the suspects at work in Phillips County. After a brief interview the man confessed in writing to shooting the eight-point buck with a .22 rifle. He also admitted that he illegally killed another deer with a .30-06.

Meanwhile, Smith County Sheriff's officers picked up the other suspect at work in that county and delivered him to Ward and Bump. He penned a confession stating that he also shot the eight-pointer with a .22.

Seeing the sun was fast setting on

their picnic, the two waved their rights to legal council and were given an immediate hearing. Phillips County Magistrate Martha Kellogg left no doubt about her disdain for the men's actions. She found one man guilty of hunting with an artificial light, hunting with the aid of a vehicle, hunting deer during closed season, and hunting or possessing a deer illegally. For those offenses he was fined \$1,750, sentenced to six months in jail, and he lost his hunting privileges for one year.

The other man was convicted on the same charges, with double counts for hunting deer during closed season and hunting or possessing deer illegally. He was sentenced to six months in jail, fined \$3,000, and he lost his hunting privileges for two years.

Unlike many wildlife-related cases involving jail sentences, the culprits' time behind bars was not suspended. Judge Kellogg did allow them work release and chance for parole.

Game Protector Ward points out that successful enforcement of Kansas wildlife laws depends on this type of cooperation between, judges, sportsmen, and the Fish and Game Commission.

Manes

## LINE OF DUTY

A lot of folks think game wardens (we call them game protectors in Kansas) spend all their working hours patrolling in search of violators who deserve to be ticketed. Enforcing the state's wildlife, boating, and trespass laws is the game protector's foremost duty. Without this enforcement, many wildlife species would surely diminish or disappear. Law officers are as important to proper wildlife management as biologists, educators, or any other related professionals. Still, there is more to being a Kansas Fish and Game law man than enforcing laws.

Most Kansas game protectors spend evenings and weekends teaching hunter safety courses, furharvester classes, and fishing clinics. They also provide valuable assistance to biologists and other field personnel when extra hands are needed. Of course, search and rescue operations also involve game protectors.

One example of such dedication involves Belleville Game Protector Terry Cloutier. In addition to his regular duties, he teaches wildlife courses at a community "free university", and he works closely with local school and civic groups. In one such community project Cloutier guided a local Boy Scout troop in constructing and erecting wood duck nesting boxes. He also writes a weekly wildlife column in a local paper.

Another dedicated Fish and Game officer is Paul Miller. Stationed in Manhattan, Miller is renowned for his progress as an instructor in the art of angling. He has been instrumental in the development of educational slide series and other learning aids for young anglers and hunters.

Franklin County Game Protector Johnny Ray is a 25-year-plus Fish and Game employee who has dedicated countless hours to education efforts involving careers in conservation, ecology, wildlife identification, and many other topics. In addition, Ray has developed an educational display of live Kansas reptiles.

Another dedicated game protector is Bud Crumrine. He has worked to establish good landowner-sportsman relationships in his area of northwest Kansas. Crumrine also has promoted good wildlife management on private lands by getting landowners involved in the Wildlife Habitat Improvement Program.

Bruce Peters is a wildlife officer in arid southwest Kansas, where he has worked with local governments to develop an 80-acre water recreation area. Peters is untiring in his efforts to improve opportunities for sportsmen in his area.

These are but a few of the many game protectors who continuously demonstrate their dedication to the wildlife and the people of Kansas through continued extra efforts outside their regular law enforcement duties.

Manes

## A BOY AND HIS DOG

It is the joy of every bird dog owner to teach his canine companion to retrieve, but one Missouri hunter probably wishes his hadn't learned so well.

While Missouri Conservation Agent Bill Otten was interviewing a trespass suspect, the man's dog fetched a raccoon hide . . . out of season. Another agency employee whistled the dog over and got the pelt. The suspect's face paled, he stammered, and then confessed that he pitched the pelt when he heard the conservation agents were coming.

"He didn't kick the dog in front of me," Otten said, "but I suspect the poor thing might be somewhat 'coon shy by now.'"

Conservation Agent David Purcell tells about a separate incident in which a woman was checking in a deer at a check station while her little boy proudly explained how his daddy shot the animal.

Now, if a boy and a dog ever belonged together . . . *MO Conservation Dept.*

## LOOSE LIPS

Two 21-year-old Wyoming men learned about the hazards of bragging . . . the hard way. Boasting that they had killed several deer in one day, they were overheard by some concerned citizens who informed officials from the Wyoming Game and Fish Department.

Acting on the citizen reports, Game and Fish officers launched an investigation which led them to 70 deer

carcasses in an area of winter range, where the deer can be approached without difficulty as they forage. Many of the dead animals were too decomposed to be used as evidence, but 42 of them showed signs of being killed by poachers.

Following the field investigation, officers obtained search warrants for the suspects' homes. The search produced firearms, cartridges, and expended shell cases believed to have been used in the poachings. The confiscated items, along with bullets recovered from the carcasses, were sent to the state crime lab for ballistics testing. With sufficient evidence secured, Game and Fish officers arrested the two men.

Justice of the Peace William Cramer set their bond at \$25,000 each. Their "wanton destruction of big game animals" is a first degree misdemeanor, allowing a fine of \$2,000 and one year in jail for each count. The county attorney filed 42 separate counts against the suspects in order to encourage the imposition of maximum penalties. *Wyoming Game and Fish Dept.*

## GOT HIS GOAT

"Goat meat." That's what a Junction City man called the deer quarters he brought into a White City meat locker. State Meat Inspector Clyde Wallace spotted the "goat" and doubted its authenticity. He notified Game Protector Steve Stackhouse about the suspected illegal meat.

Stackhouse got in touch with the owner of the locker plant, who identified a long-time customer as the one who brought the meat in. When Stackhouse viewed the meat, he agreed that it looked a little too much like the fore and hind quarters of a deer. He took hair and meat samples as evidence and sent them to Area Law Supervisor Bruce Bertwell for analysis. Chemical testing confirmed suspicions about the meat.

G.P. Stackhouse then contacted Kansas Fish and Game headquarters to find out if the owner of the meat had a permit. He did not.

With all the evidence he needed, Stackhouse joined with the Morris County Attorney in charging the Junction City man with failure to tag a deer. Pleading "no contest", the violator received a fine of \$500 from Judge Clarence Sawyer of Council Grove.

Manes

# ISSUES

## NO REFUGE DRILLING

Interior Secretary William Clark announced that funds appropriated last year for oil and gas exploration in certain areas of the National Wildlife Refuge System will not be needed and that he would seek their reallocation for other uses.

Clark said there are no Departmental plans for oil and gas activity on so-called "acquired lands" within the refuge system. Such lands had been declared open to exploration and development for oil and gas by a decision of the Interior's Board of Land Appeals in the spring of 1981. *U.S.F.W.S.*

## 404 WALLOP

Each fall and spring the Big Bend area of Nebraska's Platte River is a stop-over for thousands of sandhill cranes, ducks, geese, and endangered whooping cranes. These migratory birds could find their crucial aquatic rest area with insufficient water, if Wyoming's Senator Malcolm Wallop gets his way. Wallop wants to amend Section 404 of the Clean Water Act to allow a dam to be constructed in northeastern Colorado without requiring compensation for water losses in the Platte. Not only

could the Wallop proposal have devastating effects on the fragile Platte River system, it would open the door for stream alterations elsewhere, without mitigation of downstream effects.

Manes

## CHANNELIZATION EYED

The U.S. Geological Survey has completed a report that documents the serious effects of stream channelization. The report presents conclusive evidence that such practices destroy stream ecosystems, cause bridge failure, degrade fish and wildlife habitat, accelerate soil erosion, and contribute to other ecological and economic problems. The document, "Man-Induced Channel Adjustments in Tennessee Streams," is available from the U.S. Geological Survey, Open File Services Section, Box 25425 Lakewood, Colorado 80275 for \$24. *Wildlife Management Institute*

## WATER LAW

An important piece of legislation protecting Kansas streams passed the State House of Representatives in late March. Commonly referred to as the "minimum streamflow bill", the critical conservation law will guard certain streams from being dewatered by over-

appropriation. The newly-passed legislation establishes minimum flowage levels which must be maintained in the Neosho, Cottonwood, Marais des Cygnes, and Little Arkansas rivers. The bill was endorsed by the Senate earlier.

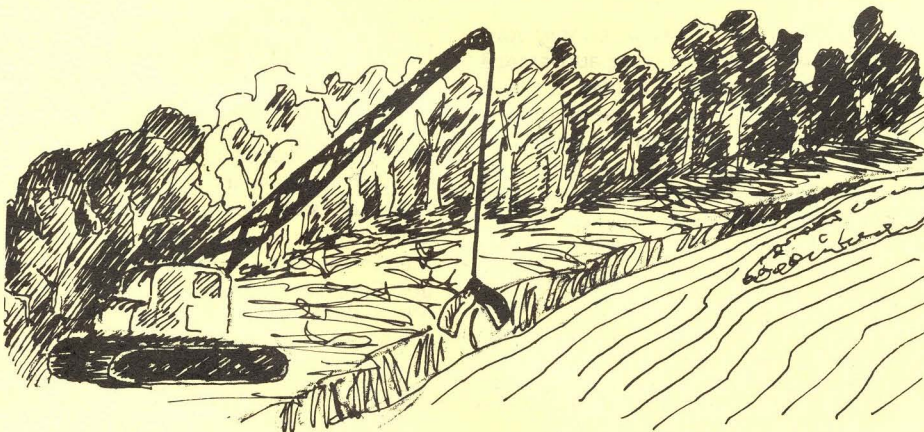
The minimum streamflow bill is one of many facets of the State Water Plan, which is scheduled for continued examination and revision during next year's legislative session. Some of the more seriously dewatered streams in western Kansas are expected to be examined for minimum flow legislation in 1985. Although the final adopted minimum flow levels for the four affected streams were set below recommendations made by the Kansas Fish and Game Commission, agency representatives felt there was sufficient merit in the prescribed flow amounts and in other provisions of the bill to warrant overall support. Says Ken Brunson, stream specialist for Kansas Fish and Game, "This legislation represents a significant milestone, not only for water conservation in Kansas, but also for fish and wildlife that depend so heavily on viable, flowing streams for their existence. The relative ease with which the minimum streamflow bill progressed through this legislative session is clear evidence that the citizens of Kansas want to see their streams kept alive and flowing."

Minimum desirable flow amounts for other streams will be considered by the 1985 Legislature. Priorities include portions of the Kansas River and its tributaries, several streams in the Verdigris River basin, the middle Arkansas River, and Rattlesnake Creek. Eventually, as many as 50 stream segments may be covered in the plan, each with a prescribed level of flow to be maintained. The measure benefits many interests by guarding against ground and surface water depletions.

Manes

## WETLAND WINNERS

Critical prairie pothole waterfowl breeding areas will no longer be indiscriminately drained, according to a set-



tlement between conservation groups and the U.S. Army Corps of Engineers. The decision affects over 700,000 acres of potholes as well as millions of acres of Alaska tundra and 73,000 wetland acres in Pennsylvania's Pocono Mountains. The Corps has agreed to issue new regulations, which require a permit to be granted before dredging or filling any wetland larger than 10 acres. For projects affecting wetlands smaller than 10 acres, permits will not be needed unless the Corps finds the activity will have more than "minimal impacts" on the environment. The new regulations will pertain to Section 404 of the Clean Water Act.

In a separate victory for waterfowl, Ducks Unlimited reached an agreement with the federal government, allowing D.U. to fund wetland improvements for waterfowl production on Interior Department lands. More than a million wetland acres in Montana, Minnesota, the Dakotas, and Alaska will receive improvements through the agreement.

Ducks Unlimited has raised more than \$237 million for waterfowl conservation since its founding in 1937.

Manes

## ENDANGERED SPECIES: TEN YEARS AFTER

In the face of continuing habitat destruction across the nation, some victories stand out as bright spots on the conservation front. One of those was the institution of the Endangered Species Act a decade ago. As a result of this landmark legislation, bald eagles, American alligators, whooping cranes, and black-footed ferrets all have increased in number. Other species have been reintroduced to former range from which they had been extirpated. While the Endangered Species Act has made possible great successes in conserving wildlife resources, some 2,000 species remain as candidates for protection; but current funding allows for only 50 species to be examined each year. During the past three years, attempts have been made by the federal government to eliminate \$4 million in grants for state use in conserving endangered species.

Manes

## WHO'S IN CHARGE

For those concerned citizens who have wondered who to contact about a

particular environmental or wildlife-related issue, the answer is in the National Wildlife Federation's 1984 CONSERVATION DIRECTORY. The comprehensive publication lists telephone numbers and addresses for state and federal wildlife agencies, major colleges and universities with conservation programs, national parks and refuges, conservation organizations, foreign conservation agencies, as well as educational materials and resource personnel. The directory can be obtained for nine dollars plus \$1.55 shipping charges, from the National Wildlife Federation, 1412 16th St. NW, Washington, D.C. 20036.

Manes

## WILD FUNDS

An additional \$37.2 million in federal-aid funds have been apportioned to the 50 states and several provinces for use in fish and wildlife restoration programs, increasing federal support of state programs to a total of \$119.8 million.

In addition to sport fish and wildlife restoration programs, the money will be used by state conservation agencies for hunter education. The funds are generated through federal excise tax programs popularly called the "Dingell-Johnson" and "Pittman-Robertson" programs. Of the total amount available, \$73 million is for wildlife restoration, \$15.4 million is for hunter education, and \$31.4 million is for sport fish restoration. Kansas stands to receive a total of \$2.1 million in 1984, helping to cover the extremely high costs of proper wildlife management. *U.S.F.W.S.*

## REAGAN'S PLAN

The 1985 Reagan conservation budget has an election-year appearance, with some lessening of budget cuts proposed in previous years. The funding increases apply to conservation efforts for which the Administration has been criticized, such as parkland acquisition and endangered species. Still, except for the U.S. Fish and Wildlife Service and the Office of Surface Mining, the 1985 budget falls far short of 1981 funding, even without considering inflation.

The general approach of the 1985 budget is the same as in previous years—grants to state and local conservation programs are reduced or completely cut.

Local governments and private organizations are expected to shoulder more of the cost of implementing formerly federal programs. The budget also reflects anticipated increases in user fees and savings from increased government efficiency. *Land Letter*

## DON'T BOTHER US

In recent years, hunters, anglers, and trappers throughout America have been mounting an offense against the anti-hunting movement. Tired of being the brunt of unfounded and unethical anti-hunting attacks, sportsmen have generated a wave of legislation aimed at outlawing such harassment. Protests by anti-hunters have ranged from demonstrations to physical confrontations with sportsmen in the field.

Ten states have passed laws which prohibit hunter harassment. Similar bills have been introduced in several other state legislatures. Most of the legislation has been based on a model developed by the Wildlife Legislative Fund of America.

Manes

## EVERYONE'S ENEMY

Landowners often complain that sportsmen abuse privileges of private land access. They charge that outdoorsmen and women shoot farm equipment, wreck fences, injure crops and livestock, and leave trash behind. Such complaints frequently are made with good cause. Nearly every responsible hunter and angler has seen the trail of destruction and debris left by those less concerned about their outdoor heritage.

These aptly-named "slob" outdoorsmen are more than a thorn in the flesh of farmers and ranchers. They are the direct adversaries of every caring, responsible outdoorsman. Those who abuse the property of others while hunting or fishing rob responsible sportsmen of access to private lands and waters.

If landowners are left alone to fight the slob hunter and slob fisherman, they naturally will attack with their most effective weapon—land closure. Sportsmen must intensify efforts to purge their ranks of irresponsible individuals who are robbing others, in generations yet unborn, of the outdoor heritage that figured so heavily into the formation of our nation.

Manes

# Nature's Notebook

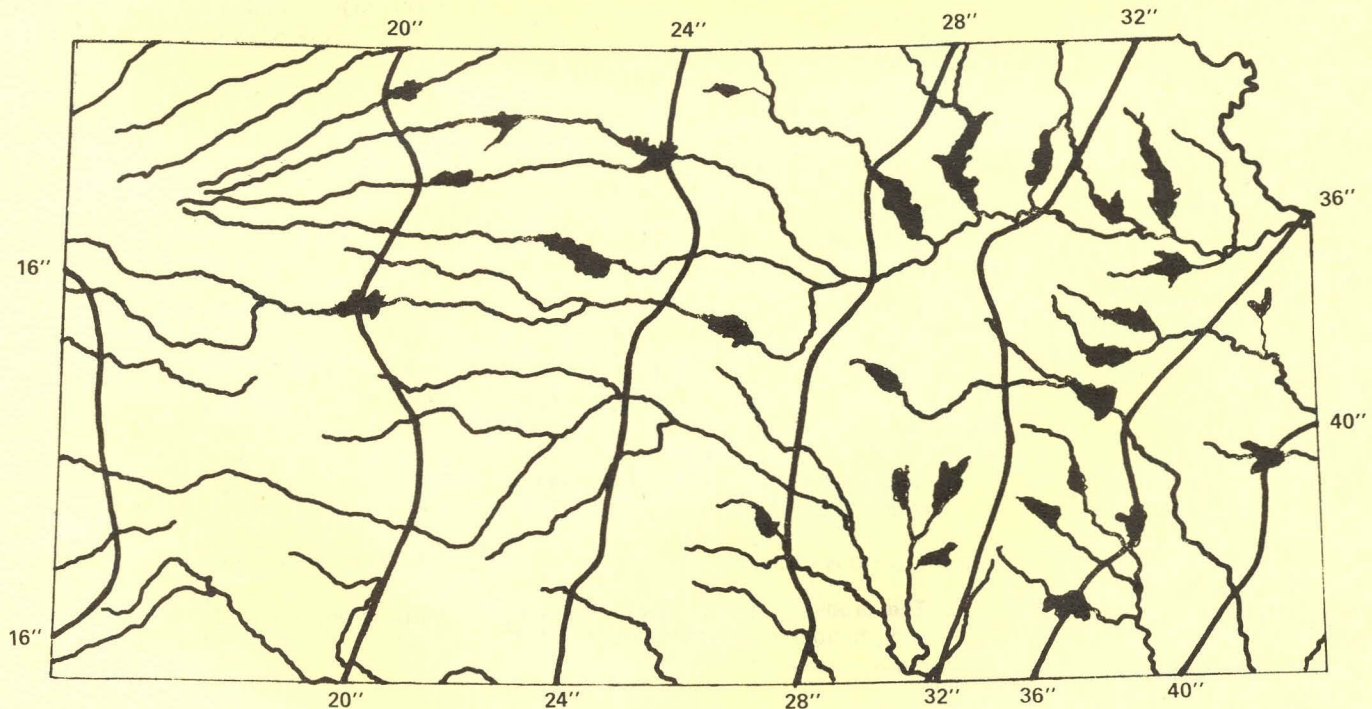
by Joyce Harmon

Wildlife Education Coordinator  
Kansas Fish and Game Commission

## WATER...

Considering that Kansas was once described as "the great American desert", the state has a large number of rivers, creeks, lakes, and reservoirs. Label as many of these as possible. Investigate the quality and quantity of water in your county. What can and should be done to ensure an adequate water supply for the future?

Rainfall distribution in Kansas varies considerably from east to west. The dotted lines roughly designate areas receiving different amounts of annual rainfall. How does rainfall affect the available water in the state? What other factors affect water supplies?



# A WORD TO THE WISE




This issue of "Nature's Notebook" completes 12 months of calendars. Several vocabulary words have been discussed in the past six issues. See how much you have learned by completing the matching exercise below. Check your answers with the calendars.

- |                       |   |   |
|-----------------------|---|---|
| A. aquifer            | — Living on or in an organism of another species.   | — The study of fishes.  |
| B. arboreal           | — Ducks that prefer deep water as in lakes and bays. They feed by going below the surface and take flight from a running start. | — Ducks that prefer shallow water. They are surface feeders and take off nearly vertically. Also called dabbling ducks.   |
| C. bag limit          | — A place where water is collected and stored for use. Kansas has approximately 25.   | — The place in which an animal lives. It must include food, water, and cover. This involves escape cover, winter cover, cover to rear young, and space to move about. |
| D. carrying capacity  | — The area drained by a stream.   | — The higher ground of a region; above the level where water flows.   |
| E. conservation       | — A wildlife sanctuary.   | — The study of insects.   |
| F. diving ducks       | — Living in or among trees.   | — Water found below the surface of the earth.   |
| G. entomology         | — The study of birds.   | — The number of animals of a species that can be supported in a particular habitat at any given time. This number will change with the season, and from year to year. |
| H. evapotranspiration | — The process of evaporation from the soil, plants, and animals, by which water is returned to the atmosphere.                  | — Living on the ground.   |
| I. fossorial          | — Living on the ground.   | — The number of animals that may be harvested legally in a twenty-four-hour period.   |
| J. ground water       | — Birds and other animals that make an annual trip to a different area.   | — Wise use of natural resources.  |
| K. habitat            | — The study of animals.   | — Living in a marsh.  |
| L. herpetology        | — The study of the physical, chemical, and biological components of fresh water.  | — An underground layer of sand, gravel, or rock through which water can pass.   |
| M. ichthyology        |   | — The study of reptiles and amphibians.   |
| N. limnology          |   | — Living underground in a burrow or tunnel.   |
| O. migratory          |   |   |
| P. ornithology        |   |   |
| Q. palustrial         |   |   |
| R. parasitic          |   |   |
| S. puddle ducks       |   |   |
| T. refuge             |   |   |
| U. reservoir          |   |   |
| V. terrestrial        |   |   |
| W. upland             |   |   |
| X. watershed          |   |   |
| Y. zoology            |   |   |

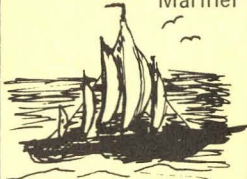

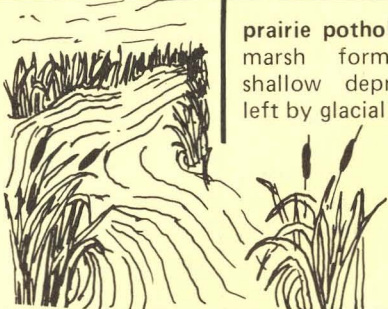



This issue is dedicated to WATER - a resource essential to all life. Kansans are growing more concerned about the shortage of water in some parts of the state. Learn as much as you can about Kansas water problems and possible solutions. June is Kansas Rivers Month.

# JUNE

<p>"The frog does not drink up the pond in which he lives." —Indian Proverb</p>		<p><b>Ground water-</b> water found below the surface of the earth. How does ground water affect people and wildlife?</p>	<p>June 5, 1877. 100,000 shad were delivered to Topeka for distribution in the Kansas (Kaw) River. Trace the route of the Kansas River.</p>	<p><b>Aquifer-</b> an underground layer of sand, gravel, or rock through which water can pass. Aquifers are recharged from percolation of surface waters. The Ogallala Aquifer underlies the High Plains.</p>	<p>Consider the long-term impact of ground water withdrawals exceeding ground water recharge. What can be done to reduce this problem?</p>	
<p>June 8, 1908. President Roosevelt appointed a 49-member National Conservation Commission. The commission was charged with making a detailed inventory of the nation's forests, waters, lands, and minerals.</p>	<p><b>Nonrenewable natural resources-</b>resources which are not naturally replenished within the limits of human time.</p> <p>Is water a renewable or nonrenewable resource? Why?</p>	<p><b>Renewable natural resources-</b>resources which are naturally replenished.</p>	<p>A voluntary Boating Safety Education program is sponsored by the Kansas Fish and Game Commission. This program increases public awareness of boating laws, safety, and ethics.</p>		<p><b>Flood-</b>an overflow of water from a river or other body of water.</p> <p><b>Drought-</b>a long period of unusually low rainfall.</p>	<p>June 14, 1867. Officials from Ellsworth and Salina reported major flooding of the Smoky Hill River. Which reservoirs are fed by the Smoky Hill River? What affects does flooding have on wildlife habitat?</p>
<p><b>Interbasin transfer-</b>an expensive technique used to transfer water from an area of greater water supply to an area of lesser water supply.</p>	<p><b>Irrigation-</b>application of water to lands for agricultural purposes. Some different types of irrigation systems are: drip, furrow, sprinkler, gravity, and surface.</p>	<p><b>Center-pivot irrigation-</b>an automated sprinkler which irrigates a circular area by means of rotating pipe. This technique is common in Kansas.</p>		<p>What does "minimum streamflow" mean? How are minimum streamflow guidelines established in Kansas?</p>	<p>June 20, 1782. The bald eagle was chosen as our national symbol. Where and when can bald eagles be found in Kansas? What is their major source of food?</p>	<p>The objective of the Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the nation's water."</p>
<p><b>Limnology-</b>the study of the physical, chemical, and biological components of fresh water.</p>	<p><b>Hydrosphere-</b>the surface water that covers the earth.</p>	<p><b>Hydroelectric-</b>having to do with the production of electricity by water power.</p>	<p><b>Acid rain-</b>rain formed from two kinds of pollutants - sulfur dioxide and nitrogen oxides, which are primarily emitted from smokestacks and tailpipes. Burning of fossil fuels is the root of the acid rain problem.</p>	<p>June 26, 1804. Lewis and Clark reached the junction of the Kansas and Missouri Rivers, where they gathered information about the area. Mark this location on a map.</p>	<p>June 29, 1541. Spanish explorer Coronado crossed the Arkansas River near present-day Dodge City. How has the Arkansas River changed since 1541?</p>	<p>June 30, 1903. Pratt County donated 12 acres for a fish hatchery. Individual donations were added later. Locate Pratt County. What kinds of fish are raised at this hatchery?</p>

# JULY

<p>"Drought, waste and pollution threaten a water shortage whose impact may rival the energy crisis."          —February 23, 1981 <i>Newsweek</i>          "The Browning of America"</p>	<p>In some parts of the nation the quality of available water is of greater concern than quantity. We are only beginning to learn how to solve problems of surface water pollution.</p>	<p>"Water, water everywhere, but not a drop to drink."          —The Ancient Mariner</p> 	<p><b>water table</b>-the upper limit of the ground water, or that level below which the soil is saturated with water.</p>	<p><b>water vapor</b>-tiny particles (molecules) of water in the air.</p>	<p><b>hydrologic cycle</b>-the process involving the circulation and distribution of fresh water on earth. Diagram this process.</p>	
<p><b>precipitation</b>-forms of water vapor heavy enough to fall to the earth's surface, such as rain, snow, sleet, hail, and fog.</p>		<p><b>transpiration</b>-the evaporation of water from the leaves of plants.</p>	<p><b>evaporation</b>-the changing of water into vapor.   <b>condensation</b>-the changing of water vapor to liquid.</p>	<p><b>evapotranspiration</b>-the process of evaporation from soil, plants, and animals by which water is returned to the atmosphere.</p>	<p><b>percolation</b>-the downward movement of water through soil, or the passing of liquid through a porous, solid material, other than soil, such as limestone.</p>	<p><b>infiltration</b>-the process by which water seeps into the soil.</p>
<p><b>wetland</b>-land areas saturated or covered by water at least part of the year.</p>	<p><b>lake</b>-a body of water larger than a pond and too deep in parts for rooted plants to live.</p>	<p><b>river</b>-a natural stream of water larger than a creek and emptying into an ocean, lake, or another river.</p>	<p><b>pond</b>-a small, enclosed body of shallow water permitting the growth of rooted plants across the entire bottom.</p>	<p><b>marsh</b>-a tract of low wetland supporting cattails, other reeds, and wetland wildlife.   <b>bog</b>-an area of wet, spongy, acid soil covered largely with peat and moss.</p>		<p><b>prairie pothole</b>-small marsh formed in shallow depressions left by glacial action.</p>
<p><b>desalinization</b>-the conversion of salt water to sweet water. A technique used to produce more drinkable water. Investigate other techniques, such as cloud seeding and iceberg harvesting.</p>	<p><b>runoff</b>-water that flows on the surface or through the ground into streams, rivers, lakes, and oceans.</p>	<p><b>artesian water</b>-underground water trapped under pressure in a porous layer between non-porous rock layers.</p>	<p>The demands on water are numerous. Make a list of major uses. List them in order of importance in your opinion. Then list them in order of quantity of water demanded. How do your lists compare?</p>		<p>List as many uses of water as you can think of. How many of these are essential for your survival? What water conservation practices can you apply in your life?</p>	<p>"When the well is dry, we know the worth of water."          —Benjamin Franklin</p> <p>Review the vocabulary words on both calendars.</p>

# HUNTING

## \$64,000 BIGHORN

A California man paid \$64,000 to hunt bighorn sheep in southwestern Arizona this year. He purchased the permit at an auction held by the Foundation for North American Wild Sheep in San Diego. The money paid for the permit will be used to finance bighorn sheep management in Arizona. In adopting a new regulation allowing such a permit sale, the Arizona Game and Fish Commission made it possible to conduct similar fund-raising activities involving all big game permits in the state.

Manes

## QUALITY HUNT

A while back, a letter came across my desk. It was from an attorney out in Dodge City by the name of Jim Myers. He was apologizing for being late in returning his deer hunter's report card, and he said his deer cost him \$600.

Right away, I figured this had to be worth a grin, and I don't pass up many grins, chuckles, and the like. So, I called this attorney, and his story unfolded, sounding more like the nightmares I have after eating too many reformed beans than a hunting trip.

Myers and his stepson left on the first Saturday of deer season to hunt near Coldwater with one of Myers' cousins and a friend. When they went out to start the car that morning, the windshield was heavily iced. The extreme cold and some enthusiastic scraping left the windshield broken. (That's about \$200, if you wanna keep track.) Still, a shattered windshield was nothing to ruin a hunt.

Myers' stepson got his deer later that day, and Myers' took him home. Then he and his friend came back to the area where they had been hunting. On the way in, the car became mired in mud . . . some folks call it "stuck". So, the friend hiked to a farmhouse for help.

Meantime, Myers tried to get the car unstuck . . . no luck. While he was toiling with the mud-bound vehicle, he heard an explosion from beneath the

hood, and steam began to pour out. When the fog subsided, he gingerly opened the hood and peeked inside. He was greeted by a blown radiator hose, and on the ground a short distance away was his broken alternator belt. (Another \$15.)

Using some ingenuity, he managed to patch the hose, get the car out of the mud, and limp it to a nearby farm.

In another vehicle, Myers traveled to Greensburg to find parts for the car. He ended up babysitting for some relatives, who, after many hours, found replacements for the belts, hoses, and whatever else may have been broken. Relinquishing the children to their father, the unfortunate Myers headed back toward Coldwater and his troublesome automobile.

With the replacement parts installed, he was ready to head toward home . . . almost. The cooling system needed filling with antifreeze. (About \$15?) They finally located enough to fill the radiator and concluded the auto repairs.

Somewhere in the midst of this tragic comedy the lawyer managed to bag a deer. So, he got someone to skin his animal while he solved his numerous problems. (Another \$25.) Then, for the sake of convenience at the late hour, he left the deer with a relative to take to the processor. (Chalk up \$100.)

By the time the lamentable hunter took all the help back to Greensburg and headed home, it was closer to "tomorrow morning" than "last night".

What about the report card? Somewhere between the steaming car and babysitting it . . . well, it sort'a went away. Those who still are keeping a total may be wondering about the other \$55. His permit cost \$25 and, of course, there's gasoline, food, and something for the headache.

I asked Mr. Myers if he planned to hunt again next season. "You bet," he assured me. "I'll do it all again."

"All of it?" I wondered.

Manes

## DO IT RIGHT

In many states, improperly completed permit applications get filed in the trash can, but not in Kansas. In fact,

the hard-working folks in Fish and Game's Licensing Section will return a faulty application, giving the applicant a second try, *if* they get the application in soon enough. Unfortunately, most hunters wait until the last two or three days prior to the deadline to submit their applications. Licensing personnel are deluged with more than 30,000 applications during the last three days of the application period — twice as many as are received up to that point.

Last-minute applications are plagued with errors. Birthdays, signatures, and unit numbers are among the most frequently omitted items. A common mistake involves buddy applications. Landowners and general residents may not apply as buddies.

A careful read through the instructions is a sure way to reduce the chance of submitting a faulty application.

## Kansas Permit Application Periods

Spring Turkey	Jan. 11 - Feb. 2
Antelope	June 1 - June 23
Firearms Deer	July 1 - July 21
Archery Deer	July 1 - Sept. 30
Fall Turkey	Aug. 1 - Aug. 20
(firearms and archery)	

Manes

## ELECTRIC FOOD

Missouri Deer Biologist Norb Giessman is feeding whitetail bucks electronic gadgetry. That's right . . . he's trying to figure a way to get deer to swallow and hold down small transmitters, which will allow him to follow the animals' movements.

The purpose of the gastronomic endeavor is to find out if deer are using temporary refuges established within public wildlife areas during Missouri's nine-day firearms deer season. The public areas are heavily hunted. Biologists hope some of the deer will find the refuges and remain there through the season, providing a valuable management tool. Permanent refuges have proven effective in deer management, but the concept of temporary refuges is yet to

be evaluated.

The most common method of marking deer is with neck collars; but bucks' necks swell during rut, and expandable collars don't stay on well. Ear tags also have been used; but they too are easily lost. Surgical implantation of transmitting devices works well with small animals, such as river otters; but field surgery on a full-grown white-tail is impractical.

So, Giessman is using a large syringe plunger to force the finger-size transmitters down the deers' throats. Sometimes the high-tech snacks come back up immediately, and that's no problem. They can be reingested and frequently will stay down the second time. Problems arise when the deer regurgitates a transmitter hours later and leaves it behind. Giessman has been fairly successful in getting the deer to keep the transmitters in their stomachs; but another problem has surfaced . . . once inside, the signal range is reduced to about a quarter mile. Giessman hopes the manufacturer will be able to fine tune his "deer bugs" so his research can continue. *MO Conservation Dept.*

## TRADING TURKEY

Wild turkeys disappeared from Kansas during the early 1900s and, until about twenty-five years ago, it appeared they might never again inhabit the state; but today, as a result of transplanting programs, the large birds are common throughout most of Kansas. So abundant are wild turkeys in the state that wildlife managers can now provide birds for other states' reintroduction projects. Such arrangements frequently yield valuable additions to Kansas' wildlife resources.

Recently, about 60 wild turkeys were trapped in southcentral Kansas and shipped to Oregon, where they were traded for seven elk. The huge animals were released into existing herds at the Cimarron National Grasslands in western Kansas and at the Maxwell Game Refuge near McPherson. Elk were once abundant on the plains, but disappeared shortly after Kansas was settled.

The elk herd at Maxwell had been reduced in size for several years while fence modifications were made to better hold the large animals. This recent introduction of new blood lines marks the start of a planned increase in herd size.

The elk-turkey trade was made possible, in part, by the generous loan of a 20-foot trailer owned by Hillsboro Industries.

"We (the Kansas Fish and Game Commission) had no equipment large enough to haul elk, so the loan of the trailer was much appreciated," said Verle Warner, Maxwell Refuge manager.

Another animal being reintroduced to its former Kansas range is the river otter. Game officials in Idaho are receiving wild turkeys from Kansas in exchange for river otters, which will be added to those already released on streams in the Emporia area. River otters, are mink-like animals which display uncanny swimming skills.

Who knows what other wild creatures may come to Kansas in a turkey trade?

Manes

## SCOPING IN

Mounting a scope on most rifles is deceptively simple. Just tighten the rings in the mounts or mounting grooves on the rifle, lay the scope in place, and cinch up the rings. Right? Wrong.

First, if your rifle does not have integral scope bases, a one- or two-piece base must be attached to the receiver. On heavy-caliber guns, it's a good idea to use 'Loc-tite' or epoxy on the screw threads to prevent the screws from loosening under recoil. Use a tight-fitting screwdriver, and tap the handle with a mallet as you apply the final twist to each screw.

You're now ready to attach the scope rings. Placement of the scope is an important task, which depends largely on the natural position of your head on the stock. Before beginning to tighten the rings, the scope should be moved back and forth in the loose rings until you see light in the full diameter of the scope with your head in a natural shooting position. Once this is achieved, the screws should be tightened slightly.

Next, the cross hairs should be squared with your eye so that the vertical line points to the center of the barrel.

Making sure that the first two adjustments do not change significantly, begin to tighten the ring screws. Again, this should be done only with a hard screwdriver, which fits the screw slots perfectly. Tighten the screws alternately so the ring applies pressure evenly to the

scope tube. After snugging all the screws once, repeat the procedure, placing the screwdriver in each screw slot and gently tapping the handle with a mallet. Continue this procedure until the tapping no longer imparts any turn in the screws under moderate pressure.

The rifle is now ready to be sighted in. This must be done if you are to hit anything; your line of sight must be regulated to the bullet path.

Manes

## FINAL JUDGMENT

Recently, a number of articles and ads have appeared, touting a huge white-tail found dead in Ohio some 40 years ago as a "New World's Record" for non-typical antlers. This is erroneous, although the possibility exists that this trophy may in the future qualify for such recognition.

Any trophy ranked by entry score in the top ten of its category must come before Boone and Crockett's Final Awards Judges Panel at the end of the entry period (current period is 1983-1985). At that time, the top trophies are remeasured by the Judges Panel and certified for possible awards. The score established by the Judges Panel then becomes final for the trophy.

Should an eligible trophy fail to come before the Judges Panel, it would be shown with an asterisk in the next edition of Records of North American Big Game, indicating that the score shown is still subject to remeasurement and verification by the judges. Only the Judges Panel may proclaim a world record.

The current world record white-tail, non-typical rack is from St. Louis County, Missouri. It was found dead in 1981, apparently of natural causes. It has 19 points on the right antler and 25 points on the left. It scores a whopping 333-7/8, 50 points better than the previous record, shot in 1892 near Brady, Texas.

The Missouri deer became the world's record at the 18th Awards, on July 30, 1983, at the end of the 1980-1982 entry period. It is owned by the Missouri Department of Conservation and is on display at their headquarters. It will remain the world's record until at least 1986, when the next judges Panel convenes for the 19th Awards.

Will the Ohio buck become the world's record? Only time, and the Final Awards Judges Panel, can tell. *Boone and Crockett Club*

# FISHING

## AGING LAKES

It is common to hear fishermen complain that a certain lake used to have some great fishing, but it isn't so good anymore. Generally, the blame falls on a fisheries biologist or some fishing organization, but the truth is that impoundments have finite productive lives. Without well-planned management, the good fishing life of most lakes is not much more than 10 years.

New lakes are havens for sport fish. Under-populated waters, inundated trees, plentiful structure, and abundant forage encourage walleye, black bass, crappie, and other popular fish to produce maximum spawns.

As the lake ages, submerged vegetation rots away, silt covers rock ledges and other structure, and forage fish populations begin to consist of larger fish, which are unsuitable prey. This situation hampers predatory sport fish; but rough fish, such as carp and buffalo are benefitted by these conditions and they increase in number, competing with sport fish for space and habitat. The end result is often a muddy lake, with few sport fish and large populations of carp, shad, and other rough fish.

This bleak sequence can be altered, even reversed, with some hard work and properly applied knowledge. In smaller lakes, it may be possible to draw the water level down so that rough fish are crowded together and stressed, reducing their populations.

While the lake is low, quick-sprouting vegetation can be seeded on the exposed bottom. When it is submerged, it will provide important escape and spawning habitat for sport fish. In addition, artificial structures may be placed in the lake bed. Weighted tire reefs, rock piles, wooden stake beds, and brush piles provide cover in old lakes.

In small impoundments, it may be practical to use a safe fish poison such as rotenone, to kill the entire fish population. Since sport fish are already few in number in this situation, the losses are generally insignificant.

When the lake is filled again, the new-lake conditions prevail, giving an advantage to sport fish once more.

In large reservoirs, it usually is not

practical to draw the impoundment to a low enough level to reduce rough fish numbers; but a drawdown does allow for seeding of shoreline vegetation and natural emergence of native plants. In addition, the refilling process stimulates increased spawning activity in sport fish, approximating new-lake conditions.

Of course, stocking predators helps both in controlling rough fish populations and increasing sport fish numbers. Commercial harvest of rough fish can assist sport fish in their fight for space with carp, buffalo, and other rough fish.

One fairly new technique for prolonging the productive life of large impoundments is called stage filling. Under such a plan, the reservoir is filled to predetermined levels each year for several consecutive years. This increases the spawn of sport fish each time the water level is raised, creating a population made up of many fish of different ages.

Other techniques are used to benefit sport fish populations as well. Length limits help to maintain predator populations at high levels. Creel limits are designed to benefit the sport fisherman as well.

The effective management of impounded waters depends on cooperation between the Kansas Fish and Game Commission, anglers, and the agencies controlling water levels in the state's impoundments (usually the Army Corps of Engineers).

Manes

## FISH TALES

Sitting on the dock's end, the angler stared in disbelief as a tremendous largemouth bass broke the surface at his feet. Longingly, the fisherman muttered, "I'd sure like to catch a beauty like you."

The bass suddenly halted as he wheeled back toward the depths. He turned to the man and said, "Thanks for the compliment, Bud. I'll be back here for next weekend's tournament." Then the lunker was gone.

The astounded fisherman ran to find the marina owner. "A huge largemouth broke the surface right over there, and he talked to me," said the

fisherman.

"Uh huh," smirked the marina owner, as he spat on the wooden walk way, "I s'pose he said he'd be here for the tournament too."

Manes

## ANGLER'S LIBRARY

There are a few literary works that no angler should be without. Even if he or she never reads them, just having these references in view of other fishermen will command respect and envy. Below is a list of what may be the top five most important angling references.

1. *Modern Methods For Tying Flies So Their Wings Don't Flap*
2. *Fifty Fun Ways To Camp In Flash-flood Basins*
3. *Magnetic Anti-backlash Control: Its Long-range Effects on the Traditional Language of Bass Angling*
4. *1001 Uses For Closed-face Spin-cast Tackle In Saltwater Angling*
5. *A Complete Guide To Flyfishing the Antarctic*

Diawa Corp

## WALLEYE SEARCH

One of the great mysteries of angling is the post-spawn disappearance of walleye. In March, they move to rocky shorelines to spawn, and the fishing during this time can be good for those with the fortitude to brave the cold temperatures and high winds of a Kansas spring. This angling action usually lasts into late April. Then something happens. The walleye are gone. They aren't on the rocks and they aren't to be found on the flats as they are later in summer. So, where do they go? It surely doesn't take them four to six weeks to find the flats, and they aren't found in concentrations elsewhere.

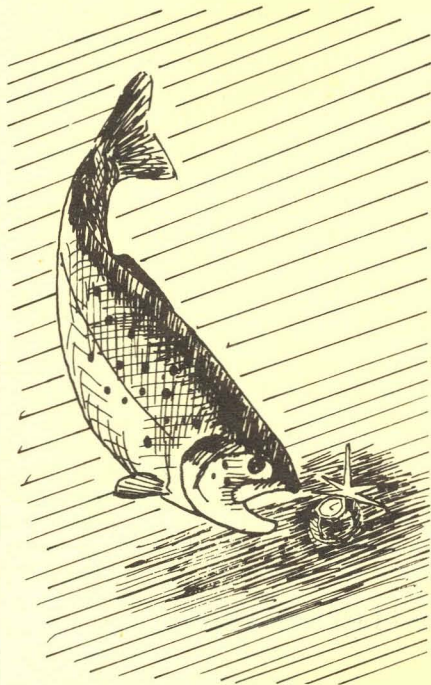
Experts believe the stress of spawning forces walleye to retreat to

loafing areas, such as along creek channels and in areas of heavy cover. Several consecutive days and nights of being tossed about on the rocks, combined with the physical hardships of spawning, leave the fish wanting for rest. Recuperating becomes more important than feeding.

Other factors also may contribute to the lack of walleye angling success during late spring. Water temperatures may yet be near the 50-degree mark, causing food for walleye to remain scarce. Most anglers know that feeding among fish is triggered by the availability of food. So, they are less likely to be interested in bait, if no other food is to be found.

Many questions about walleye remain unanswered, but current research promises to improve the success of fisheries managers and anglers alike.

Manes



## TAKES A LICKIN'

You may have heard that wild animals have internal clocks, but not many of them have a gold-plated automatic Bulova in them. Four years ago Thomas Kresnak of Grand Rapids, Michigan caught a 42-pound coho salmon. While cleaning it, he found the fish was equipped with a wrist watch.

Meanwhile, in Sioux Falls, South Dakota, John Bembers had missed the specially engraved watch presented to him by his employers at All American Trucking. He lost the watch in 1976 while salmon fishing in Michigan. He

had hooked a large fish, and in the process of trying to land it, he somehow got the line around his wrist and snagged on the watch. As the fish fought, the watch slid off John's wrist and the line broke. In an instant he lost both his fish and his watch.

Three years later when Kresnak found the watch in the salmon's stomach, the timepiece was still operating and the date only three days off! The inscription on the timepiece named the owner and the trucking company.

He first thought it must have belonged to a drowning victim, so he took the watch to the local sheriff's office. Because they didn't have any records of a John Bembers and no one seemed to know what All American might mean, Kresnak had the watch cleaned and began wearing it.

Later, Kresnak moved to California where he told the story to someone who knew that All American was a trucking company. A telephone call to the company's home office in Kansas City gave him John Bembers' address. Now the watch is back on the wrist where it belongs. As far as anyone can find out, during the three years it had the watch, the fish never missed an appointment. *S.D. Game Fish and Parks*

## FOR THE RECORD

For those who are driven to establish their names in record books, the opportunity is knocking. All a person needs to do is catch one of the sport fish not listed in current world record books maintained by the National Fresh Water Fishing Hall of Fame and the International Game Fish Association. Both organizations publish updated record books each year.

One Kansas sportfish which is not in the 1983 record books is the longear sunfish. To be eligible, all an angler needs to do is catch a longear of any size, submit the properly completed forms to one of the fishing organizations, and hope someone with a bigger fish doesn't have the same idea.

Other sport fish are presently absent from record books, simply because no catch of any size has been submitted for the species. To obtain copies of the record books or information about submitting a potential record, write to: the International Game Fish Association, 3000 E. Las Olas Blvd., Ft. Lauderdale, FL 33316; or the National Fresh Water Fishing Hall of Fame, Box 33, Hall of Fame Dr., Hayward, WS 54843.

Manes

## NEVER GIVE A FISH AWAY

"I pledge that I will never give a fish away," reverberated through the hall, as more than 1,400 students attending the concluding session of the Bass Fishing Institute at Indiana State University repeated the vow. The pledge was led by Billy Murray, coordinator of the Institute instructional staff.

Murray explained that there are many people who don't fish but like to eat fish. Often when a fisherman catches more than he and his family can eat, other people are willing to help eat his catch. These people may not purchase fishing licenses or support programs for fisheries management. When legislation is pending concerning the improvement of fishing and boating programs, these may be the people who vote against the use of public funds for such programs.

According to Murray, the moral of the story is "Keep as much fish as you can eat, return the rest to further the future of the resource, and don't provide fish to friends who are nonsupportive of maintaining and continuing the resource."

"Now everyone please stand, raise their right hand, and repeat after me," says Murray, "I pledge that I will never give a fish away." *Izaak Walton League*

## BEAT THAT!

The world record largemouth bass was taken from Georgia's Montgomery Lake. George W. Perry took the twenty-two-pound, four-ounce fish in June of 1932. No largemouth on record has come within a pound of Perry's aged mark.

Manes

## RIVERS MONTH

June is Kansas Rivers Month. Each year, the Governor signs a proclamation to that effect, recognizing the importance of the state's streams. To celebrate the event, the Kansas Canoe Association will sponsor a "slalom and downriver race" on Deep Creek, beginning at Pillsbury Crossing near Manhattan. The activities, which are to take place on June 9 and 10, will include both recreational and competition paddling. Details about the race may be obtained from Race Chairman T.J. Hittle, P.O. Box 83, Manhattan, KS 66502, (913) 539-7772.

Manes

# NATURE

## WISDOM

*"What the pioneers did not realize was that in the process of subduing a wilderness, the very conditions which molded their character as a people were being destroyed."*

—Sigurd Olson

## EASY OVER

In comparison to its size, the ruddy duck lays the biggest eggs of all North American ducks. The ruddy's eggs measure about two-and-one-half by one-and-three-fourths inches, about the size of an extra large chicken egg. Total weight of an average clutch of six eggs will be more than a female ruddy, which will usually weigh about one pound, two ounces. Imagine a woman giving birth to sextuplets that outweighed her. *Ducks Unlimited*

## ARACHNID REMEDY

Some people get the creeps at the sight of a spider; but to many people, these eight-legged creatures are a sign of good luck, good weather, and good health. In fact, during the 1500s, some English doctors thought spider-and-butter sandwiches could cure high fevers. *Ranger Rick Magazine*

## CRUELTY TO ANIMALS

There are those who oppose hunting, fishing, and trapping because they perceive such activities as cruel. What often may be overlooked are the harsh ways of nature. Most young wild animals, whether birds, fish, amphibians, reptiles, mammals, or invertebrates, never reach maturity. They are eaten alive, starved to death, or they die from one of many diseases and parasites that attack nearly all wildlife. An old wild animal is an exception in nature.

Although ring-necked pheasants are capable of living to be eight years old, the average life span of these birds is only nine months.

Raccoons can live into their mid teens, but most of them never reach two years.

If a mallard duck is so lucky as to avoid all of nature's perils, it may live to be 20. Still, the average mallard dies before age 18 months.

Some birds, such as herring gulls, may live nearly half a century. Most, however, fall prey to nature before they are three.

The ways of nature may seem harsh, but they are perfect. Each living organism is part of a continuous cycle of life and death, which perpetuates the hardy and eliminates the weak.

Manes

## LIFE RAFT

To prevent getting separated during a flood, some ants on the North American prairie cling together, forming a large ball. Constantly tumbling, the raft gives each ant a turn to breathe. Few ants drown during such a float trip. *National Wildlife Federation*

## EAGLE INVENTORY

The National Wildlife Federation, through their Raptor Information Center, coordinates state, federal, and private sectors in a nation-wide eagle survey each January, usually on the sixth or seventh of the month. The Kansas Fish and Game Commission coordinates the Kansas portion of the survey.

Eagle inventories provide an index to state and regional population trends. They also provide useful information about annual changes in numbers at specific wintering sites and identify critical wintering habitat.

In this year's eagle count, the Kansas inventory recorded 355 bald eagles and 32 golden eagles. The 1983 Winter Eagle Survey tallied 436 bald eagles, 37 goldens, and seven unidentified eagles. Kansas Fish and Game personnel, Audubon members, employees from federal conservation agencies, and interested individuals helped with the survey, totaling 82 participants.

Northeastern Kansas had the highest number of bald eagles but no gol-

dens. The southcentral region had the most golden eagles.

Eagles winter near large reservoirs in Kansas, feeding on fish and waterfowl, so long as some open water remains.

Manes

## RAPTOR REFERENCE

The Smoky Hill Audubon Society has published an eight-page booklet, "Raptors of Kansas", which bears fine illustrations of 15 common Kansas birds of prey. Each drawing is accompanied by a brief description and natural history. The book is a valuable reference for teachers and bird enthusiasts.

The publication is also an art catalog. Each of the Richard Courter illustrations is available in a signed and numbered print (8 1/2 x 11 inches). Single prints are available for a donation of \$25 to the Smoky Hill Audubon Society's Raptor Rehabilitation Center in Salina. The entire set may be obtained for a \$350 donation.

The prints are available from the Smoky Hill Audubon Society, c/o Prairie Raptor Project, Route 1, Culver, KS 67435. The booklets, funded by Kansas Fish and Game's Nongame Tax Checkoff Program, are available from the Kansas Fish and Game Commission, Route 2, Box 54A, Pratt, KS 67124.

Manes

## REINTRODUCING THE CHIPMUNKS

Several of the 48 eastern chipmunks that were obtained last year from Missouri and released in Emporia city parks have been seen this spring. Some of the chipmunks undoubtedly dispersed from the release areas last fall, but many adapted well to their new homes and raised young. Nongame project leaders plan to release more chipmunks this summer and to eventually distribute production from this colony to other suitable areas in eastern Kansas. Establishment of a second production area on the Kansas University Natural History Reservation is planned for this year.

Joe Schaefer

# WILD DESIGNS

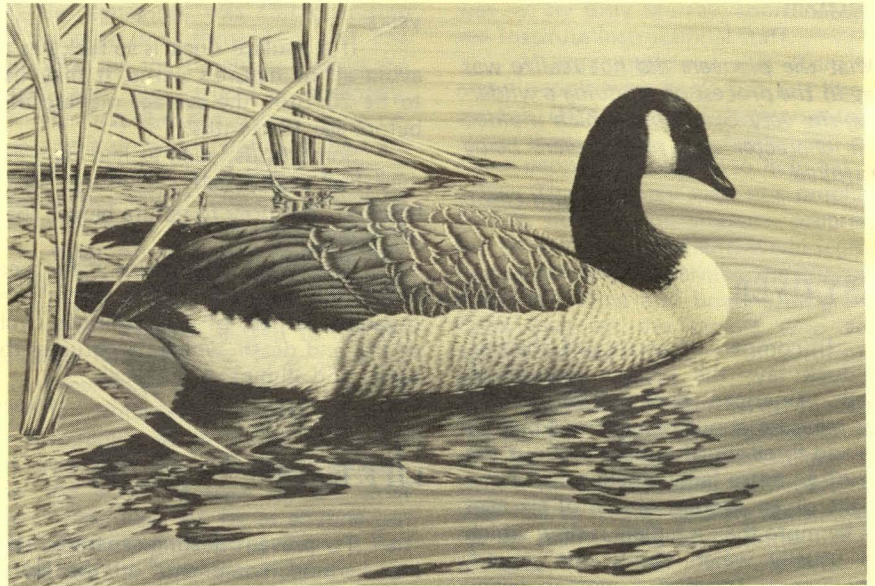
## DOHONEY'S ART

Relatively new to the field of wildlife art, Ann C. Dohoney gained her first recognition by placing third in the 1981-82 Federal Duck Stamp Competition. Since then, she has made appearances in many well-known wildlife art shows. In addition, she has placed among the top finishers in state duck stamp competitions.

Ms. Dohoney says she has always been fascinated by wild animals, but it was not until 1975 that she began her serious pursuit of wildlife art. Since then, she has traveled to refuges and zoos throughout the U.S. and Europe, studying and photographing her subjects. Her paintings are characterized by crisp detail and life-like poses.

Prints and originals of Ann Dohoney's work are available through the Kansas Fish and Game Commission by contacting: Jan Royston, c/o K.F.G. C., Rt. 2, Box 54A, Pratt, KS 67124.

Manes



Canada goose by Ann C. Dohoney

# SPECIAL NOTES

## ETHICS WINNERS

The Kansas Safe Hunter Program stresses the importance of safe and ethical conduct by sportsmen. Tim Rice of Sycamore is one graduate of the program who learned that lesson well.

Rice, a senior at Independence High School, has been named the national winner of Marlin Firearms' Hunter Ethics Essay Contest. Tim's essay, titled "What It Means To Be An Ethical Hunter," was judged superior to hundreds of other essays submitted from across the U.S. and Canada.

For his efforts, Rice was awarded \$3,000 in savings bonds and a monogrammed lever-action rifle at presentation ceremonies with Governor John Carlin. The honor is doubly rewarding for Tim's father, Charles Rice. The elder Rice, who was Tim's Hunter Safety Instructor, also will receive a specially-pro-

duced rifle from the Marlin company.

William Joe Clark, a junior high student in Eskridge, Kansas, received Marlin's State Junior Hunter Ethics Essay Award. He and his hunter safety instructor each received a plaque from Marlin Firearms and a \$50 gift certificate for L.L. Bean outdoor merchandise.

Kansas' hunter training program was initiated in 1973 and has been coordinated since its inception by Royal Elder, who plans to retire from the Fish and Game Commission this year. George Schlecty, a veteran of the agency's law enforcement division, was recently appointed to assume leadership of the statewide hunter training program. Since its beginning, the program has certified more than 185,000 young Kansas hunters. The program relies on volunteer instructors, who contribute their time and expertise free-of-charge to train youngsters in the safe handling

of firearms and ethical conduct in the field.

Bob Mathews

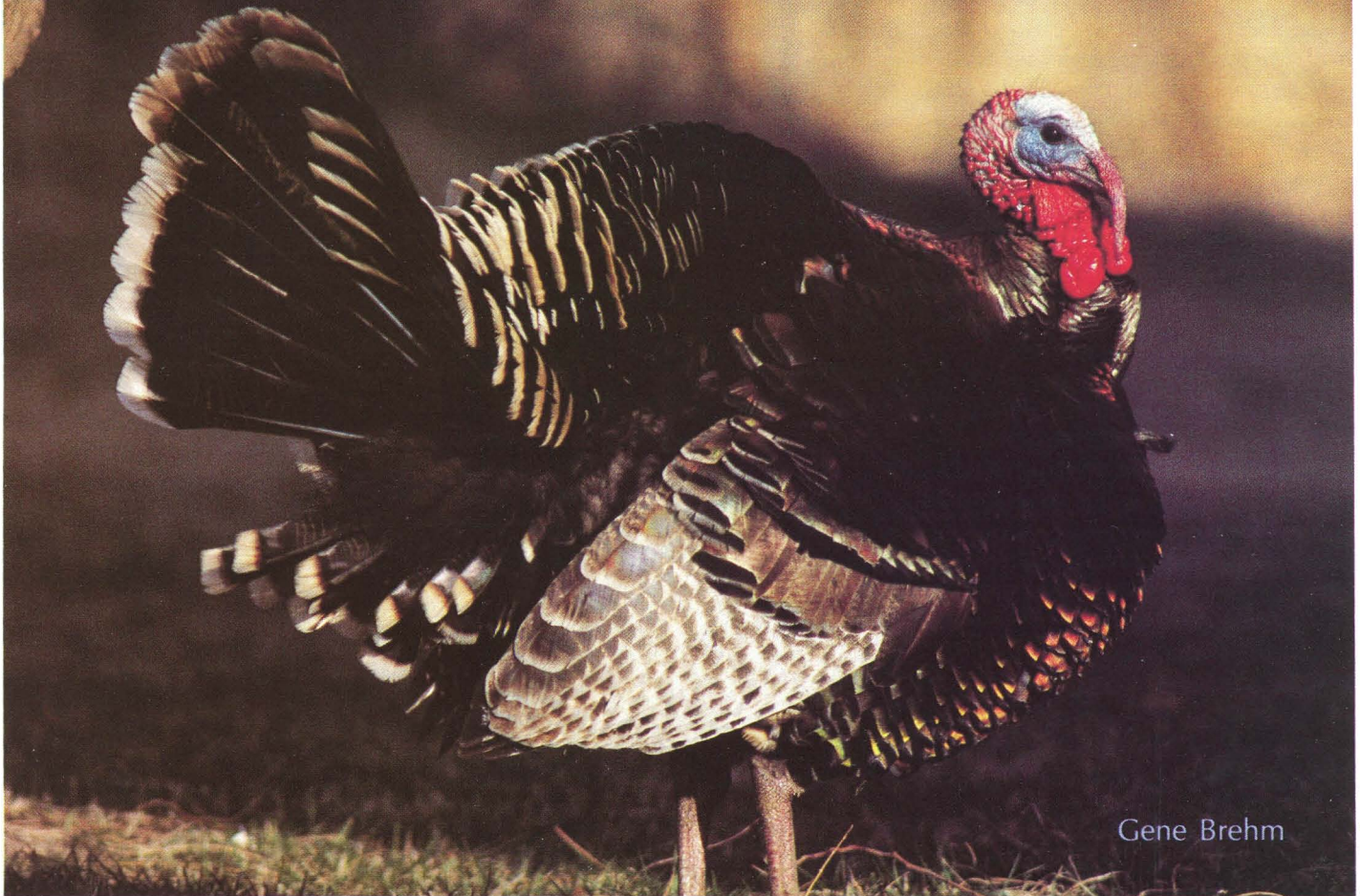
## AUDUBON GRANTS

A scholarship and grant program for high school, college, and graduate students is offered by the National Audubon Society Expedition Institute. The 1984 awards are designed to defray an individual's expenses while attending school or completing a project, internship, or summer program.

Application forms and instructions for grants up to \$500 may be obtained by sending a self-addressed, stamped number 10 envelope to: Scholarship Committee, RFD 1, Box 149-B, Lubec, Maine 04652. Applications must be received by the committee prior to July 15, 1984. *National Audubon Society*



# Freeze it on Film!



Gene Brehm photo

**A**mong the most rapidly expanding hobbies in our nation today is nature photography. Its appeal is obvious; few people are lucky enough to live or work in unspoiled natural areas, so when they do travel to such places, it is nice to take a piece home. For those of us who are not painters or poets, photography is our only option.

Many people are not aware of the most practical equipment for the type of photography they wish to pursue. The gear needed to take good wildlife pictures differs from that used in other types of photography. Large-format cameras with negative sizes of 4 x 5 or 8 x 10 (inches) are grand choices for the

studio but of little use to the wildlife photographer. Even the medium format (2¼-inch) cameras are usually too cumbersome for field use. Conversely, the "instamatic" breed shooting 120mm film will never produce satisfactory results.

By far the best cameras for wildlife photography are the 35mm SLR (single lens reflex) models. A 35mm body seldom weighs more than two pounds, and it fits nicely into one hand. Because of the popularity of 35mm equipment, competition among manufacturers is keen, and more research and development has been done on this type of camera recently than on any other kind. Consequently, retail prices for 35's are much lower than for larger-for-

mat cameras, and many kinds of film—both black-and-white and color—are available. Finally, all high-quality 35's are designed to accept interchangeable lenses—from wide-angle 24mm glass to the huge 600mm telephoto. This allows a photographer to purchase a great variety of lenses for use on one or two bodies. Changing lenses is quick and easy.

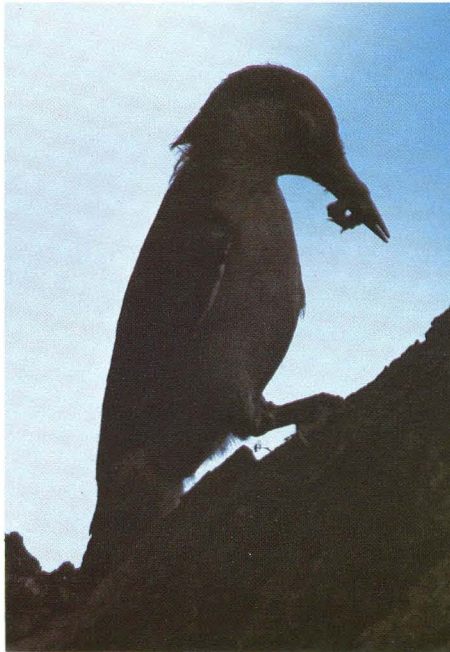
In choosing a 35mm body, look for one whose manufacturer offers a full line of accessories (such as lenses and flashes) which may be purchased as your hobby evolves. Always choose a body that is capable of being switched to manual operation. Then, as you learn more from your experiences about light

and film, you can choose to overrule those easily-fooled computers. For advanced "hidden camera" techniques, a body should accept an autowinder which may be tripped electronically from a distance.

**C**hoosing lenses which are most practical for your needs is a problem which can keep you awake at night. As few as two lenses will serve for most wildlife photography. The Kansas Fish and Game Commission presently owns (among others) a 28-90mm and a 70-210mm lens. These two zoom lenses, which both have macro (close-up) capabilities, take good photographs and are always kept close at hand. Zooms have a couple advantages over lenses of fixed focal length. The most obvious is the versatility inherent in having, at the twist of a wrist, several magnification options. Secondly, zoom lenses allow you to compose a picture far more effectively than fixed-focal-length lenses. That is, you can "frame" a photograph properly (or in several ways) from one spot, without having to move.

A fault of zoom lenses is that they are not quite as sharp as good-quality lenses of fixed focal length. Fortunately, the differences are only noticeable by critical eyes using an 8X viewing loop or when the photos are greatly enlarged. To put this discussion in perspective, when I am close to my camera bag I use a fixed lens, but when on foot and on the move, I use the zooms without feeling compromised. If zooms fit your needs, buy the best quality, fastest (largest available aperture) lenses that you can find and afford.

Filters should be purchased at the same time as the lenses. A UV (ultraviolet) haze filter is a good all-around everyday choice. It helps eliminate haze and gets the excess blue out of shadowy areas. A UV filter is a must in snow conditions where shadows may be involved.



Gene Brehm photo



Gene Brehm photo

*The camera's light meter "read" the top situation incorrectly and indicated a high f-stop to reduce incident light. The bottom photo was correctly exposed after the lens was opened to compensate for strong back-lighting which fooled the meter.*

Some scenic photographs are greatly improved by the use of a polarizing filter. This filter will block reflections and let the true colors of a scene saturate your film. Also, the sky portions of scenes will show a darker blue.

When considering lenses and wildlife photography, most people think of large lenses first. It is true

that I use a 400mm lens in many situations, but it is much more difficult to get good pictures with long lenses than it is to build good blinds out of which shorter lenses may be used. Blinds will generally provide better close-up photographs than will long lenses. When you learn to use both in conjunction, the results will be dazzling.

Sometimes long lenses can cause problems. Once, while I was photographing elk in Colorado, a large bull came to my bugling. The 600mm lens that I was using would not focus on that bull when he finally stopped just a few feet away. The minimum focusing distance on that lens is eight meters.

Last fall a whitetail buck worked his scrape directly under my tree stand. I had just moved to that tree because of a change in the wind direction and was not ready for action with the lens I needed. The big telephoto lens I had handy would not allow me to show the entire scene. A smaller lens would have captured an important behavioral trait peculiar to the species.

**A** piece of equipment that should be considered from the very beginning in nature photography is the tripod. If photograph quality is of any importance to the photographer, a tripod is a must. Even when using wide-angle lenses, a tripod can make the difference between a mediocre photo and a real crackerjack image. You can use a slower shutter speed without fear of shake and therefore can obtain greater depth of field. Of all the common errors in picture taking, excessive camera wobble is the most prevalent. Learn to use a tripod and a supple cable release (most cable releases are too stiff) and fewer photos will go to file #13.

Another tool often used to minimize camera shake is a beanbag. I use a beanbag when taking opportunistic photographs out of a car,

from tree stands, and in some blind situations. Sometimes a beanbag works better than a tripod in flower photography. My beanbags are constructed from jean "cutoffs" and filled with soybeans.

The use of flash is a great way to improve certain types of wildlife photography. An example would be nesting birds. Nests are seldom constructed where sunlight strikes them, and without strong sunlight it is impossible to stop action or obtain acceptable depth of field. The only option is flash; the more the merrier. I usually set two or three strobes within eight or ten feet of a nest. These are triggered either by wires to the camera or by remote light sensors. The camera is pre-focused on the nest and is triggered from a distance by a remote wire connected to the camera's auto-winder. Flashes give enough light to maximize depth of field and will stop most action.

Film needs of photographers vary as greatly as equipment needs. Positive slide film is essential when the product is to be used for magazine publication. *Kansas Wildlife* uses Kodachrome 64 exclusively. If your photographs are for casual snapshot viewing, a print film may suit your needs better. The faster the film, the less light will be needed, but more 'grain' will be present—with the inevitable loss of resolution. If your goal is to learn a great deal about photography, trial and error is probably the best way. And the least expensive errors are made on positive slide film. To view your results, set up a slide screen and projector. To see if the slides will truly print well, view them through an 8X viewing loop.

**N**ature photography comprises two basic categories: wildlife and scenic. Photographers with limited time will do well to choose one or the other objective at the beginning of a day's

shoot. When days are clear, with maximum available light, I opt to photograph wildlife, since the greater illumination allows faster shutter speeds while still maintaining acceptable depth of field (see chart). Since the most difficult wildlife shots contain action, a full spectrum of light during the active periods of early morning and late evening is desirable.

On the other hand, partly cloudy skies add a pleasant dimension to landscape or scenic photos. Desired depth of field may be obtained by slowing the shutter speed, which allows a smaller aperture size, and using a tripod to control camera movement. Extreme weather conditions are difficult to handle, but by bracketing exposures (shooting one or two f-stops above and below that which you think best) stunning results may be obtained. The deep shadows of early morning and late evening add interest to rolling landscapes. Try it all.

When shooting a camera on manual mode, the most foolproof method for selecting proper exposure is to use a gray card or learn how your hand reflects light as

compared to a gray card's surface and adjust accordingly. With the sun over your shoulder, hold the gray card at arm's length and take a reading through your camera. Be sure that your shadow does not fall on the card as you use it. "Why not just use the setting that the camera advises as you view the scene?" You ask. Well, usually this works. But imagine an animal standing in a ray of light with a background of shadows. Your camera would meter the background and your main subject would be over-exposed. If the critter steps into the shadows, then use your meter through the lens and if time allows, bracket.

Last spring I had the opportunity to photograph turkeys from a ground blind. A young tom approached through scattered trees to a distance of 25 yards. My light meter through the lens was reading the scene at 1/125th of a second at f/4.5. From metered gray card readings that had been taken before the tom approached, I knew that an object standing in full light could be ex-

*A macro lens is essential for close-up photography, as is a tripod or beanbag.*



*Ron Spomer photo*

posed at 1/125th of a second at f/11. Holding fire until the strutting turkey entered a well-lighted zone, I started shooting at the gray card setting and then bracketed down to f/9.5. The results were pleasing. Only a very narrow field spotmeter could have read that scene correctly. Since automatic exposure type cameras usually meter a wide area, that dark background would have fooled the computer and the turkey would have been over exposed.

**P**ossibly the most important step in wildlife photography is to decide that one grand photograph taken on an outing is preferred to many fair ones. "Running and gunning", as I call it, will often result in the sighting of many species and photographs of greatly

varying quality, but the best shots usually come from blinds. Pre-scouting for blind location and the actual construction of blinds takes time, energy, and patience, but the results are most rewarding. Building components may vary from natural materials found in the area to cardboard refrigerator boxes. If the blind is to be used soon after construction, stick to natural materials and blend them well with the surroundings. When there is ample time to condition the target animals to a blind, or the species is none too wary, blind construction is less critical.

The first time that I photographed prairie chickens from a blind I used a burlap affair that was on the booming ground when I arrived. When the sun rose it shone through the loose weave and cast my shadow across the ground. If I moved . . . well, predictably so did my shadow!

The next morning I dragged a piece of cardboard to the site. Stuffed into the blind behind me, it blocked all the sun's rays and the burlap looked no different from the outside. The chickens seemed to prefer this addition also.

Waterfowl may be effectively photographed from a floating blind. The Fish and Game Commission owns a float tube which has been rigged to look like a muskrat house. Some species may be approached in such a blind, but often it must be positioned in an area beforehand to allow marsh inhabitants to get accustomed to it.

When choosing the positioning for a blind, I usually opt for a 'front-lit' position. (This means that the same blind will *not* work for both morning and evening photography). If your subject is a mammal you

*A flash triggered by remote control captured this cardinal and its young on film. The camera was set up beforehand.*



A well-constructed blind and high-quality telephoto lens combined can yield striking results. This avocet photo is an example.

should be sure to man the blind only when the wind is favorable.

Wildlife photography can reveal a whole new world. And because a photographer's "hunting" season is open year round, he never has to stay home. Combining this hobby with other outdoor pursuits is only natural. A good photograph can put the finishing touches on a great fishing trip or bring back memories about a hard-won game animal. Again, learning can be accomplished by trial and error, but don't ignore the many "how to" books at your local book store or library. No matter how you approach this sport, along with fishing, hunting, bird watching, hiking, and camping, nature photography is a grand way to enjoy our great and varied Kansas wildlife.



Gene Brehm photo

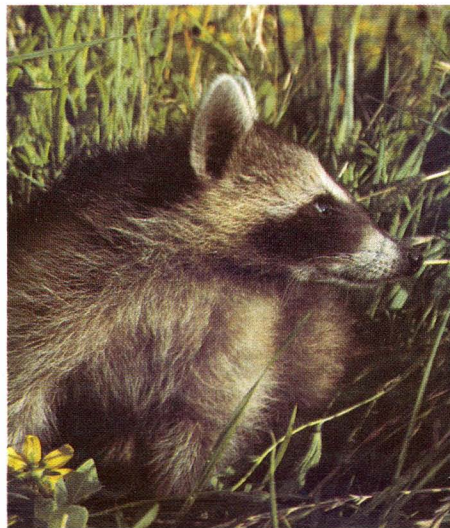
**T**he chart below illustrates three situations frequently encountered by wildlife photographers. Recommended camera settings are based on the assumption that available light is the same for each case.



Gene Brehm photo

Shutter speed: 1/500  
Aperture: f/5.6

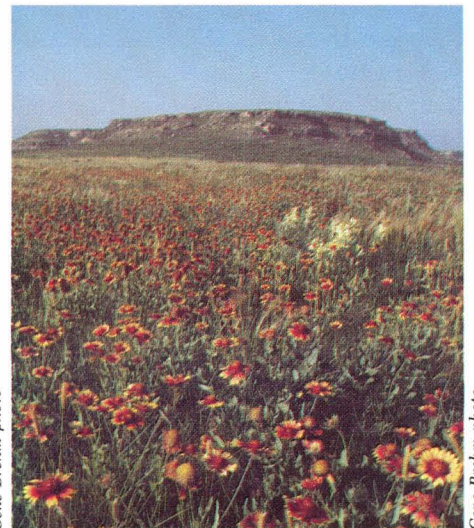
*Fast action demands high shutter speeds, which in turn necessitate wide apertures. You'll freeze that motion—but with very little depth of field.*



Gene Brehm photo

Shutter speed: 1/125  
Aperture: f/11

*A stationary subject allows the use of slower shutter speeds, smaller apertures. Greater depth of field and better color saturation result.*



Gene Brehm photo

Shutter speed: 1/30  
Aperture: f/22

*Scenic photographs call for very slow shutter speeds, with correspondingly small apertures. Maximum depth of field is possible here. A tripod is a must.*



# reliving the primitive

Keith Campbell

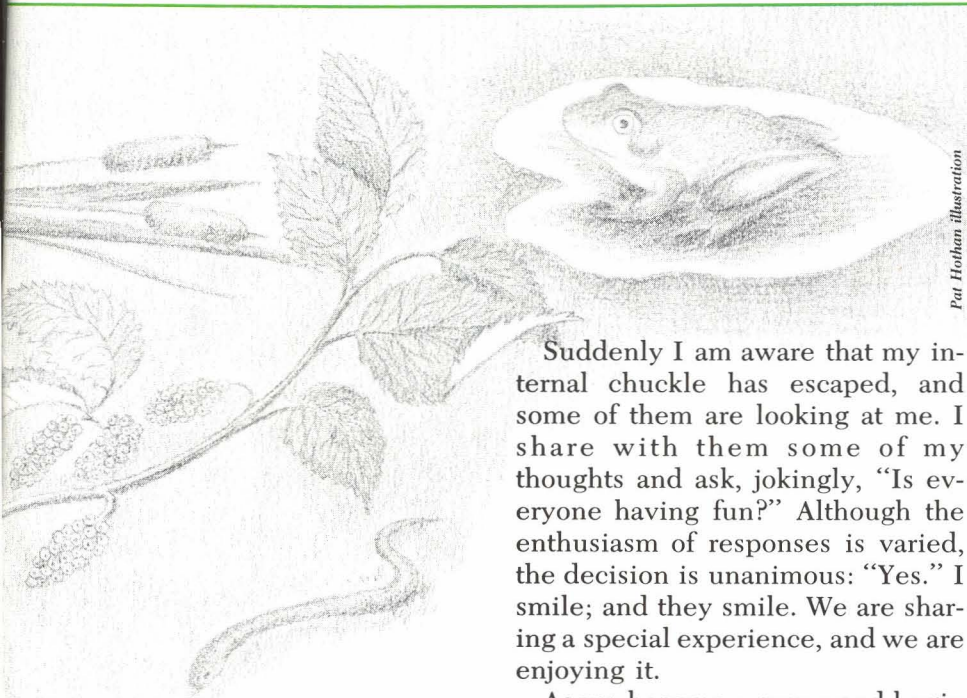
**E**ight scraggly, cold, hungry figures huddle around the tiny fire. They do not speak. After hunting game and gathering vegetation all day, their minds are riveted to only two things: getting warm and eating. The sun has already set. They used every bit of daylight in their quest for food and are now paying the price for not having started their fire when the sun was providing some warmth. Although they ignited the tinder with only the friction generated by rubbing two sticks, they wasted no time this evening, producing within minutes a spark to begin their fire.

These hunters are from today's society, but they are experiencing nature as few of us do. They are

returning to the paleolithic age in which stone, bone, and wood were primary technological materials, when creativity and the will to survive were requisites for life itself. These hunters are leaving behind gas lanterns, ice chests, sleeping

bags, air mattresses, tents, firearms, fishing rods and reels, and food. They are living off the land with their knowledge of animals and plants—with an assist from such tools as flint and bone knives, stone axes, handmade bows and arrows, handmade spears, atlatls (spear throwers), and fire bows.

These "primitives" have taken a few days out of their busy schedules to reestablish their ties with nature. For a short time they are separating themselves from their buzzing, fast-



Pat Hohman illustration

paced, competitive society to experience a totally different world; a world of quiet and solitude, of fresh, clean air, of unpolluted land, water, and sky. Still, this world of nature has its own harshness. Here at Cedar Bluff Reservoir, it is chilly at night, and the mosquitos are a frequent nuisance. The largely vegetarian diet does not satisfy hunger pangs in the same way as a hamburger and french fries, and there are rattlesnakes in the area. But this is part of the reality of nature. This is a part of the reality they have chosen to experience.

As I squat by the fire along with these hunters, holding my cold hands as close to the flames as I can without burning my fingers, I watch their faces. They are tired faces, and much dirtier than when the day began. Their hair is messy, and their eyes have a hollow look to them, seemingly mesmerized by the fire. Inside I chuckle at the cultural shock some of them have experienced today by entering the stone age. I'm not laughing at misfortune, just recognizing that these students are seeking a worthy objective, and getting more of it than they expected.

Suddenly I am aware that my internal chuckle has escaped, and some of them are looking at me. I share with them some of my thoughts and ask, jokingly, "Is everyone having fun?" Although the enthusiasm of responses is varied, the decision is unanimous: "Yes." I smile; and they smile. We are sharing a special experience, and we are enjoying it.

As we become warmer and begin to nibble on some of the meat that has been cooked over the fire on sticks, they begin telling about their day. Several stories are related about unsuccessful stalks with spears and bows and arrows on cottontail rabbits. Fishing with bone skewer hooks is reported as equally unsuccessful, although several lines were put out in the morning. We tally our meat intake for the day: It includes two Swift lizards, three bull snakes, twelve pickerel frogs, and twenty crawdads. (One of the frogs was removed undigested from the stomach of the largest bull snake.) Oh yes . . . one other meat source was the head of a rabbit that had been left when a coyote killed and apparently ate the creature. The head was thrown into the coals of the fire, and after about 10 minutes the charred remains were eaten.

We realize that we were not very successful today in securing meat from the wild. Even the javelin thrower from the college track team, who before the trip was predicting the number of rabbits he would kill with his spear, admits that life in the stone age is more difficult than he had anticipated.

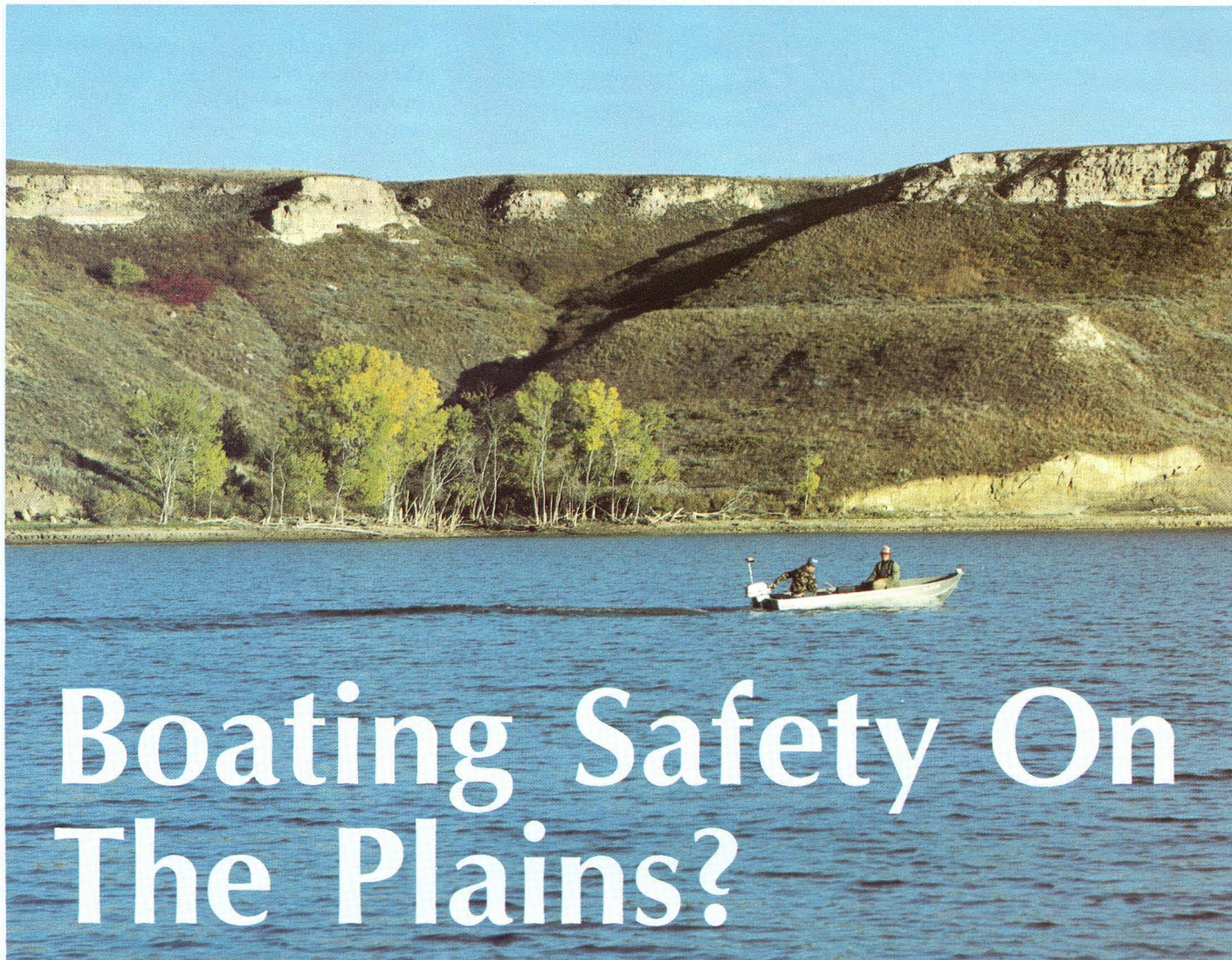
Although the meat we provided is

eaten quickly by this group, I note that most of the vegetation is left untouched. At first a cattail shoot and root taste good, but after a few bites they become uninspiring to the palates of people used to seasoned food. But the cattail is perceived by most of us as better-tasting than the pithy "Indian potato" that we harvested. In fact, not one of the several edible plants gathered today is relished by this group, and some among us choose not to fill their stomachs.

As I lay back against a tree close to the fire, I note that I am the only person still eating. The small amount of meat we had for the evening meal was gone long ago, and only the vegetation remains. Again I chuckle to myself at these people who are famished, but refuse to eat the food we have before us. Yet, only a few minutes later I lay aside a partially-eaten cattail shoot. I am still hungry, but I am tired of that monotonous taste.

After two and a half days and a couple nights of living off the land with stone age technology, our journey ends. We are all tired and hungry. Although we have not eaten well (by choice, not necessity), we have tasted some things more important than food. We have come as close as we could to experiencing a stone age culture, and we have developed a substantial appreciation for those cultures that could easily obtain meat, as well as make vegetation palatable. Through our experience we have also developed a new dimension to our appreciation and understanding of nature. Perhaps the most important consequence of this trip is how it influences our perception of our own industrial society. By experiencing a stark contrast to that society, we are reminded that we are a part of our environment, and that we must work with nature, not against it.

*Keith Campbell is an associate professor of sociology at Fort Hays State University.*



Gene Brehm photo

# Boating Safety On The Plains?

*As boat registrations multiply water safety becomes an issue.*

George Schlecty

**K**ansas was once a dry state—in more ways than one. Prairie schooners cutting through waves of grass often logged many miles between water sources. Later, during the dust bowl era, water was in even shorter supply. A nineteenth-century pioneer or 1930's farmer could probably not have imagined that Kansas would someday rank fourteenth in the nation in surface acres of water and that this

water would supply Kansas residents many pleasurable hours of boating.

The big transition began in the late 1940's, when the Bureau of Reclamation and the U.S. Army Corps of Engineers began construction of the first of twenty-four operating reservoirs on many of the major streams in Kansas. Kanopolis was the first to be constructed; the newest reservoirs are Hillsdale and Big Hill.

The surface acres of these impoundments total 181,000. Added to the state's three navigable rivers—the Kansas, Arkansas, and Mis-

souri—and state, county, and city lakes, these reservoirs offer our boaters a total of 236,000 surface acres of public water available for recreational boating.

It's easy to find access to Kansas' public waterways. Though the State Park Authority charges for use of park shore facilities, the Kansas Fish and Game Commission has established several no-fee boat ramps on navigable streams. A boater below the high-water mark of such streams may travel up and down these streams without permission.

Before accessing any other river or its tributaries a boater must have



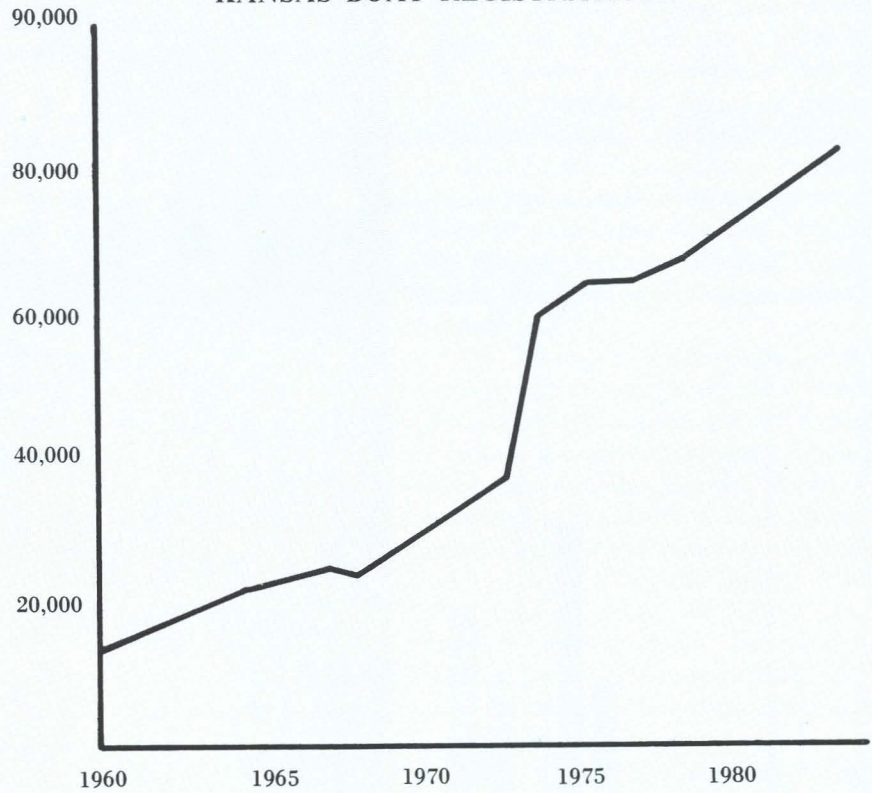
permission from the landowner through whose property the stream flows. Most ponds on private property have no public access.

**B**oating has enjoyed rapid growth as an outdoor pastime in Kansas. Today there are approximately 82,000 motor and sail boats registered in the state. This increased boating traffic brings many safety problems. In 1971 Kansas adopted the National Boating Safety Act. The Act addresses these problems and provides laws and regulations to deal with them.

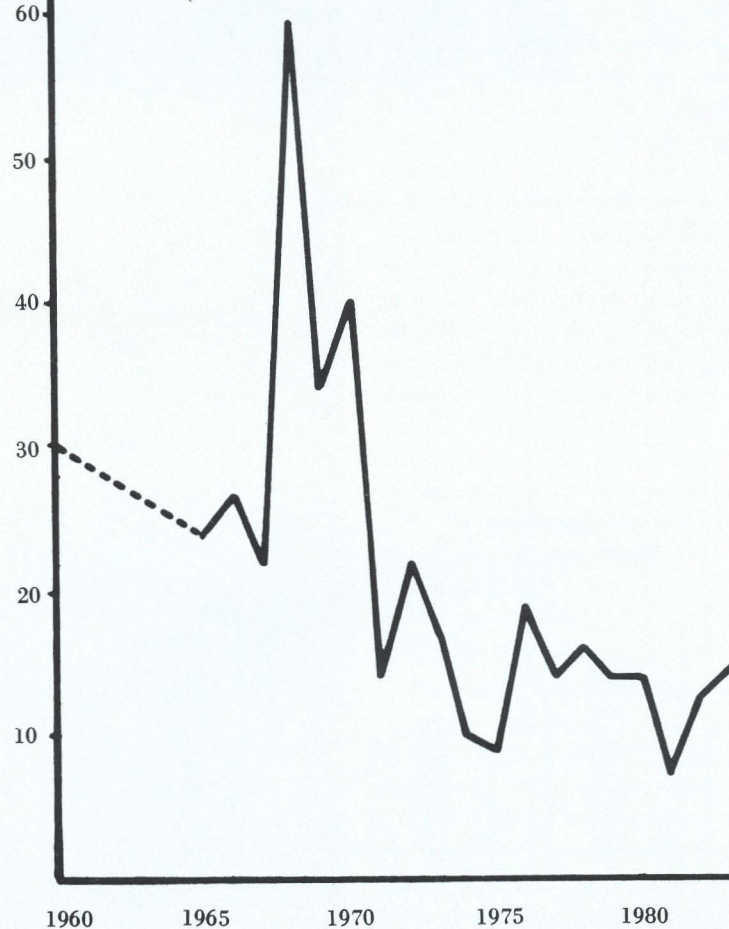
But the enforcement of regulations alone will not reduce accidents, and most states agree that a boating safety education course should be offered to the boating public. Because many state agencies initially lacked the funds to provide adequate boating safety programs, the federal government became involved and from 1983 to 1988 will provide 12.5 million dollars annually for state boating safety education programs. The monies used to fund such programs are generated from taxes paid by boaters purchasing marine fuels.

Approximately 450,000 boaters will spend 4,012,000 boating days on public Kansas waters in 1984. Not all these boaters are doing the same thing with their craft, however; and use conflicts can arise—especially between anglers and speed-boaters. Fishermen usually anchor in secluded, quiet water out of the way of most boat traffic. Still, disturbance of these areas by skiers and other recreationists can become a problem. Regulations, again, are only part of the solution to use conflicts. Courtesy is the long-term answer and will become even more important as boating traffic increases on Kansas waters. Just as common sense is a requisite for safe boating, it is also necessary for better relations with our fellow outdoorsman. After all, each of us owns a share of Kansas' great water resource.

KANSAS BOAT REGISTRATIONS

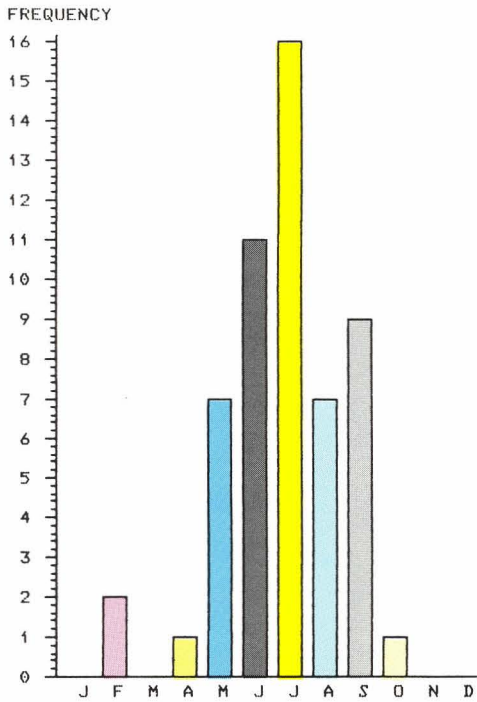


KANSAS BOATING MISHAPS  
(FATALITIES PER 100,000 BOATS)

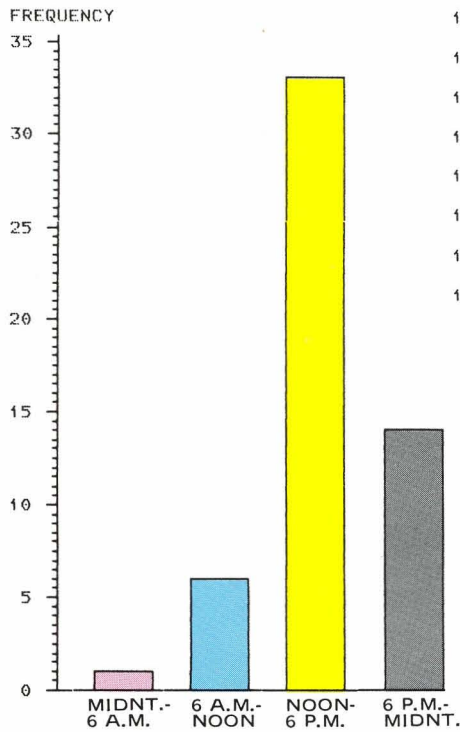


# 1983 KANSAS BOATING ACCIDENT STATISTICS

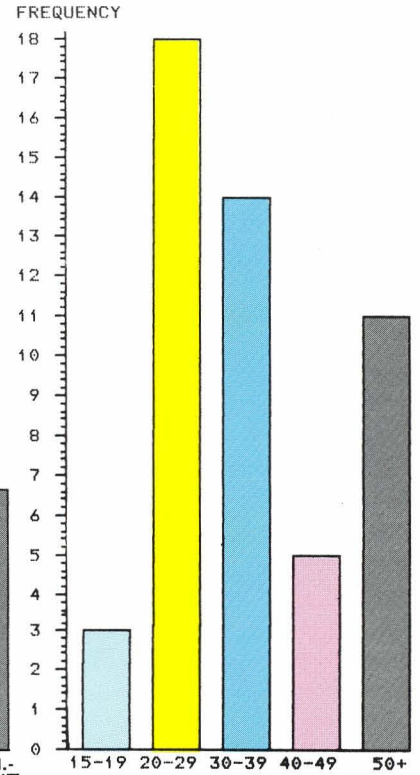
\*\*\*\* MONTH ACCIDENT OCCURRED \*\*\*\*



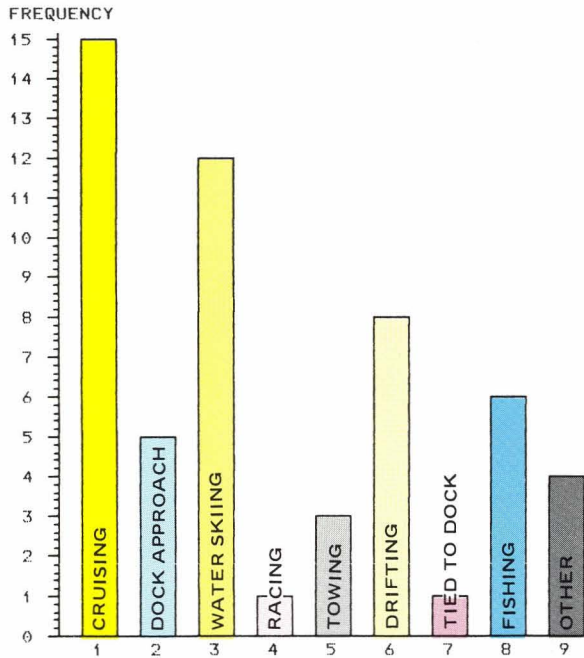
\*\*\*\* TIME OF ACCIDENT \*\*\*\*



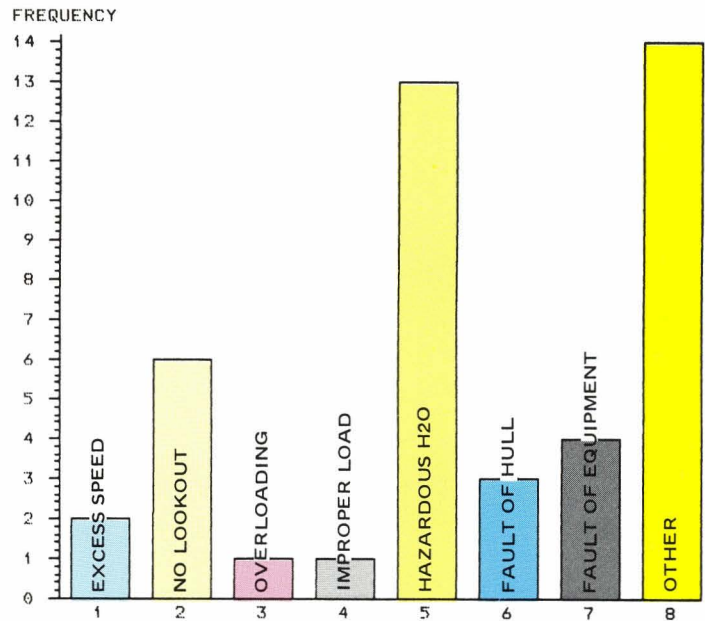
\*\*\*\* AGE OF OPERATOR \*\*\*\*



\*\*\*\* OPERATION AT TIME OF ACCIDENT \*\*\*\*

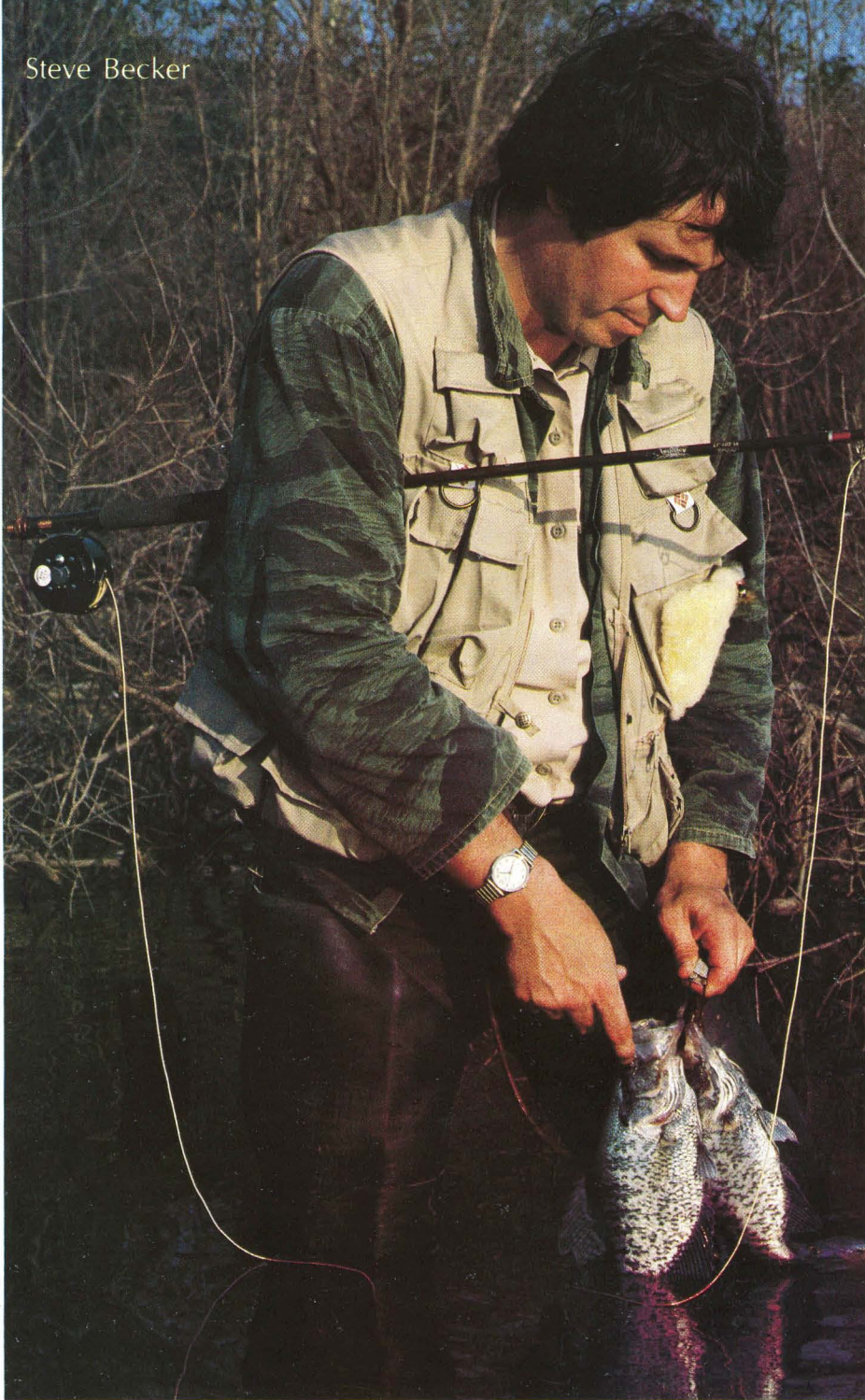


\*\*\*\* CAUSE OF ACCIDENT \*\*\*\*



# Panfish with a Fly!

Steve Becker



Gene Brehm photo

Fly fishing. Those two words bring to mind the names of faraway places like the Battenkill and Madison; the Gunnison, Gypsum Creek, the Poudre River, and the North Platte with its miracle mile. They smack of hours spent in front of a fly-tying vise and conjure up mental images of royal coachmen, ginger quills, and tellico nymphs.

Fly fishing is anticipation, wondering whether each fly as it comes out of the vise is good enough to fool a fish. It is anxious moments casting upstream and floating the fly back, waiting for the strike. It is going one on one against the quarry when your skill in controlling the line by hand determines success or failure. The fish are stalked, slowly and on foot. Absent are high-speed boats and state-of-the-art electronics that tell you where to fish.

Too, there are the quiet times, times when you're not even fishing. When you sit around an evening campfire as the flames retreat into glowing coals, watching with your mind's eye as a rainbow jumps again, or recalling the glistening beauty in a cutthroat or brook trout. And there is the anticipation of next year's trip.

Trout and fly fishing are synonymous for most people. But fly fishing is really nothing more than a patient, delicate method used to take fish. Any fish. While there are no quality trout streams in Kansas, there is an abundance of quality fly fishing here. The same rod, reel, and line can be used to take rainbows or bass, brookies or bluegills. The fly patterns are different, but the rest of the experience is, or can be the same.

## Equipment

Fly rods come in a variety of lengths, weights, and materials. From small five- and six-foot rods, weighted for number three or four lines, to nine- or ten-foot sticks built to handle line weights up to 12, there is a rod for every purpose. A fly rod can be relatively inexpensive

or can cost several hundred dollars, depending upon materials and the amount of hand work put into its construction.

The best rod to begin fly fishing with is a hollow glass seven- or eight-foot rod, weighted for a number six or seven line and sporting a single-action fly reel and tapered floating line. In fly fishing the *line* is cast, not the fly. As a result, the tapered lines (heavier at the front) are far easier to cast than the level or untapered lines. Leaders can be anything from tapered commercial items to a piece of monofilament fishing line about three-fourths the length of the rod. A card of cheap artificial flies and some poppers will round out your gear and get you started casting. As you progress, you'll want to tie your own flies.

### Technique

Fly casting is best learned at home in the back yard. Practicing there with just line and leader will allow you to concentrate on the fundamentals without having to worry about brush, slippery rocks, or patches of smartweed in the water.

As you cast, hold your elbow in close to your body and try not to move your upper arm any more than necessary—certainly not out away from your body. Your right (dominant) forearm should move to the 12 o'clock position on the back-cast and to 9 o'clock on the fore-cast as it lifts and lowers the rod. Your left (or weak) hand is used to control the line, taking up slack on the back-cast and releasing it through the fingers on the fore-cast. A clean re-

lease on the fore-cast allows the line to slip through the guides for maximum distance. A lively rod and proper arm action on the back-cast put the forward part of the line—the part you're actually casting—out where it exerts maximum pull when it's needed most. Controlling the leading part of the line and making it work for you is the key to accurate, effortless fly casting. Timing and smooth follow-through are basic to a good cast.

The muscles required to control a presentation will be built easily with practice, though you can expect them to be sore after your first few sessions. One of the most valuable aids to quick learning is the

*This stringer of largemouths shows that fly fishing can be productive as well as fun!*



Gene Brehm photo

*The author holds a bluegill taken on a fly. You needn't be a purist to have fun with fly tackle, he says.*

advice and coaching of an experienced fly fisherman. If you're fortunate enough to enlist such services, you'll be on the water sooner. It's important that you master proper technique before hitting the ponds or streams, however. The mechanics of casting should be second nature before you ever tie on a hook.

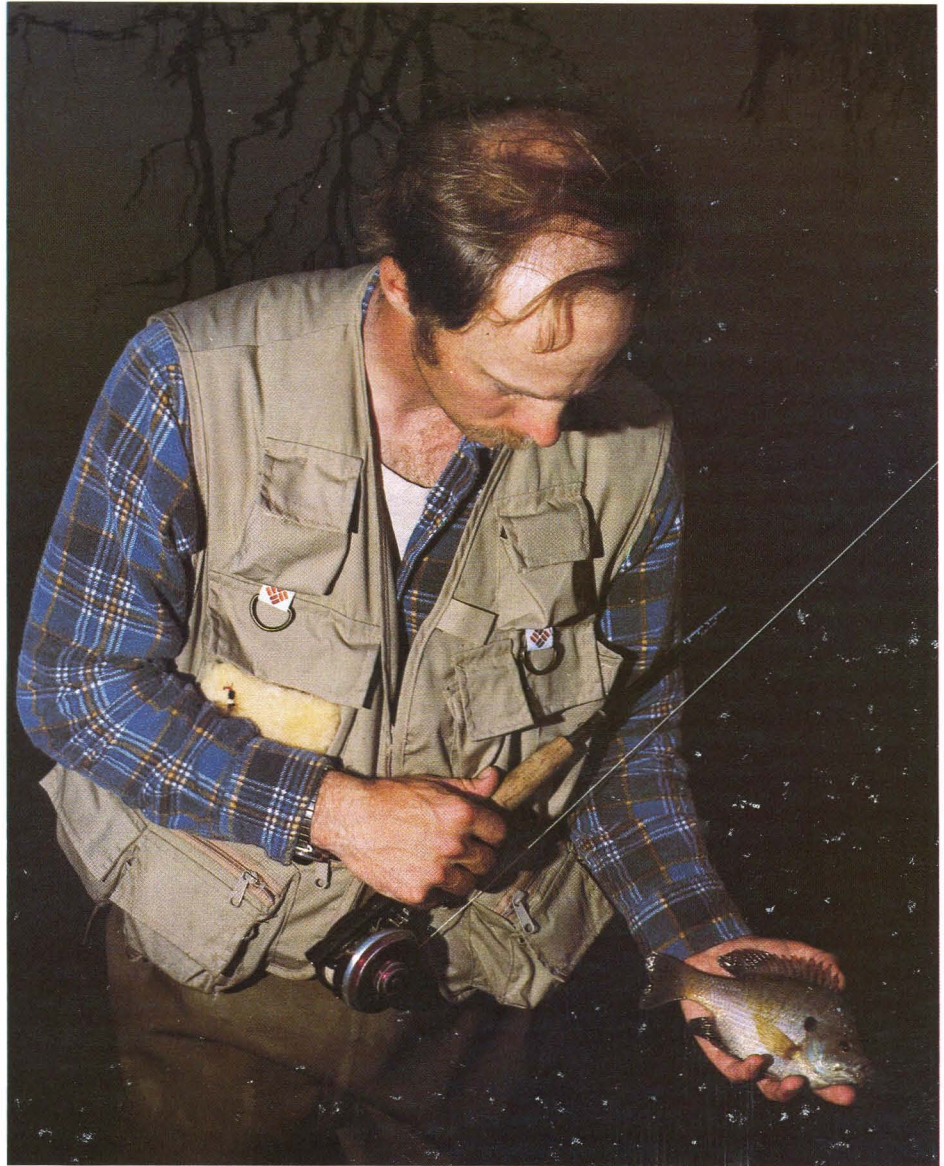
## On Kansas Water

Fly fishing is a good way to catch a number of species, not just trout. But fly fishing for panfish seems a remarkably well-kept secret in the Sunflower State. And that's a shame. In the last couple years, my two "working" fly rods have produced nine species of fish, ranging from carp to cutthroat. Bluegills, green sunfish, and bass, especially, are susceptible to flies and poppers.

A year ago I discovered that, if I rigged my fly rod properly, I could catch a lot of big bluegills with a 1/16-ounce jig when I went worm fishing for bass. I'd feel the bluegill pecking at the tail of the plastic worm, lay down the casting rod, and flip the jig out around the worm.

Flies, streamers, poppers, and hair bugs need to be fished slowly in and around the same habitat areas you would normally fish for bass, bluegills, or crappies. A fly rod may handle differently than your spinning outfit, but the fish are the same. You'll soon learn how to lure panfish to a fly. To set the hook, simply snap your rod up sharply with your wrist.

When I was a youngster, my grandfather showed me a trick for catching big crappies on a fly rod, using minnows for bait. Here's how it works: After learning how deep the crappies are holding, you strip that much line and leader off the reel. Then you just cast out and let the line float on the water. That way you'll always be fishing the same depth. But that's not the trick; it was



Gene Brehm photo

just part of the day's lesson. The trick was to put on just enough weight to make the rod tip bend ever so slightly. When the crappie took the minnow softly in an upward motion, the rod tip straightened out, signaling a strike.

The versatility of a fly rod is truly astounding. On a creek one day last fall, I tied on a long-shank number six hook and slowly waded to within 15 feet of a mulberry tree that hung over the water. Using a mulberry for bait, I swung my offering out so it dropped under the tree. Within seconds I was tied onto a four-pound carp. Don't ever say a carp can't fight! Getting that fish in was like pulling a bull to a halt by hanging onto its tail!

A friend of mine once remarked that fly fishing was a pleasant pastime, but not very exciting. "Everything happens in slow motion," was his complaint. Well, he's right. You *do* have to wade slowly so you don't spook the fish, and the retrieve is slow. Even fighting a fish is a slow process, because you can't horse it at all.

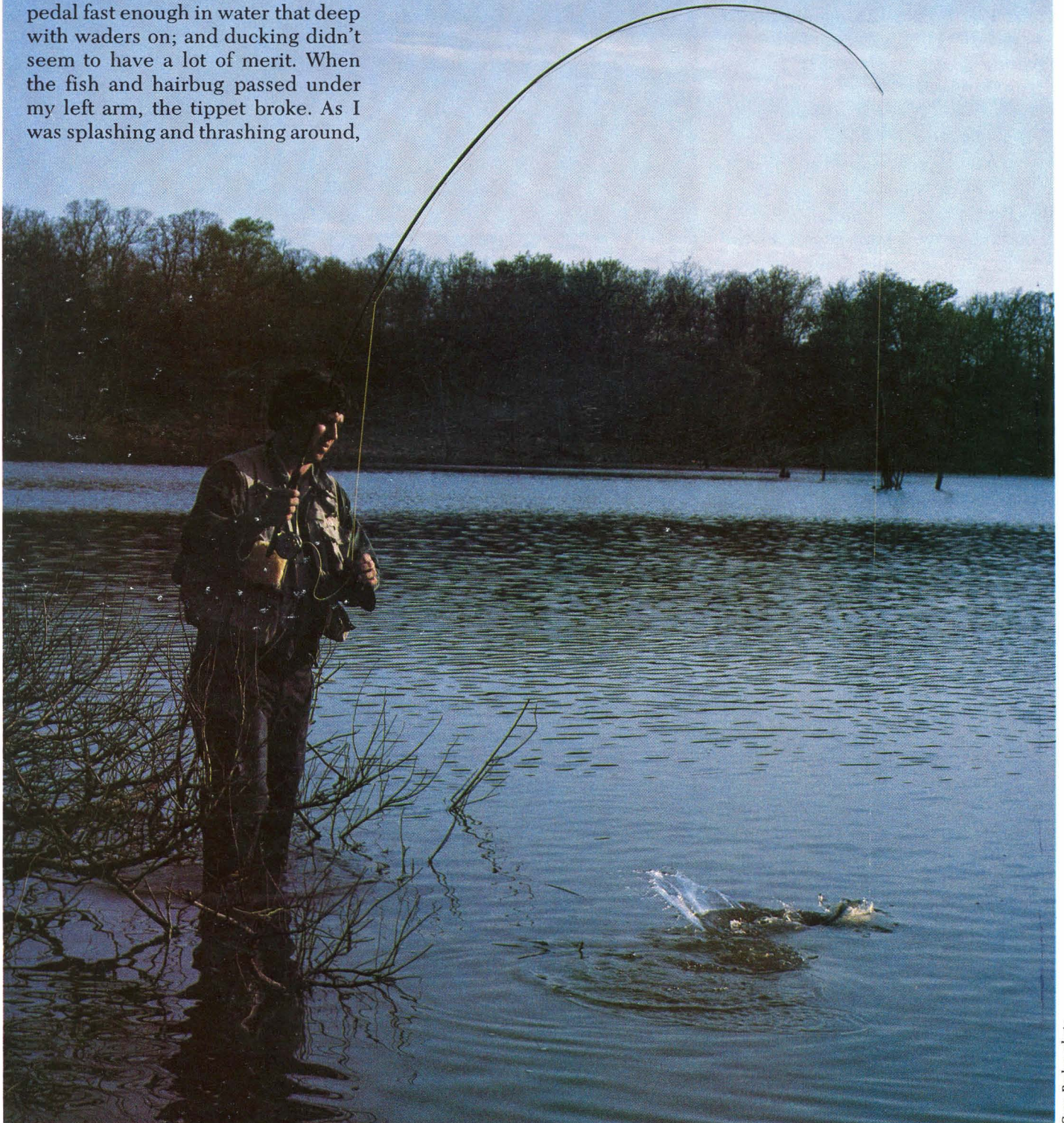
A few weeks ago I was all alone, fly fishing for bass in a lake near home. At the time I was wearing chest waders and showing about four inches of freeboard at the top of my waders. The last cast and retrieve I made hadn't produced a swirl. The big hairbug I was using lay on the water under my rod tip about eight feet away. I had just

started picking up the tip for the next cast when suddenly the water under the hairbug exploded. I found myself eyeball to eyeball with a big northern pike. All I could see were those cold yellow eyes and a mouth full of big teeth coming straight toward me.

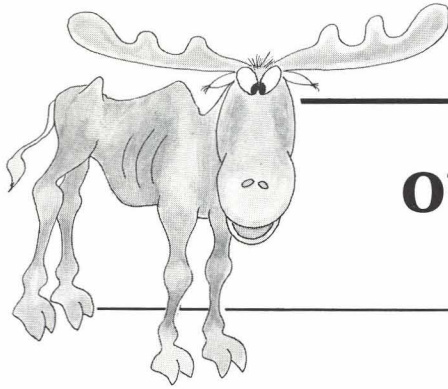
There's no way you can back-pedal fast enough in water that deep with waders on; and ducking didn't seem to have a lot of merit. When the fish and hairbug passed under my left arm, the tippet broke. As I was splashing and thrashing around,

I figured I had about two minutes to come up with a way of performing CPR on myself. After regaining my balance and composure, I looked around to see if anyone had witnessed my contortions.

Yes, friend, fly-fishing *can* be exciting!



Gene Brehm photo



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## off trail

... with *Stub Snagbark*®

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I'm not a joiner. I guess it goes back to my high school days. I tried to join groups of all sorts back then. But I soon learned that not everything is as it seems. When you join a basketball team, for example, you don't always become a Team member. You may be one of the Bench. Now, why don't they just say they're having Bench tryouts and Team tryouts? It would save a lot of confusion. Perhaps some who joined the Team would rather be part of the Bench. It seems that selecting Team and Bench members willy-nilly from the same group is inefficient, if not unconstitutional. More people would be happier if the two groups were not combined for boot camp. Splitting the folks from the start would also prevent a lot of heated arguments over chocolate malts.

Churches like to promote themselves as places anyone can go anytime without obligation. Often they are not. Churches like joiners. As soon as you make it plain you're not one, the congregation is apt to cool off. It's as though they're saying, if you're not one of us, you must be one of them. Well, I'm not one of them. I don't even know who they are. I'm just not a joiner.

Of course, most organizations benefit directly from having your name on the membership roll. That's why they want you to join. It means they are bigger than they were before you joined. They benefit even more from having your telephone number. It means they have written justification for calling

on you for work and money. Now, every organization needs money to survive, and workers to give the group some reason for existence. That's fine. But I don't like to be obligated. Joiners are obligated. It's the one-of-us syndrome; you are always called upon to prove it. Being one of them becomes more and more distasteful as you sink slowly, inexorably into the trap of usness. Soon your entire life is dictated by what the rest of the us's want.

Don't get me wrong. A lot of good has been done by groups. One Girl Scout can't unload enough chocolate chip cookies to matter, and a Red Cross blood drive carried out by a single nurse won't yield many corpuscles. Ike couldn't have pulled off D-day by himself, and even Barbara Mandrell wouldn't sound good without a band. We get used to groups. Like credit cards, they're a part of modern life.

Becoming a joiner, however, is dangerous. Sometimes you accidentally become a part of a Clique when you really wanted to be a member of a Group. But once you've joined, you have to think of a better reason than that for quitting. Being honest is hard. You can't just say "I don't like this group" or "This group is becoming too cliquish for my taste." Well, you can, but you won't. Because you joined the group that had all your friends in it and there's no way to separate

your opinion of them from your opinion of the group. If it is cliquish, they are. It's that simple.

So you don't quit. You grin and bear it, just like you did on the Bench in high school, ruing the day you became a joiner.

No, I'm not a recluse. And I've done my share of joining. In fact, I've had a lot of joining experiences. To wit: I joined a modern dance class once because I wanted to learn how to dance modern dances and impress pretty girls. But modern dance isn't modern dance. It's more like ballet. It was a stroke of luck that no one had an extra pair of leotards my size and I was able to sneak out the door after a few rudimentary movements.

I was very careful about joining anything else for a long time. Eventually I took the plunge, however, and joined a mail-order book club. It was a brash thing for me to do, but I like to read. The book club was nice. I bought lots of good books and had a great time. All groups should be like mail-order book clubs.

Sometimes you have to join just to keep the peace. Lots of people don't want to join the Army, but they do. Once in a while they join voluntarily. If you're selected for jury duty, it's best to join; it's just not cool to abstain. Professional societies are nice to join because their names look good on your resumé, and unions are eminently joinable because you can be blackballed for not joining.

In general, though, joining is bad business. Freewheeling is where it's at. I'd write more about that, but I have a bass club meeting tonight.



*White-footed Deer Mouse by Gene Brehm.*