

KANSAS WILDLIFE

September/October 1983 Single copy \$1.50



MAGAZINE STAFF

Information Education Supervisor

Mike Cox

Editor

Bob Mathews

Assistant Editor

Rob Manes

Staff Writers

Joyce Harmon
Mary Kay Spanbauer
David Case

Photographer

Gene Brehm

Illustrator

Deb Schmidt

Editorial Assistant

Bev Aldrich

Consultant

J. T. Collins, Herpetology

COMMISSIONERS

Richard Hanger, Chairman
Topeka

Ronald Hopkins
Wichita

John Ostmeyer
Colby

Roland Spriggs
Oswego

Gary Caplinger
Larned

ADMINISTRATION

Director

Bill Hanzlick

Assistant Director

Kent Jackson

Administrative Assistant

Fred Warders

DIVISIONS

Chief of Administrative Services

George Axline

Chief of Fisheries

Mike Theurer

Chief of Game

Darrell Montei

Chief of Law Enforcement

Omar Stavlo

Contents

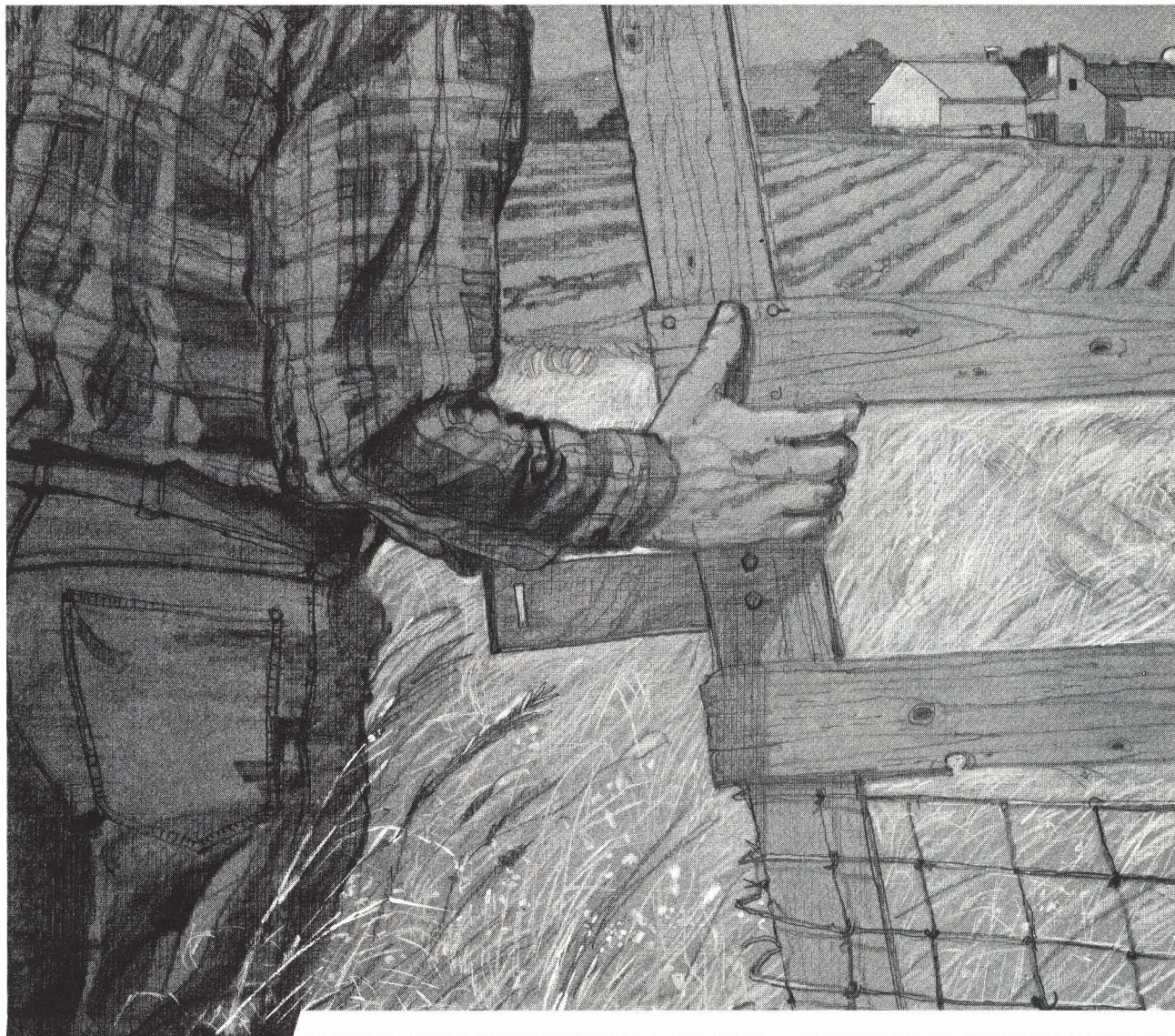
hunting the opener	Are there any good reasons for joining the throngs of hunters out for opening day of pheasant season? Yes.	4
trail of a gunstock	It's a little-known fact that a third of the guns produced in America are fitted with Kansas-grown walnut stocks.	10
extending the invitation	Reducing shooting pressure can make a big difference in keeping doves around for some late season hunting.	17
the white-faced ibis	A unique bird has taken a liking to the marsh environs of central Kansas.	22
eyes on the west	A biologist surveys lessons learned from the continuing struggle to save western Kansas lakes and streams.	26

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.

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

Postal I.D. Number: ISSN 0279-9030

The gate swings both ways



Access to private land: For millions of hunters throughout America, it's the difference between spending a day afield, or the day at home.

For the most part, landowners are not against hunting. But they do want to control access to their property. They want to know who's on their land, and why.

In fact, according to a national survey, one-third of all landowners with posted land would allow hunting access if hunters came to them and asked permission.

It's been said many times before but always bears repeating: Ask permission before you hunt on private land and, once you get it, treat the land as if it were your own.



Illustration by Bruce Cochran

there are advantages in joining the early crowd

hunting the opener

Rob Manes



There are those who flatly refuse to join the ritual of the pheasant season opener. Such skeptics cite mass assemblages of hunters in every field as the factor that keeps them at home on opening day. Others fret about the grim possibility of being the one who fails to

wake at 3:30 a.m.; such an infraction could make the entire party late for predawn shivering around the pickup. Too bad. Some of the most memorable hunting experiences of the year can occur during the first few hours of the first day.

It's not hard to tell which hunters

actually *do* beat the fields and fencerows on opening day. They're the ones wearing ear-to-ear grins that keep fellow workers wondering for weeks.

Those who love chasing the "Chinese Chicken," but shun the first weekend of the season, may

live to regret it. Instead of inventing excuses to bypass the opener, they should consider what will be missed if opening day is left for "the other guys."

The opportunity to shoot *does* come more often on opening weekend, as young birds are more easily flushed the first few times they are hunted. They will often take flight at close range and hang above the cover momentarily, as if to survey the surroundings. This behavior begins to disappear by the end of the first week, as the more daring birds are selected against and go home in a game bag. Birds that don't get to the freezer or table during the early days become markedly more wary and less likely to flush within shooting range. They run with

speed and stealth that dumbfound dog and hunter alike, ducking and weaving through seemingly impassable tangles of sunflowers and tumbleweeds, or they may simply sit tight while the hunting party treads by, nearly stepping on a crouching cock. Pheasants may also demonstrate their mastery of the ol' double-back technique, leaving a prize dog running rabbits and mice while the owner turns the air blue with expletives slandering the dog's ancestry.

A ring-necked pheasant's repertoire of evasive tactics doesn't end there. One method of escape used by generations of late season survivors is to run headlong to the end of the field and flush far out of range. Often the birds simply explode into

the air next to the road, leaving behind a flurry of frustrated fingers fumbling with shells and unzipping gun cases. It would be unjust not to mention one of the pheasant's most creative and infuriating antics. Nearly every pheasant hunter has walked an expansive stubblefield, fighting towering sunflowers to exhaustion, only to collapse at the far end of the field without having spent one shell. After several minutes of breathless commenting about how "the birds should have been there," the pheasants boil out of the ditch just across the fence. One gunner usually fires a futile round in the direction of the birds as they disappear over the next rise.

A well planned and coordinated early season hunt can not only

some pheasant stats

Unlike many introduced species, the ring-necked pheasant has done very well in terms of benefit to sportsmen. Others, such as the starling and the English sparrow, have been thorns in the flesh of America's wildlife milieu.

Pheasants first began to appear in significant numbers on the Kansas plains in the 1930's. Their populations increased rapidly, and reached what were probably the highest peaks in the 1940's. The Soil Bank days of the Fifties did their share for the Asian immigrant birds, but the advent of intensive, "clean" farming in the late Sixties presented a major setback for pheasants.

Small Game Biologist Randy Rodgers points out that the Kansas pheasant harvest fell from a high of over 920,000 in 1961 to a low of 455,000 in 1971 . . . the peak days of intensive farming.

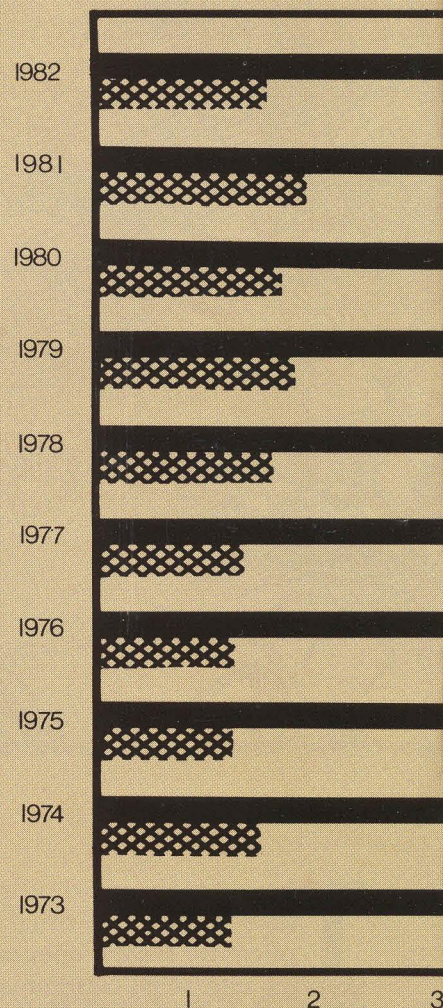
Since 1976, however, the Kansas pheasant harvest has increased steadily to a high of 1.56 million in 1982. Rodgers expects the '83 pheasant harvest to be another good one. Carryover from the 1982 bumper crop will add to hunter success. However, drought conditions persisting through the summer of '83 jeopardize prospects for another record year. He attributes the recent in-

crease, in part, to the energy crunch of the Seventies. With higher fuel costs, farmers have been moving toward conservation tillage, resulting in more undisturbed nests and more abundant habitat left in crop fields.

Another obvious factor which figures into the harvest of pheasants is the number of hunters in the field. However, the estimated number of Kansas pheasant hunting man-days has increased only 63 percent since 1976, while the harvest of birds has increased almost 200 percent!

A temporary dip in the pheasant harvest occurred during the 1980 season. Biologists attribute that to the harsh summer of that year. Barring any long strings of such hot, dry summers, Rodgers predicts continued good harvests of the ever popular ring-necked pheasant in Kansas.

The number of pheasant hunters has remained fairly constant over the past ten years, never straying far from the 150,000 mark. In contrast, the annual harvest of pheasants hovered around 500,000 throughout the early 1970s, and then began a steady increase to almost 1.5 million in 1982. A slight dip in the number of birds taken in 1980 can be attributed to the severe summer and winter which preceded that season.



eliminate much of this sporting unpleasantry, but can provide the experiences that are the source of only-slightly-exaggerated stories.

Preparation prior to the hunt is of utmost importance. Lining up the location of a shoot can mean the difference between a great pheasant hunt and a long ride to nowhere in Billy Bob's new four-wheel drive.

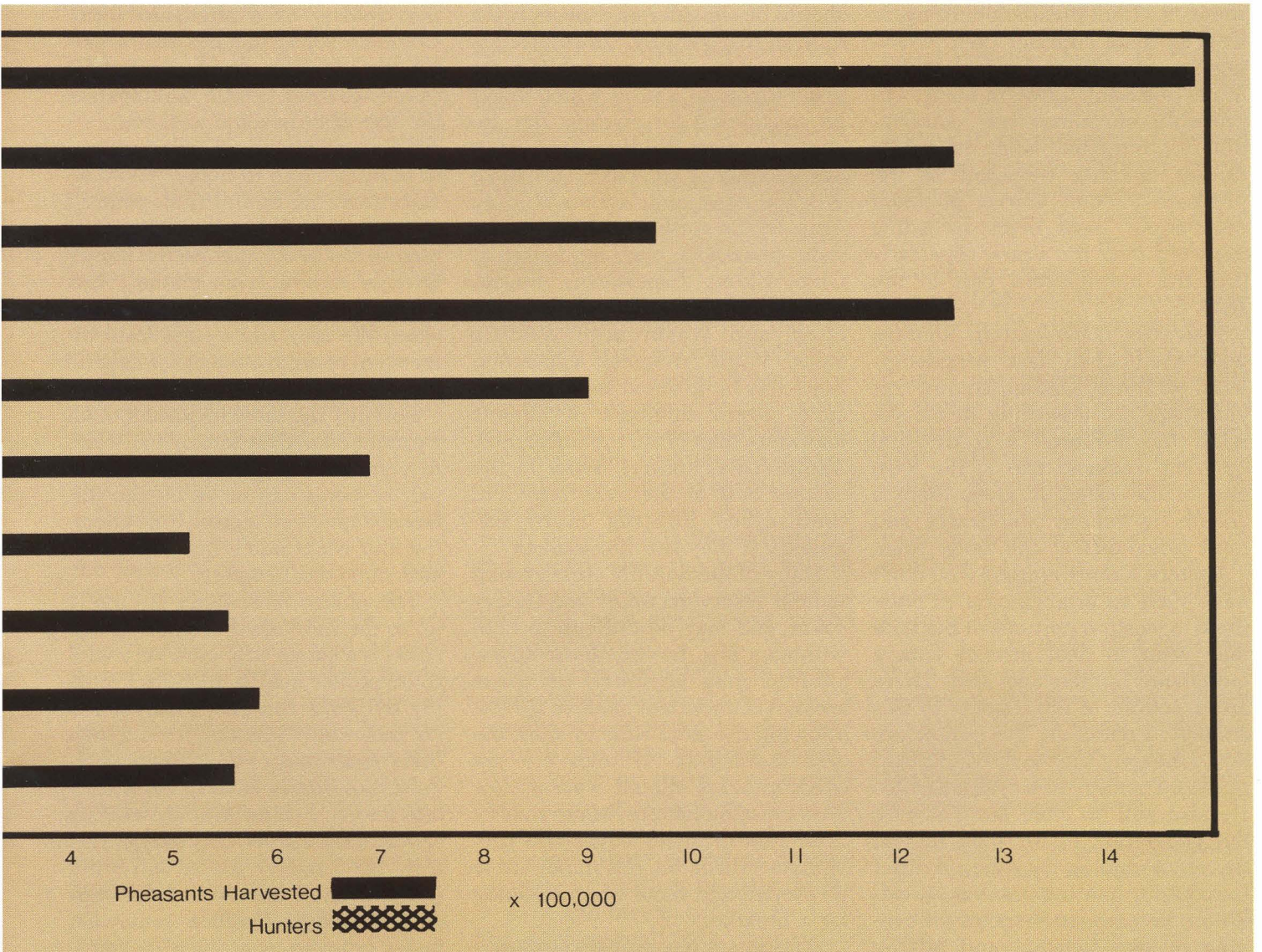
Finding new ground to hunt might begin with a survey of nearby areas, looking for good habitat and indications of good populations. This preparation is necessary whether one is planning to hunt public or private land. Both places can be difficult to locate and hunt in the twilight hours of the second Saturday in November.

When weather is mild, as is often

the case in the early season, dense cover is not a major factor in attracting large concentrations of pheasants. Rather, food plots should figure more heavily in the selection of a hunting site. Grain fields are often among the best places to stalk early season birds. However, while these are good places to scout for pheasants, the availability of insect foods decreases their need for grains, if no hard freeze has occurred. If the country you're scouting is privately owned, the obvious next step is to contact the landowner. Most landowners respond favorably to a direct, hat-in-hand approach when contacted sufficiently early in the year. Many requests have been refused simply because they were made too near the start of the sea-

son. Farmers will often allow only a certain number of hunters on their ground, so the first to ask is often more likely to receive permission to hunt. Landowners usually appreciate knowing exactly where and when the hunts will take place, how many will be hunting, and what sort of vehicle might be recognized as belonging to the party with permission. Even when arrangements to hunt private land have been made, a short stop by the owner's house just before the hunt commences is often a good idea.

In considering places to hunt opening weekend, many turn automatically to the counties lying in the western one-third of the state. It is true that the highest pheasant concentrations are found there. It is also





true that hunting near home, even if it is in the eastern half of the state, has its own advantages.

Central and eastern Kansas offer some excellent pheasant hunting, as well as some superior quail shooting. An eastern Kansas resident who hunts pheasants close to home will probably encounter less competition for huntable land, especially during opening weekend of the pheasant season. Kansas pheasant populations have been spreading eastward over the years, especially into the northeastern part of the state.

However, many eastern Kansans who established fast friendships with western Kansas landowners years ago are unwilling to forsake what has become a traditional opening weekend trip to the west end of the state. It gives them a chance to renew friendships and hunt pheasants at the same time.

Eastern Kansas hunters who don't have such an arrangement to draw them to western portions of the state may want to deal instead with a landowner in their own area. There are a couple of advantages to this strategy. First of all, the hunter can avoid the long haul to the traditional pheasant country of western Kansas. He also will be more familiar with the geography in his own region, thereby reducing the time required to scout for hunting grounds. In addition, he can easily spend an evening or two locating and talking

with landowners to line up hunting sites before the season opens.

Public hunting areas located in central and eastern parts of Kansas should be considered, especially if a hunt in that vicinity can reduce expense and travel. Some public areas in southcentral Kansas which might be considered for opening day include Cheney Wildlife Area, Harvey County East Lake, Kingman Wildlife Area, and Marion Wildlife Area. In the northcentral part of the state pheasants may be found at Glen Elder, Jamestown, Jewell, Kanopolis, Lovewell, Milford, Ottawa, and Washington wildlife areas. While ringneck concentrations may be lower at some of these areas, lower numbers of hunters may more than offset the imbalance. Additionally, hunters living in the eastern half of the state may find themselves hunting more frequently if they use these areas.

Many of the wildlife areas around federal reservoirs sport very heavy cover, and may be difficult to hunt without a dog. In very dense cover, such as may be found on these areas, it is important to move slowly, allowing the dogs time to work the area thoroughly. If dogs are not used, gunners should walk a slow criss-crossing pattern. Many times a brief stop in heavy cover will precipitate a flush. So, it is important to be prepared to shoot when stopping for a breather.

Equipment is a primary consider-

ation in organizing an opening weekend hunt. Clothes, guns, camping gear, food, and dogs all add (or detract, as the case may be) from the quality of a pheasant hunt. Common sense dictates that a person should take clothes suited for bitter weather, while anticipating the use of only some of them.

This brings up another advantage of hunting close to home. When an early morning hunter finds himself cold, wet, or hungry, the house is a nice place to recuperate for the afternoon outing. Dry clothes, less expensive food and lodging, and a warm fire may add a significant dimension of enjoyment to a weekend of bird hunting near home.

Possibly the most important of all garment considerations is footwear. A comfortable, warm, waterproof pair of boots can make all the difference between a great time shooting four cocks and a limit of pheasants obtained in agony.

The choice of shotgun is largely up to the individual. Twenty gauge or twelve gauge will work very well if the proper load is utilized. Probably the most common load used is six shot. Many insist on having high brass loads and twelve gauge shotguns, but others have taken pheasants for years using standard load six shot in a no-frills twenty gauge. It is true that a twelve gauge will bring down some of the more distant targets, and may produce somewhat fewer cripples at a given distance,

but big guns and high brass loads are no substitute for "puttin' it on 'em." Generally, a little more time may be taken in shooting during the early days of the season, as the birds will flush closer to the gunner. Sportsmen hunting pheasant in areas where quail are often found, may put one or two eight shot loads in the magazine followed by shells carrying six shot. This allows the eights to be fired at closer pheasants or a covey of bobwhites, with subsequent, more distant shots carrying number six pellets.

A success factor often overlooked until too near opening day is training and conditioning of dogs. Most bird dog fans have found that even the best field companion gets a little rusty during the off-season. The standard wing-on-a-rod technique can be effective rehearsal for the real thing. It is advisable to get some periodic field work in prior to opening day, so that "Shep" doesn't forget some of the more obscure commands, like "Fetch" and "Come." Field work is also basic to the conditioning of dog and handler. Done regularly throughout the off-season, these workouts help prevent sore feet, aching muscles, and general fatigue . . . for dog and master alike.

This pre-season physical tuning up can keep a planned two-day hunt from turning into one day of hunting followed by one day of hobbling and moaning.

In planning an opening day hunt one should consider the nature of the location. A large stubble field may require a larger party spread across its width to prevent the birds from doubling back around the ends or between hunters walking too far apart. However, it is generally not worth the potential hassles to invite hunters with whom one is not well acquainted simply for the cause of having a large crew of stubble beaters. Quality pheasant hunts are most likely to be experienced in the presence of friends and family . . . not in a group of gun-toting strangers.

Hunters can further improve the potential for a good opening day hunt by arriving early at the hunting site. The first hour of shooting offers the least wary birds, as they have food, and little else, on their minds.

Again, food is the main attraction for early season pheasants. They are generally widely dispersed until cold weather moves in later in the season. The birds may be found in everything from green wheat fields to nearly impenetrable tangles of brush along stream banks. Most devoted pheasant hunters eagerly await the first snowfall, and the chance to find concentrations of birds in small areas of cover.

While it is important to plan a strategy for each field hunted in the late season, it is only slightly less important to know who will be where, and when, on an early season hunt. "Surround and surprise" tactics are generally more fruitful than a quick, unorganized stroll through the field. It is best to work into the wind, when possible. This minimizes the distance at which the pheasants may detect the approaching gunners, and allows better scenting by the dogs.

Some pheasant hunters prefer a close-working dog early in the season, when birds are less likely to be flushed by the hunter. They maintain that a far-ranging dog may point and hold the late season birds without having the handler spook a potential point before it occurs. There are those who will swear that a rangy dog is best in the early part of the season when the birds will sit longer under a point. Regardless, a dog can be a great asset to the pheasant hunter.

When pheasants begin to show a preference for running over flying, a handler should watch his dog more carefully for signs of being "birdy." When it appears that a point or flush may occur, it is best to hustle up near the dog and be ready to shoot.

It seems that hens never become as wary as roosters do later in the season, and they may be more readily encountered than the males.



However, it is wise to be on maximum alert immediately after flushing a hen or two, as cocks are often sitting tight nearby, or running full speed directly ahead. As the first weeks of November wear into December and the foolish young birds disappear, the ring-necked pheasant becomes a more difficult quarry. Fortunately, winter weather makes the bird easier to locate and less likely to run. It is then that local non-western Kansas hunting areas demonstrate another advantage. Smaller fields which are common in eastern Kansas are more easily hunted, not requiring large parties. A simple plan of approach on a corner with heavy cover will generally suffice . . . unless, of course, the birds fly away as the pickup comes to a stop, or sit still until the hunters have given up, or double-back, or execute any number of their near-magic disappearing acts.

It is sad to think that some will miss the next pheasant season opener, using one of many excuses available, only to regret the decision when others return with glorious tales of high times on the opening weekend pheasant hunt.

Bruce Cochran is an artist and illustrator from Prairie Village. His work has appeared previously in KANSAS WILDLIFE, as well as many other national and regional publications.



gun makers
covet Kansas'
black walnut

trail of a gunstock

Mike Blair

It's a long way from a knotty walnut tree along a Kansas creek to a highly figured gunstock on a midas grade Browning—or a fine Monte Carlo stock on a Winchester .270—or even a field grade stock on a Ruger .22. But the path of production which ties walnut trees to finished gunstocks is a fascinating and profitable trail often traveled in the Sunflower State.

Walnut gunstocks are an American tradition in fine sporting arms, and Kansas is a leading producer of trees which supply the gunstock industry. While few people know it, Kansas ranks among the top states which supply walnut lumber, veneer, and gunstock products to American and foreign markets. Kansas walnut trees are on the western edge of walnut's natural range, and tend to be shorter and more limby than their eastern cousins, but these traits are desirable for gunstock production. This, combined with the frequent occurrence of walnut in the state, is the reason that about one in three guns now produced in America is fitted with Kansas-grown wood.

The abundance and type of walnut trees in the Midwest explains why all four of America's major gunstock mills are located within 250 miles of the heart of Kansas. Log buyers canvass the states of Iowa, Nebraska, Kansas and Missouri for most of their inventories of walnut logs. The biggest mills are located in Kansas City, Kansas, and St. Joseph, Missouri, but Council Bluffs, Iowa, also has a large production center. The fourth mill, much smaller in size, is located at Perry, Kansas.

As trees go, the ideal gunstock candidate isn't particularly beautiful. It doesn't have the tall, clean trunk of a veneer tree, tending instead to be short and limby. The trunk measures eighteen inches diameter or larger at breast height, and continues as a single stem for six feet or more. Large branches with wide angles protrude here and there, and it is at these crotches where the dense and highly figured tension wood is produced. This special wood makes the fanciest gunstocks, and gives limby trees a special value in the timber industry.

This is fortunate for woodland owners, since many Kansas trees are of average or lesser quality. Much of the native walnut in the state has gone unmanaged, and Kansas trees typically have many defects. However, since gunstock buyers harvest shorter logs and rougher material than what is acceptable for lumber and veneer, gunstock sales provide good incomes from trees which would otherwise be difficult to sell.

Valuable as they are, gunstock trees sometimes fail to meet the expectations of their owners. There is a common misconception that most walnut trees are worth hundreds of dollars, brought on by publicized sales of exceptional trees. The average walnut is worth much less—often less than \$50, in fact. However, relative walnut values are high considering that equivalent hackberry and oak trees are worth less than \$10 apiece. Multiplied by many walnut trees, gunstock sales can bring appreciable incomes.

Jack Mott of Medicine Lodge is one who knows the value of a gunstock harvest. Recently, he sold 275 trees from his Barber County ranch for \$22,000. Prior to harvest, the sale



photo by Mike Blair

was marked by an area forester from Kansas State University. This provided an estimate of the sale's market value, while ensuring that only those trees ready for harvest were removed. In this way, many good trees remain to yield future revenues from his woodland.

Not all walnut sales bring such large incomes. In fact, few of them exceed \$5,000. But more and more woodland owners are becoming aware of the potential profit of walnut trees, and seeking the income their woodland offers. Proper management of these tracts allows periodic revenues from otherwise non-income producing land.

The gunstock industry's concern for the future of black walnut is evi-

dent in promotions to encourage better growth and management of this special resource. The American Walnut/Fine Hardwoods Association, which includes all gunstock mills, sponsors annual boy scout projects to gather walnut seeds for delivery to the Kansas State University tree distribution center. Here some of the nuts are placed in cold storage stratification for sale to landowners at reduced conservation prices. The goal of the Association is to replant five walnut seedlings for each mature tree harvested. The industry then purchases the planted trees at maturity for full market price.

Why go to these lengths to assure walnut for the future? According to

Don Elliott, President of American Walnut Company, black walnut has a unique combination of qualities ideally suited for gunstock production. "There is no other wood in the world with stability and strength to absorb recoil, while at the same time allowing easy machining, exceptionally crisp checkering, proper hardness, and light weight. American black walnut is the very finest of gunstock woods," according to Elliott.

From a technical standpoint, this includes the coveted French walnut found on fine European arms. In fancy grades, French walnut may cost three times more than American black walnut, but has neither the hardness to resist denting and marring, nor the degree of strength to tolerate repeated recoil over a lifetime of use. Black walnut is excellent in both respects.

Native walnut also has natural color and grain patterns which make staining unnecessary. If a walnut gunstock is scratched, it can be sanded and refinished with no visible evidence. Other woods must be stained to make them attractive, and scratches often absorb stain unevenly to leave obvious signs of repair.

The density of black walnut is yet another plus for its use in gunstock production. Gunmakers feel the ideal weight for stock material is 35 to 40 lbs./cu. ft. This is heavy enough to balance the gun and provide qualities of strength, yet light enough to be carried all day in the field or on the trap range. Black walnut weighs 38 lbs./cu. ft.—the perfect weight for most guns.

For these and other reasons, the future of black walnut in the gunstock industry is strong. Currently, more walnut is being exported than is being used domestically. America, as the only nation which produces native black walnut, is in a unique position in the world market place. Kansans who manage this special resource for its best growth are sure to reap continued benefits in the future.

The trail of a gunstock begins the moment a walnut tree crashes to the ground during harvest. The tree is bucked into logs which are dragged to a loading area on skidding trails, and loaded on trucks for transport to the nearest rail heading. They are then shipped by rail to the gunstock mill.

Many Kansas logs end up at the American Walnut Company in Kansas City, Kansas. This important mill was first in the U.S. to begin mass producing gunstocks in 1924. Today the company produces roughly a third of the world's black walnut gunstock supply. A walk through the log yard quickly illustrates the magnitude of the gunstock business.

Here, thousands of walnut logs are piled to await processing. At peak output of 60,000 board feet per week, the mill annually saws nearly three million board feet of lumber from 25,000 walnut trees. This represents over 2 million gunstocks each year.

For those expecting to see finished stocks at a gunstock mill, a surprise is in store. The end products at this level of production are called "blanks," and only vaguely resemble their ultimate forms. Sporting arms companies such as Remington and Winchester finish the gunstocks at their own facilities. But walnut blanks are produced to exacting standards, and are a crucial stop on the trail of a gunstock.

Not all wood is useful in manufacturing gun blanks. Knots, cracks, and other wood defects are unacceptable in gunstock pieces. Since most walnut trees have a certain amount of defect, an involved process is necessary to produce a full complement of blanks from each tree.

The process begins when a walnut log arrives at the mill. Prior to sawing, it is carefully checked with a metal detector to discover any potential hazard to equipment or operator. It's not uncommon for walnut trees to harbor wire, spikes, or other hardware damaging to saw

blades. Occasionally, such unlikely objects as pitchforks or metal saws are found intact in the wood. If metal is detected, it must be chain-sawed out before the log continues.

After a stop at the wash tank where dirt and loose bark are removed, the log is mechanically placed on the cutting carriage. The head sawyer uses his skill and experience to evaluate the log for its best grain characteristics. The log is turned mechanically for the best initial cut, and the sawyer opens the log while mentally computing how many 2-inch or 2¼-inch slabs may be cut from the log to minimize waste.

This job demands an expert knowledge of walnut and a high degree of concentration. The sawyer uses hands and feet to control the complex sawing machinery, frequently turning the log to emphasize the wood for its best grain. Since grain patterns determine grade of blanks, the job of head sawyer is the most important at a gunstock mill.

Sawn boards with bark still attached move by conveyor to the marking area. Here, defects in each

board are marked on one side only. This is complicated, since defects on the top and bottom sides of a slab seldom match. If mistakes are made, time and wood are wasted in later steps of production.

Templates of various gunstock patterns are traced around defects to use as much clear wood as possible. The same board may produce a variety of rifle stocks, shotgun stocks, forend pieces, or pistol stocks. In all, there are 16 different pieces cut by American Walnut Company. After marking, the board looks something like a jigsaw puzzle.

Marked boards move by conveyor to band sawyers, who cut them into their desired shapes. The blanks are then planed to a standard thickness and weight of about 7½ pounds. Later, after drying, they will weigh slightly less than half this much.

Each piece is carefully inspected for size and defects, and dipped in hot wax on both ends to seal the end grain. This slows moisture loss to prevent the wood from splitting and checking during the drying process.

The blanks are then stacked and placed in outside drying sheds where they are held about six



photo by Mike Blair

months. To control the air-drying process, special louvers in the walls are controlled to allow the sun to shine in only part of each day. Moisture content of the blanks is reduced from approximately 100% to 25% in the drying sheds. When this level is reached, or if demand dictates earlier need, the partially dried blanks are loaded into large dry kilns.

American Walnut Company operates ten steam-heated kilns capable of drying 35,000 gunstocks each. Under normal conditions, it takes about four months to dry a load of blanks from 25% moisture to the 8% level sought by arms companies. When drying is complete, the blanks are graded and prepared for shipping. Gunstock blanks are sold according to several grades, depending upon wood grain and figure.

Fancy gunstocks are valuable because of their rarity. Only about 5% of all walnut gunstocks are exceptionally figured. If the stock is cut from wood which has a consistent grain pattern, and the grain is the same on both sides, it is considered #1 fancy. If it comes from a large crotch where the wood wrinkles between branch and trunk, it produces the rare feather figure sought for commemorative and presentation guns. The ultimate gunstock is cut from the exact center of such a crotch, creating matched feather figure on both sides. This rarest and highest grade walnut gunstock is called full-fancy.

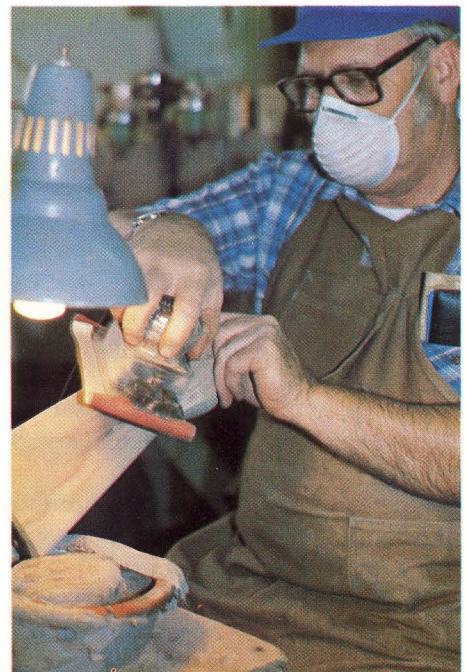
Full-fancy stocks are extremely expensive additions to a fine gun. However the beauty they add is deserving, considering only about 2/1000 of one percent of all gunstocks make up this grade.

A more common type of high-grade walnut is found in logs having straight grain and curly figure. This valuable wood is called "fiddle-back," because it may be cut to small thickness without splitting for fine acoustical qualities on violins. It produces the beautiful striped effect found in some wood.





Once a walnut log is cut into slabs, the gunstock begins to take shape. A template is used to trace gunstock outlines on slabs (left). Band sawyers then convert the slabs to gunstock blanks, which are rough shaped by fixed routers as the blanks slowly rotate in carving machines (right). After butt plates and fittings are attached, stocks are smoothed with hand-held sanders (below right) and checkering is carved into the wood (below center). Gunstocks are sold according to grade (below left); common grade, fiddle-back figure, and the highly valuable feather figure illustrate the variable range, and expense, of gunstock options available to gun buyers. (Photo at left by John Strickler; all other photos by Mike Blair)



After grading and trial inspection, gun blanks leave American Walnut Company enroute to their final stop before assembly—to craftsmen who will bring to them their ultimate beauty.

It's been nearly 40 years since Reinhart Fajen left his job at Bishop Gunstock Company in Warsaw, Missouri.

His youthful hobby of making gunstocks and his interest in wood-working led to a position with Missouri's only gunstock company at the time, and he might still have been there, were it not for a new manager who took a dim view of his skills and ideas about gunstock production.

Under pressure to resign, Reinhart left the Bishop Company determined to start a gunstock business of his own. Today, Reinhart Fajen, Inc. of Warsaw is the largest producer of replacement, specialty, and custom gunstocks in the U.S.

It wasn't an easy business to get into. For years, a second job was necessary to help pay the bills in establishing the company. But in 1951, Reinhart incorporated his new business, and it has steadily grown since then.

The Fajen Company, like other custom gunstock businesses, is unique because it isn't limited to the few styles and models of stocks which the large arms companies produce. Remington and Winchester, among other companies, concentrate only on those gunstocks which are fitted to their current guns. Custom businesses differ by producing obsolete or special styles to order.

The ability to quickly manufacture hard-to-get gunstocks is part of the story of Fajen's success. Though only a fraction of it's 100,000 gunstock choices are kept in stock, an order placed for any of them is often

semi-finished the same day it is received. Prices vary greatly, but many common types of gunstocks can be produced unfinished for under \$50.

Besides individual orders from all over the world, some 7,000 dealers purchase gunstocks from the Fajen Company. Most buy only a few stocks each year as special needs arise, but the demand is great enough to keep 55 workers employed full-time. Other customers include the military, and large arms companies which contract experimental runs of new gunstock designs.

Like all producers, Fajen relies on pre-cut walnut blanks as the raw material for finished gunstocks. Much of the walnut he uses originates in eastern and central Kansas, via an Oklahoma gun mill he has dealt with for 30 years.

The production of today's gunstocks is largely an automated process. At Fajen Company, walnut blanks are cut into their desired forms on special carving machines which accommodate 16 or 24 gunstocks at once. The operator pulls a guide along the contours of a gunstock jig, which in turn automatically makes corresponding cuts on all the blanks by means of fixed router bits which travel along them. The blanks do not turn continually, but rather are turned at small intervals with each new stroke of the guide. When finished, the stocks are properly shaped, but rough to the touch.

Shotgun stocks go directly to the fittings station to receive butt plates and grip caps, but one-piece rifle stocks must be further carved to accommodate triggers, clips, and forend caps. These exacting operations are also performed on the carving machines before the pieces are sent on.

Carved trigger openings and other cut-outs are hand finished with chisels and wood rasps to ensure tight, clean fits of metal parts. Once inspected, fittings are added and the stocks are ready for sanding.

Because of the critical nature of this step of processing, Fajen Company uses no automated sanding systems on their gunstocks. Sanding is done by hand using small vibrating air sanders to give the wood a silky smoothness.

Once sanded, the gunstocks are ready for finishing. Outlines of checkering fields are carved into place, and a power checkering tool is set to the desired spacing, normally 18-20 lines per inch. Checkering is cut cleanly and automatically into the gunstocks with the help of a special guide on the tool. The lines are run first one way, then at angles to the first cuts to produce the traditional cross-checked pattern. When completed, hand-tools are used to clean the grooves and bring the diamonds up to sharp points for a non-slip surface.

Checked areas are masked to protect them from lacquer buildup, and the stocks are sent to the spraying room for their last stop before marketing. Here, they are sprayed with a vinyl finish to enhance the natural color and figure of the wood. The finish also protects the stocks from moisture and minor scratches, and preserves the wood for a lifetime of use.

Every day, Reinhart Fajen, Inc. ships about 200 gunstocks throughout the United States, most of which are specially modified to suit their customers' wishes. The road to these destinations is the final leg of a journey which often begins in a Kansas woodlot.

Whether a \$25 addition to a field gun, or a \$500 special selection for a commemorative, black walnut gunstocks add to firearms a warmth and character as rugged as the living tree. By popular demand, sportsmen have seen to it that walnut leads the way on the trail of a gunstock.

Mike Blair is an area extension forester for the K-State Cooperative Extension Service, and resides in Hutchinson. He is an accomplished outdoor writer and photographer whose work has appeared in numerous other publications.

the yellow pages

Edited by Rob Manes

**WRITING
READERS**
“?&...!”

Crime & Punishment

Editor:

I would like to quote Kansas Fish and Game Commission Director Bill Hanzlick — “The licensed fishermen of Kansas pay for the production and protection of fish in our lakes and streams.” (KANSAS WILDLIFE May/June 1983).

Having been a licensed fisherman and hunter since the age of sixteen (I am now 34) and being an individual who truly enjoys the field, whether fishing, hunting or merely observing, I want to comment on one of the key words in Mr. Hanzlick’s statement . . . “protection.”

I assume in the literal sense, paying for “protection” means supplying the monies for game protectors’ salaries and providing the equipment necessary for them to successfully do their jobs. Where I come from, and I am a lifetime Kansas resident, that suggests an employee/ employer relationship or, if you will, a hand in hand fellowship with both parties respectful of the other and working together to attain the same goal. Bearing that

thought in mind, I will now convey an experience that occurred a few weeks ago.

On July 16, I set six set lines along the Republican River near Concordia. For bait I used bullheads that I and two friends seined that afternoon, and since I was fishing for twenty pounders plus, I double hooked them. At 6:00 a.m. the following day, the two friends paddled the canoe upstream, while I checked my lines. I had straightened hooks but no fish. I live only a half mile from where I had set the lines, and upon returning home was surprised to find a local game protector standing in my back yard, flexing his ticket book and looking like we had just shut his best fishing rod in the car door.

I realize that ignorance of the law is no defense, and when the game protector cited me for “operating untagged set lines,” I immediately admitted my guilt and signed the ticket.

The judge who viewed my case, I presume, took everything into consideration before deciding on the proper punishment: It was my first offense; I had only two hooks per line and only six lines; I used legal bait; I had a current license; and I checked the lines within a 24-hour period. His decision? Fifty dollar fine, \$19 court costs, and suspension of my fishing license for 30 days.

Now, I understand the law is the law, and I was guilty — but THAT guilty? If one will hesitate long enough to consider this situation, the only conclusion would be that I did not attempt in any way to take fish illegally. In fact, it is a textbook example of a

legal attempt to take fish, and the only violation I’m guilty of is not signing my name and address on a tag.

This brings to mind two questions. First, why did the Game Protector confront me with such hostility, for a menial infraction of the law, before he even knew the facts? He was accusatory, rude, and arrogant. Secondly, does tagging set lines really reduce the numbers of “slob” fishermen and help to ensure proper fishing methods? Or is it merely another tried and failed regulation that actually makes “slobs” of legal fishermen and thus should be rescinded?

I want to make it clear that I am in complete support of the Kansas Fish and Game Commission, its men in the field, and its regulation . . . if it works together with the sportsmen in our state. If it does not . . . it is biting the hand that feeds it.

Hank Shockley
Clyde

Dear Hank:

The acting Editor of the KANSAS WILDLIFE Magazine passed your letter on to me because he felt that there were some questions that needed to be answered which could clear up some points that you brought up.

The Kansas Legislature passes laws that regulate the penalties that may be levied by the Magistrate, and in your particular case, the Magistrate administered the lowest minimum fine.

In your letter, you stated that ignorance of the law is no defense, and I feel that, you, as an ardent sportsman and fisherman, should have been aware of

the law that required all set lines to be tagged.

If you had knowledge of this law, it makes it all the more a flagrant violation.

You also stated, that with the help of friends, that you seined and used bullheads as your bait.

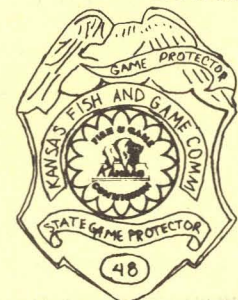
It is only legal to seine bullheads and use them for bait under certain conditions, and I hope that the Game Protector checked on this when he visited with you about the untagged lines.

I don’t know of one Game Protector in the state that relishes writing a Notice to Appear, because once it is written, he must follow it through the court system and send the completed case to this office for filing. This, of course, takes time and effort that could be spent in the field.

Tagging of lines is necessary for a number of reasons, and the number one reason is to curtail the number of lines any one person may set: another is that untagged lines may be removed by the Game Protector without worry of removing legally set lines.

Hopefully, I have answered most of the questions you presented in your letter to the Editor.

Respectfully,
George Schlecty
Asst. Chief of Law
Enforcement



Memories

Editor:

The KANSAS WILDLIFE magazine is an excellent publication. I grew up around Lindsborg, and hunted rabbits and quail when I was just a boy. The magazine brings back lots of good old memories.

I hope to visit your fine state for a pheasant hunt sometime this fall.

Chuck W. Siely
Fordland, MO

Saged Not Aged

Editor:

Last year you responded to my request for information on prairie chicken hunting and sent me a copy of the 1982 regulations as well as some fine advice on where to go. Soon thereafter, I decided to phone Dr. Allen Culver of Yates Center. He is a former student and hunting partner with whom I had a fine prairie chicken hunt 42 years ago. Though we had no contact since 1941, it turned out that he was still in Yates Center and ready to go.

Fortunately, or unfortunately, my cup ran over last year. In spite of odds of perhaps 10 or 15 to 1, I drew an elk permit for our nearby Mill Creek Watershed, a rugged, roadless area that has been closed to human entry since 1916. This is an unspoiled fairyland, and though I had previously bagged a good many elk which permittees had driven out of the sanctuary, I could not resist the opportunity to

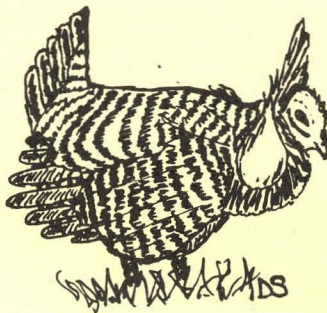
hunt in the area. I got an elk the first morning and backpacked most of it out myself in spite of the infirmities of the advanced age of 70.

Now I am indeed ready to come to my home state for that prairie chicken hunt. I would greatly appreciate this year's regulations. Jake, Ben, and Duke, my fine English pointers, are also very enthusiastic about the hunt. They work wild birds every morning and evening to get themselves ready for the trip.

Many people may wonder why a guy who lives in the middle of some of the world's best bird hunting would drive 2000 miles to hunt in Kansas, but I know that you people there at KANSAS WILDLIFE don't wonder at all.

Keep up the great work.

Robert F. Wallace
California



Fine Fines

Editor:

I wish to thank you for publishing "The Law" section. Over the past few years, I have noted the lack of respect for the hunting and fishing laws by many "sportsmen." Perhaps your column will change the views of those violators.

A brief word of thanks to the judges who are handing out fines and jail terms, instead of a slap on the wrist.

Thanks for a great magazine!

K. Lee Zimmerman
Lawrence

A Privilege

Editor:

The other day I was standing around in a local service station, where a lot of folks buy hunting and fishing licenses and supplies; and one of the fellows there was complaining about the cost of a fishing license. His comment caused several other guys to chime in with their two cents worth about paying 11 bucks to fish in Kansas. Most of them seemed to think that they were paying too much for the right to fish.

I listened to them talk for a few minutes and then decided somebody needed to stick up for the other side. Now, most of these fellows have been friends of mine since I was a school boy so I surely respect their right to an opinion, but right is right.

I pointed out that the fishing around here has improved quite a bit in the last several years, and that was done with money from licenses. I also pointed out that many of the hatcheries that the U.S. government used to run are going out of production, so we need to have one in Kansas to take up the slack. I guess the thing that got to me the most was the comment about "the right to fish." I believe that we had better look at fishing as a privilege and not as a right and something to be

appreciated, not taken for granted

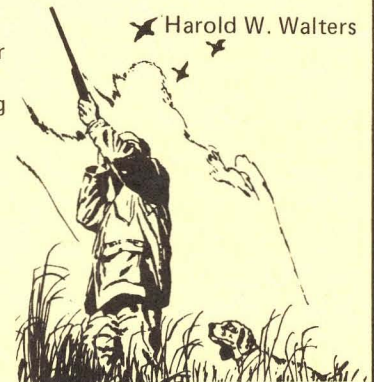
Well, I let them know how I feel about it. I thought I would let you all know too. Thanks for the good work.

Coming Home

Editor:

Just a note to tell you how much our family enjoys your fine magazine!

My wife and I will be retiring to her hometown in Hutchinson in a few years. I appreciate the opportunity to learn more about fishing and hunting in Kansas. I'm saving all copies!



Satisfied Customer

Editor:

As a native Kansan and an avid outdoorsman, I find KANSAS WILDLIFE the most enjoyable and interesting publication in its field. The excellent hunting I have experienced in Kansas is exceeded only by the quality of this magazine. Thanks!

Gary Pederson
Moorhead, MN

READY? AIM...

HUNTING



In a few short weeks hunters will be taking to the field for another season. A properly cared for gun will enhance their success.

The average hunter has stored his gun since last used nearly a year ago. It may not have been properly cleaned before it was put away. Now is the time to take care of minor repair work and prevent any breakdown in the field.

Go over the entire rifle with a screwdriver and make sure all screws are properly tightened. Use the proper sized screwdriver so the screw heads won't burr. A little shellac or paint on the screw will keep it tight. Make sure the screws that hold the action to the stock are tight.

Clean the bore and chamber of the gun. This is especially important in autoloaders which can easily jam if gritty. Use as little oil as possible. Oil can hold dirt and in freezing temperatures becomes stiff.

Check the finish on the gun's stock and refinish if needed. The finish helps control expansion and

contraction of the stock, which can throw off the sighting.

Make sure the safety on the gun is working properly. Test it to make sure. Also test the bolt action and trigger pull. Try ejecting some ammunition through the gun to make certain it will function, especially if the cartridges were reloaded.

When all this is taken care of it is time to head to the rifle range and practice. One can never get enough practice. The weapon should be sighted in to a point of accuracy that is satisfactory to the shooter. Practice at different distances and conditions. Try shooting a few rounds in the early morning to simulate usual hunting light.

While checking a gun, major problems may be discovered. Unless completely comfortable with his talents, a sportsman should take these problems to an experienced gunsmith.

PIK Hunting

According to the latest information available from the Agricultural Stabilization and Conservation Service, agricultural lands set aside from crop production under the Payment-In-Kind (PIK) program may now be leased or rented for hunting and fishing purposes. This amendment countermands the original PIK directive, which prohibited charging

a fee for hunting and/or fishing on PIK acreage.

Anti-Anti Bill

Safari Club International is urging American sportsmen to support U.S. Representative Ron Marlenee's (R-MT) new bill (H.R. 3713) to protect sportsmen from antihunters seeking to disrupt lawful hunts.

Based upon similar state laws enacted recently, the Hunters' Protection bill would impose federal felony penalties up to \$5,000 and/or five years imprisonment upon individuals who plan or participate in violent efforts to impede a sportsman's lawful hunt as interstate commerce. Similar nonviolent actions would bring a \$500 fine and/or 60 days in jail.

"Since there has been an alarming rise in the number of incidents directed at American sportsmen in the field, this legislation is a highly significant and welcome step to begin to reverse this trend," commented SCI President Sam Borsellino.

"The lawless actions of radical antihunting groups are increasingly jeopardizing the civil rights of law-abiding American sportsmen," continued Borsellino. "It is imperative that something be done to put an end to this activity, and Congressman Marlenee's bill is certainly part of the answer."

"We are urging all

American sportsmen to rally around Congressman Marlenee and his efforts to protect the American sport hunter by urging the Congress to enact H.R. 3713 into law," Borsellino added. "It is the most important sportsman's civil rights legislation ever to be introduced in the United States Congress."

Deer & People



During the past 100 years, the U.S. population has increased by 4 times.

Remarkably, the white-tailed deer population has increased by 24 times.

Around the turn of the century, there were only some 500,000 white-tailed deer in the U.S..

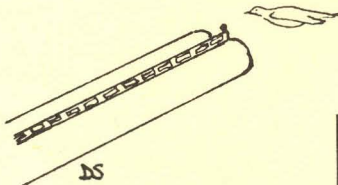
Incredibly, there are today over 12 million whitetails throughout America, with populations in most areas near or at the capacity of the range. That's an increase in population of 24 times.

The reason? Over the years, tremendous strides have been made in developing strategies that have brought back a number of wildlife species from critically low population levels.

Through the efforts of wildlife management, especially in the restoration and preservation of critical habitat, a wide variety of native wildlife exists today in healthy numbers throughout their historic range.

American sportsmen have long played a key role in this success story, both through focusing attention on the needs of wildlife and promoting sound conservation practices, as well as providing billions of dollars, through license fees and special taxes they pay.
—National Shooting Sports Foundation

Sharp Shooting



Good wingshooting. It's a matter of personal pride and of quick, clean kills. And it's a very important part of what a responsible and ethical hunter is all about.

Good wingshooting is also something you have to learn. If you hunt with a shotgun, practice as much as you can. Trap, skeet and other clay target games are a great way to sharpen your skills and a lot of fun, too. This is good advice for both the novice and veteran wingshooter.

According to a nationwide study conducted for NSSF, the non-hunting public believes that today's hunter is generally not very skilled. Now, we'd like to think *that's* not really accurate — but that *you* are.
—National Shooting Sports Foundation

'82 Pheasant Harvest

Pheasant hunters harvested more birds in Kansas last year than ever before. A million-and-a-half roosters went home in the game bags of about 170,000 pheasant hunters. On the average, each hunter spent 6.05 days in the field and took home about a bird-and-a-half for each day of hunting. This average daily bag was the highest for a cocks-only season since 1960.

Biologists point to high fuel costs as being one of the major factors in the upswing in pheasant numbers. Farmers find it cost prohibitive to

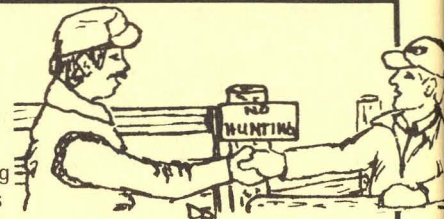
make extra tillage passes through the field, leaving more undisturbed nests. Other factors, such as weather, also have a bearing on the success of pheasants and pheasant hunters.

The 1983 pheasant season is expected to be another great one, with a possible slight dip in the number of birds harvested. However, anything close to the banner year of 1982 will be a cup running over.

Manes

Won't Hurt To Ask

Let's face it, most all of us have come upon some great looking hunting area only to discover that the land is posted. Yet, how many of us have taken the time to find the landowner and ask him permission to hunt, even



though his property is bordered with "No Hunting" signs. Not worth the trouble? Don't bet on it.

In a nationwide survey conducted for the National Shooting Sports Foundation, almost one-third of all landowners who posted their property said they would allow hunting *if* hunters came to them and asked permission. That's one out of every three landowners and, in any league, that's a good average.

Remember: ASK PERMISSION. It's a simple question that can pay you great hunting dividends. And when you're hunting on someone else's land, respect it as if it were your own.

—National Shooting Sports Foundation

brothers bag big bucks

The weekend of November 13 brought two brothers from Wichita together with the kind of stuff tall tales are made of, but their's is no tale.

Bill and Dennis Rule, of Wichita, had scouted an area in Clark County, looking for a place to take big bucks. They found an area with some "good heads," and a scrape pinpointed the spot.

On the afternoon of November 13, Dennis saw his preseason footwork pay off. He had the privilege (and guts) to pass up several deer, including a six-point and two nice eight-pointers. Late in the afternoon, a huge 13 point whitetail came to visit the scrape beneath Rule's tree stand. He made a good shot in a strong crosswind, and trailed the buck until darkness forced him to spend a sleepless night pondering

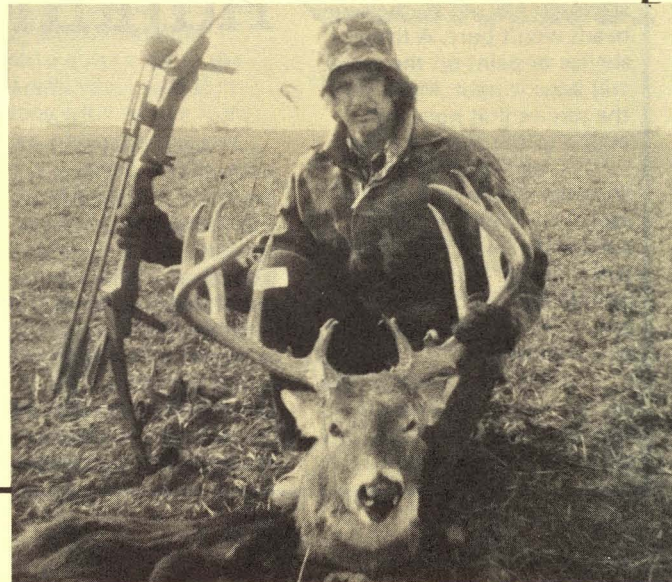
the buck's whereabouts.

Using good observations made the night before, Rule found the buck . . . an American Bowhunter Commission national record, weighing 256 pounds field dressed.

The impressive rack spread 20½ inches.

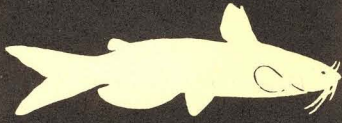
As if that weren't enough, the next morning Dennis' brother, Bill, rattled in another ABC trophy, which qualified for Pope and Young recognition as well.

Manes



WHO FISHES?

FISHING



In January of 1983, a questionnaire was sent to over nine thousand resident fishing license buyers to find out who fished, where they fished, and what they caught. Preference for types of and species of fish were also measured. Information gained will be used to manage fish populations for the future benefit of all anglers.

Statewide averages from the 1982 survey are compared with similar information obtained eight years earlier. Some changes have taken place since then.

In 1974, the largest percentage of license buyers were in the 50-years-and-older group. The '82 survey showed a trend toward younger fishermen, with the largest group (31.2%) being the 35 to 49 years olds.

The average licensed angler fished about 24.5 days in 1974. Perhaps it was a more dedicated group of anglers that increased the average to 34.5 days per year in 1982.

Catfishes and largemouth bass were, by far the most sought after fish eight years ago, commanding the preference of over 70 percent of the anglers. However, bass and cats lost ground to other species since then, receiving only 48.6 percent of the favor in 1982. Types of fish gaining in popularity were crappie, walleye, white bass, bluegill, carp, northern pike, and drum.

Streams and rivers were still the favorite type of waters to fish, but private ponds and lakes gained a great deal of acclaim in the past eight years. Second and third places behind streams didn't really change. Federal reservoirs and small public lakes were neck-and-neck for those two spots.

The 1982 Licensed Angler Survey accounts for more than 498,000 anglers who spent in excess of 11 million days wetting a line. A national survey indicated that the average expenditure for a day of fishing in Kansas was about \$11. Based on the above figures, fishing generated about 139 million dollars in 1982.

Manes

It Takes Guts

Those involved in medical research have to have a lot of guts . . . literally.

At least William Elliott, professor of biochemistry at St. Louis University Medical Center does. Elliott has, for 21 years, been studying the biochemical properties of a substance called cholestanol, which is involved in human metabolism as is the more familiar cholesterol. He has found that the common German carp is one of the best sources of bile-containing raw material that, in the words of a biochemist, "has the same geometry as cholestanol."

Now, Elliott is looking for sources of carp entrails — lots of them. "We have worked with 35-40 entrails at a time but can handle three

to 10 times this amount on occasion," he says.

Although his research, sponsored in part by the National Heart, Lung and Blood Association, has been to discover how the body handles cholestanol, the ultimate aim is to find out how the chemical is important to the body.

Elliott gets most of his entrails from Wellston Live Fisheries, a commercial operation in the St. Louis area. The business has been helpful at encouraging fishermen to bring in whole rather than dressed fish, but the source isn't enough. Another source, a lake in Iowa, is too far away to be economical.

"The carp is a chemically interesting fish," Elliott says. "The chemistry in the bile of most fish is different — they just aren't as old as the carp."

Anyone with a large supply of carp entrails may contact Elliott at the St. Louis University Medical Center, 1402 S. Grand Blvd., St. Louis, MO 63104; phone (314)664-9800, extension 131 134.

Fish Funds

The House has passed legislation to provide much-needed funding for fisheries management and boating, according to the Wildlife Management Institute. The measure now goes to the Senate.

Dubbed the Breaux-Forsythe Fund Act after its legislative sponsors, Congressmen John Breaux (LA) and Edwin Forsythe (NJ), the legislation has two parts, both of which are important to sport fishing and boating. Part 1 would redirect boat fuel taxes by making \$15 million per year available to the U.S. Coast Guard for boating safety and \$30 million per year to the U.S. Department of Transportation for boating safety and facilities grants to the states.

Part 2 of the bill would bolster the Dingell-Johnson Program which helps states manage sport fisheries. It would extend the 10 percent manufacturer's excise tax on certain fishing tackle to virtually all tackle items. It would levy a 3 percent excise tax on trolling motors. And it would direct existing import duties on foreign-made fishing tackle and recreational boats into D-J. Lastly it would require that all federal marine fuel tax collections above \$45 million per year be deposited in the D-J Fund.

All tolled, the Breaux-Forsythe Fund would provide \$45 million annually to boating and boating safety and about \$85 million per year to D-J.



Effort Well Spent

Ron Emmons, 39, of Wichita, has been selected for special recognition by B.A.S.S. conservationists for his support of the Kansas Fish and Game Commission.

Emmons, owner and president of Wichita Brush and Chemical Company, served the Kansas B.A.S.S. Federation as president in 1981 and 1982, and is a member of the Air Capital Bassmasters. He helped the Commission to start the Kansas Fisheries Update information newsletter/fact sheet and serves on the Kansas Fish and Game Commission Water Resources and Fisheries Advisory Council.

In 1981, Emmons began a successful campaign to obtain legislative approval for construction of a fish hatchery at Milford Reservoir near Junction City.

Calling first on B.A.S.S. affiliated chapters in Kansas, Emmons coordinated a broad telephone/letter network to state legislators, and when he telephoned his own representative to urge his support of the Milford Hatchery, he was pleased at the secretary's inquiry: "Which B.A.S.S. club are you with?"

Emmons did not stop there. He testified before Kansas House and Senate Committees on the urgent need for the Milford Hatchery, and worked ceaselessly with the Kansas Fish and Game Commission until legislation for funding of the \$10 million project was passed in 1982.

Construction will begin this fall below the spillway of Milford Reservoir, and when completed, the facility will

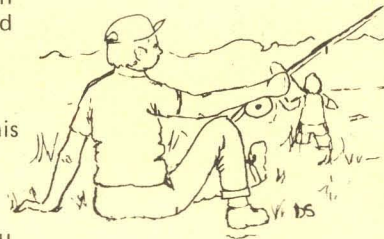
employ 3 permanent personnel and 2 temporary positions. Among species to be raised at the Milford Hatchery are black bass, channel catfish and walleye.

Bill Hanzlick, Kansas Fish and Game Director, gives the Kansas B.A.S.S. Federation credit for successfully obtaining legislative approval for the first fish hatchery to be built in the state since the 1940s WPA projects.

"They did it," Hanzlick said. "Without the hard work of the Kansas B.A.S.S. Federation, this legislation never would have passed."

"These (Fish and Game) people are dear to us," Emmons explained. "Sportsmen need them, and they are grossly underpaid for the mammoth undertaking they face each year. I admire them tremendously for the great job they do, and I feel privileged to work with them. I am extremely honored by this award."

Emmons and his wife, Diana, live in Wichita with their sons Vince (19), Philip (16), Reed (15) and Corey (14), all avid sportsmen. —*B.A.S.S. Times*



Money Buys 'Buddies'

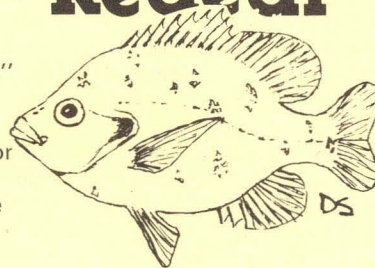
An outfit called Fishing Buddy Service in New York, guarantees that it will match you up with a fishing buddy in six months, or it will refund your three dollar

membership fee. Whether you are looking for a life-long friend or just someone to hold the boatline while you park the car, they promise satisfaction.

The folks at Fishing Buddy Service will be happy to take your check or money order at P.O. Box 441, Mastic Beach, New York 11951.

Manes

State Record Redear



A twelve year old southeast Kansas boy can now lay claim to the biggest redear sunfish ever caught in Kansas. Pat Whetzall, of Franklin, was getting in one more afternoon of fishing before school started at Arma Junior High. Using a Garcia ultra light rig, Pat was dangling a night crawler in a water filled pit left over from strip mining operations of years past. He had landed a number of small sunfish, when he tied into what he thought was a nice bass. The fish gave him a good tussle on the other end of the light tackle, but Pat managed to haul it to the bank. He immediately began tossing back the smaller fish, and then ran to his grandparents' house a couple of blocks away. Pat's grandparents took him to have the fish weighed, and Fisheries Biologist Rob Friggeri, confirmed the 11 3/8 inch fish as a potential state record. The redear, which was as big around as it was long, weighed one pound, seven and one-half ounces, breaking the old record by an even four ounces.

Manes

Hey, Fish Eyes

Question: How well do fish see at night?

Answer: Some fish species, such as walleye, see much better at night than during the day in bright sunlight. The same holds true for most sport fish, especially the sightfeeders like black bass, flathead catfish and striped bass.

The structure of a fish's eye resembles that of other vertebrates, but there are some differences which more or less compensate for fish not having eyelids. Since fish lack these external structures to limit the amount of light entering their eyes, they have light-sensitive cells within the sensing layer (retina) of the eye, which move. In bright light the cells move slightly away from the focal point of the eye's lens, and in dark conditions, these cells move towards and concentrate closer to the focal point. In this way fish see much better under low-light conditions.

What fish actually see slightly differs from what humans see, and this also aids night vision for fish. Fish detect movement and form as compared to a focused image. The cells which make this possible are light-sensitive in nature and also help fish see in dark waters. — *Outdoor Oklahoma*



Nature's Notebook

by Joyce Harmon

Wildlife Education Coordinator
Kansas Fish and Game Commission

GREENER PASTURES

Flyways are used by birds much the same way as people use highways. Travelers can get from one point to the next, entering and leaving at their choosing. North America has four waterfowl flyways labeled for administrative and biological purposes. The Pacific, Central, Mississippi and Atlantic flyways have characteristic waterfowl species that take these routes when migrating. Kansas is in the Central Flyway. This flyway is noted for mallard, pintail, teal, and white-fronted geese.

Migration requires some preparation. Just as we prepare for trips, so do birds. Birds add fuel in fat layers as we would fill our gas tanks. Flight feathers must be in repair similar to the condition of our car body and tires.

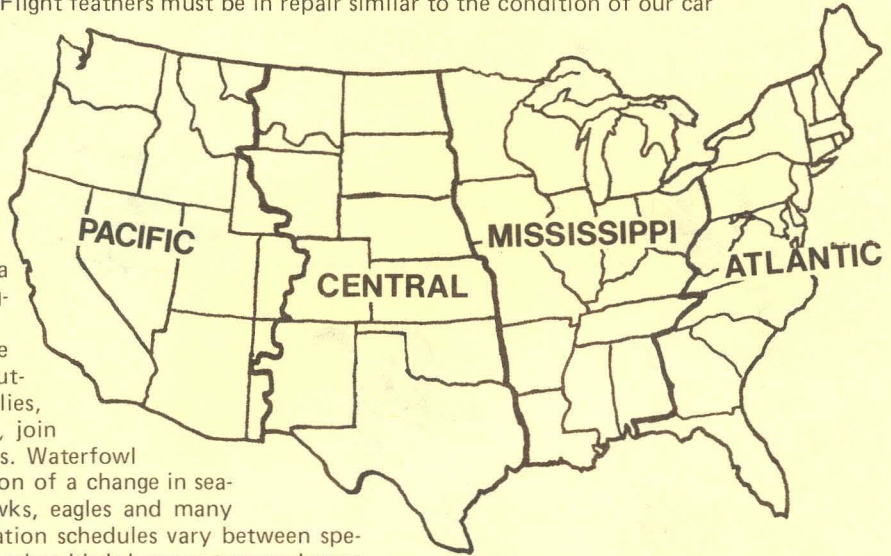
The promise of better days ahead keep birds headed south looking for a good winter's supply of food. Breeding grounds and summer territory lure birds to make the spring flight north. Migration times can be approximated for many species of wildlife. Weather, day length, the lack of favorite foods and a sort of internal clock seem to trigger the activity.

Birds are not the only wildlife that migrate. A few insects such as butterflies and green darner dragonflies, along with some fish and mammals, join the crew headed for greener pastures. Waterfowl migration is often used as an indication of a change in seasons because it is so visible, but hawks, eagles and many smaller birds also migrate. The migration schedules vary between species. Have you ever paid attention to what birds hang out around your home? Notice that the species can vary dramatically throughout the year.

This annual trip may be long or short, depending on the species. Sandhill cranes migrate through Kansas on their way to Texas for the winter and Canada for the summer. Migration can be a change from one climatic zone to another in the same hemisphere. But other species travel from one hemisphere to the other. Think of how many miles they cover for better grub and warmer temperatures. Their survival depends on the outcome of this trip. That would be more than enough motivation for me!

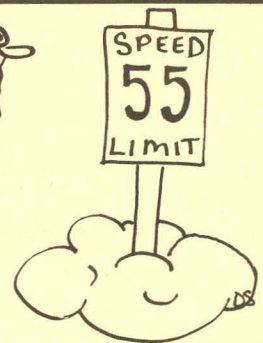
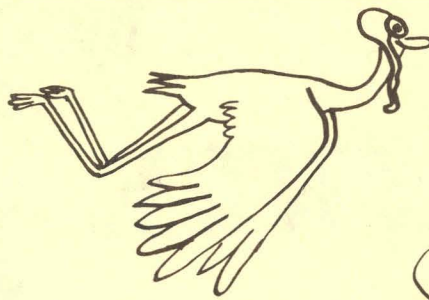
When traveling long distances, we depend on maps to show us the best route. Waterfowl and other migratory creatures use maps of the landscape, along with the position of the sun and stars to cue them towards their destination. Wind and the earth's magnetic field may also be used in navigation. Waterfowl are known as precise navigators. The homing instincts of mallards, black ducks and Canada geese are especially noted for their accuracy. They rely on this ability to return to the same breeding, migration and wintering areas each year.

The autumn sky will be graced with migratory birds. They may fly in pairs, loose groups, or compact flocks. Canada geese are famous for their ever fluctuating 'V' formations and snow geese for the 'U' shaped. Take time to look skyward and remember that the birds have their work cut out for them, but they'll be back again come spring.



DS

CRUISING PATROL



CRUISING SPEED for waterfowl species varies. Ducks and geese generally move at about 40 to 60 miles an hour.

If the waterfowl species illustrated below were cruising over your head, how many could you identify? Check your answers with the key.



1.



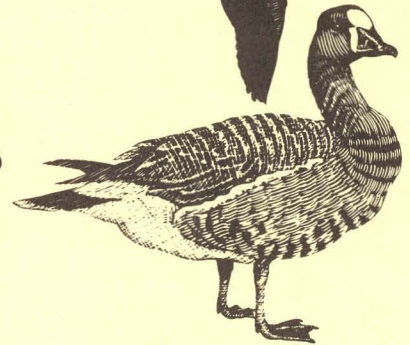
2.



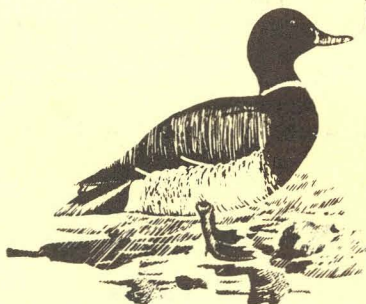
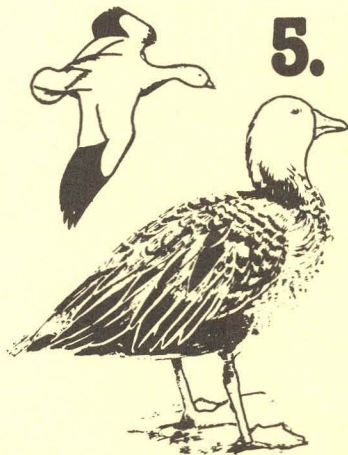
3.



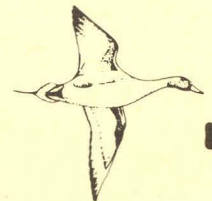
4.



5.



6.



7.

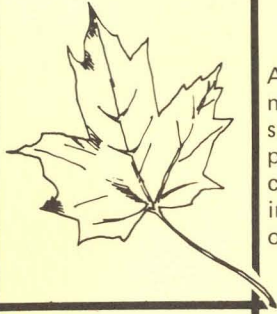


KEY: 1. Canada Goose; 2. Greater Scaup; 3. Wood Duck; 4. White-fronted Goose; 5. Snow Goose; 6. Mallard; 7. Pintail.

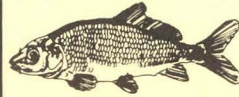
OCTOBER

1st week

Observe the vibrant autumn colors. Why do the leaves change colors and fall?



Around 1882, German carp were stocked in Kansas ponds. They were considered the best introduced pond fish of the day.



What fish do we stock now? What role do carp play in ponds today? Why do we stock fish?

Kansas Fish & Game currently has 4 hatcheries: Pratt, Colwich, Meade, & Farlington, and is in the process of building another at Milford.

Fish hatchery— a place where fish eggs are raised. Locate the 4 Kansas hatchery sites on a map.

2nd week

October 10, 1877 100,000 California salmon eggs arrived by train to Ellsworth Kansas. They were placed in hatching boxes and those that survived lived in Kansas waters a short time.

Would you expect to find salmon in Kansas today? What's your favorite kind of fish?



Kansas has both bald and golden eagles. How many different kinds of eagles are there in the world?

Since 1911, eagles have been protected from hunting in Kansas. What is the current status of eagles in Kansas and the U.S.?



The Endangered Species Preservation Act was passed on October 15, 1966. A list of threatened and endangered species was made. Can you name the Kansas endangered species?

3rd week



Furbearers are a special group of mammals. They have high quality hair and fur which can be used for fur garments.

Furharvester Education classes are being held in your area. If you want to learn more about hunting and trapping of furbearers check with this office or your local Fish & Game staff.

Make a list of all the Kansas mammals that are considered "furbearers".

There are 3 aquatic furbearers (mink, muskrat, beaver) and 9 terrestrial furbearers (bobcat, red fox, gray fox, swift fox, opossum, raccoon, badger, striped skunk, weasel) in Kansas, which have trapping or hunting seasons.

Regulations are set to guide sportsmen in the harvest of game animals. List other reasons for wildlife regulations.

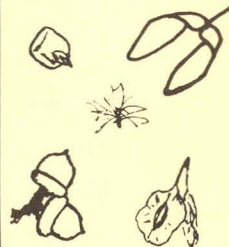
Sportsman—A person who is active in sports such as hunting, fishing, etc. and who is fair, courteous, and ethical.

4th week

October 1963 Kansas Fish & Game adds the Cheney Wildlife Area to its acres. Locate Cheney on a map.

How many wildlife areas and reservoirs can you locate on a Kansas map? What's your favorite?

Reservoir—A place where water is collected and stored for use. Kansas has approximately 25 reservoirs, such as Cheney, Wilson, and Clinton.





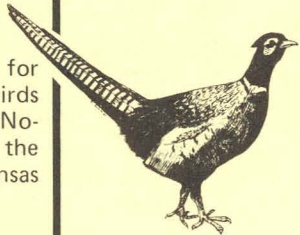


Seeds can travel or be dispersed by wind, water, or animals. Some plants have special tools to help spread their seeds.

Make a collection of seeds and divide them into groups based on their means of seed dispersal.

What can you find out about a wildlife species that is a symbol of Halloween?



NOVEMBER

<p>UNLESS someone like you cares a whole awful lot, nothing is going to get better. It's not.</p> <p>—Dr. Seuss, from <u>The Lorax</u></p>			<p>As wildlife and people ready themselves for winter, make observations of the changes.</p>	 <p>Buffalo herds can be found in several locations in the state. Visit the Garden City, Maxwell, Pittsburg, Hays or Kingman herds.</p>	<p>November 6, 1806 Pike's travels took him near the Garden City area. He noted that "... the face of the prairie was covered with them (animals), on each side of the river, their numbers exceeded imagination."</p>	<p>Research past and present Kansas wildlife and habitat. How have things changed since 1806?</p>	
<p>Topsoil—top layer of soil, about plow depth.</p>	<p>Humus—dark part of soil formed by decayed plants and animal material.</p>	<p>Study the layers of soil where you live. Compare these to layers at other locations. Check the color and texture of each soil type.</p>	<p>November 11, 1933 First great dust storm in the Great Plains.</p>	<p>What measures have been taken to prevent the Dust Bowl from happening again? Observe these practices in use. What do you notice when the techniques are not used?</p>	<p>Erosion—wearing away of soil by wind or water.</p>	<p>Terrace—a shallow channel used to control erosion.</p>	
<p>Hunting seasons for many game birds species begin in November. Study the variety of Kansas game species.</p>		<p>Carrying Capacity—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.</p>	<p>Surplus—That quantity of wildlife above the carrying capacity. The surplus is removed by disease, starvation, hunting, or predation.</p>	<p>What can you learn about the animal that is a symbol of Thanksgiving? How did Ben Franklin show his value of this species?</p>		<p>Kansas has Eastern and Rio Grande turkeys. Where would you most likely find a wild turkey?</p>	
<p>Pheasants were introduced to the U.S. from Asia. They have adapted well to agricultural areas. They eat insects and seeds.</p>	<p>Adapt—To make suitable to environmental conditions; adjust.</p>	<p>Only male or cock pheasants are legal game in Kansas. More females are needed than males to produce future generations.</p>		<p>Pronghorn antelope belong to a family by themselves. They are not true antelope because they do not have true horns. Found only in North America. About 1900 antelope live in Kansas.</p>	<p>Historically, the western 2/3rds of the state were prime antelope habitat. Because of continuing conversion to agriculture, only a few scattered blocks of range capable of supporting antelope herds remain.</p>	<p>Fish & Game began transplanting antelope to Kansas in 1965. The main herds are located in Logan and Wallace counties. Others have been transplanted to the Flint Hills and western counties.</p>	

1st week

2nd week

3rd week

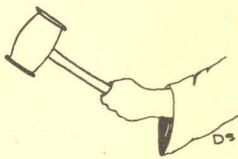
4th week

OUT OF THE FRYING PAN

THE LAW



A Kansas City man by the name of Richard Compton thought he had a better idea. After receiving a ticket for fishing without a valid license, he set out to obtain a backdated version of the license he should have purchased earlier. He was successful in doing just that . . . all nice and neat. But the judge wasn't fooled on court day. He reminded Mr. Compton that perjury was a weighty offense to add to the Fish and Game violation. This caused the accused to rethink the situation, and "fess up" to his guilt. Result: Mr. Compton paid a hefty \$200 fine, with a \$19 court costs kicker.



Campbell's Soup

Game Protector Rick Campbell has been scoring some points for "our side" lately. The long dry spell and thirsty row crops of Summer '83 have left many Kansas streams to trickle from pool to pool, if they run at all.

Looking for cool, oxygenated water, fish concentrate in deep holes, making them easy prey for "fish poachers" who use electricity for bait.

Back in July, a tip from a concerned Maple Hill man, who was digging green worms on the creek bank, brought Wabaunsee County Sheriff's officers and G.P. Campbell to Mill Creek. Three men had been seen using a telephone crank to shock fish, but they had dumped the generator in the weeds before the officers could get to them.

While the sheriff and his deputies held the three men, Campbell went back to town and got a statement from the witness, which included the whereabouts of the generator.

Rick returned to the scene, found the crank, and wrote each of the men tickets for taking fish by illegal method and for possession of an illegal fishing device. A Wabaunsee County Magistrate obliged by fining each of the three \$150 plus \$19 in court costs.

A short time later, Campbell was patrolling the St. George area in Pottawatomie County, along the Kansas River. Something caught his eye . . . a handful of men on the river bank "looking like they were up to something". Another man in a boat saw the Game Protector and dumped a telephone generator into the water. Without that crank, Campbell had no case.

After obtaining pertinent information, Rick let the men go, dug out his grappling hook, retrieved the generator, and waited. He didn't have to wait long though. The six men returned in about an hour "to look for someone's glasses," they said. Campbell helped them look, (He's a nice sort of fellow.), and then issued tickets to

each of them.

A Pottawatomie County Judge slapped the minimum \$50 fine on each of them. Good work, G.P. Campbell. And thanks to the judges for making crime not pay.

Manes

Like A House Afire



Fish and Game's

Assistant Chief of Law Enforcement George Schlecty, spent many years in the field, gaining the experiences that make a G.P. wily, and maybe a little bit ornery. Uncooperative violators, and a true concern for the wildlife resource, provoke men like Schlecty to use some pretty sneaky tactics to apprehend a subject. When George was a district Game Protector in northeast Kansas, he resorted to some interesting trickery to serve a warrant on a Topeka man who had been issued a ticket.

It seems that the man had decided to simply lay low until things blew over. His wife would answer the door or telephone whenever George came calling with a warrant. She always explained that her husband was not in, and she was never sure when he would return.

With some snooping around, Schlecty discovered that the man owned a rental house located a short distance from his residence. . . a situation to be taken advantage of.

George went to a pay phone in the neighborhood, and made a phone call that went something like this:

"Mrs. Williams?"

"Yes?"

"This is the Topeka fire station 422 calling to notify you that your home on Sawyer Street is on fire. A unit is enroute. It might be a good idea for you and your husband to meet us there right away."

Mr. Williams came barreling around the corner in his pickup and skidded to a stop in front of his uncharred property. There were no fire trucks and no fires, just Game Protector Schlecty standing there with a warrant in his hand and a smile on his face.

Manes

Plant Poacher



A Brownsville, Texas, man was recently sentenced under the Lacey Act in the first conviction ever for trafficking in endangered plants. Joseph Anthony, Jr., owner of Anthony Botanical Gardens in Brownsville, received a \$5,000 fine and a 1-year suspended prison sentence, and 5 years' active probation.

Fish and Wildlife agent Tom McKay and U.S. Customs agent Don Cunningham uncovered Anthony's involvement in illegal plant traffic, primarily of cactus, when they obtained a search warrant to search his property for

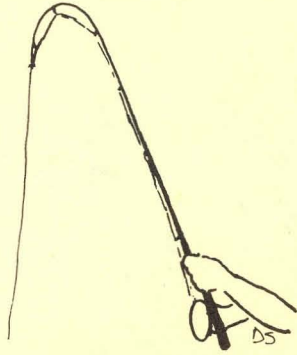
smuggled parrots. They *did* find 12 juvenile red-headed parrots at the nursery, but also discovered forged papers and a copy of an official stamp and stationery of the Mexican Government. The records showed exportations of more than 100,000 illegally imported plants destined for private collectors. The false documents provided enough information for the courts to convict Anthony for illegal plant importations, even though no plants were seized.

The collection of cactus, especially in other countries such as Japan, Germany and England, has led to the growing market in these plants. Individual plants sell from \$5 to \$30 and some extremely rare species bring even higher prices. With this type of pressure, a number of cactus species are being threatened with extinction in their native habitat. Because of severe economic problems in Mexico today, villagers are eagerly collecting specimens to supplement their income, with no government protection for plants.

the individual received a ticket accordingly.

Not long after this incident, the recipient of the citation sought to clear some rather foul air which had been lingering around her conscience.

Game Protector Burlew received this letter:



Dear Sir,

Sunday you asked to see my fishing license and I told you that I hadn't been fishing. I'm sorry I lied to you. I won't stand for people lying to me and I'm not proud of myself for lying to you. Thank you for going ahead and doing your job and giving me a ticket, even though I made it harder for you because what I told you contradicted what you saw. I'm sure the next time, I'll think twice before I say anything.

Thank you for taking the time to let me clear my guilty conscience.

'I Wasn't Fishing'

Yes, indeed, summer does bring out the eager anglers. Unfortunately, some anglers "forget" to bring a Kansas fishing license along for the trip.

When Game Protector Bill Burlew encountered one such angler, the culprit apparently bent the truth to the breaking point. However, Bill was not easily dissuaded. He knew what he saw, and

an arm & a leg...

A California man has paid \$3,000 for an elk he killed illegally during the 1982 elk season, said Tim Barraclough, New Mexico Department of Game and Fish. The seven-month-long investigation also involved the U.S. Fish and Wildlife Service.

Charges filed in November against Chris B. Jacobs, 62, of Lakeport, California, resulted in a plea agreement and disposition July 8, before Colfax County, New Mexico Magistrate Archie Valdez. Jacobs paid \$1,000 for illegally killing the elk, \$1,000 for illegal possession of the elk, and \$1,000 in civil damages to the Department of Game and Fish for the loss of the game animal.

Barraclough said Jacobs had a landowner license during the 1982 season to hunt elk on National Rifle Association Whittington Center property south of Raton, but had crossed a fence and walked about a mile onto private property, where he killed the elk.

Jacobs originally had been charged with illegal killing of the elk, a misdemeanor, and transportation of stolen livestock or game, a fourth degree felony; but the plea agreement and disposition resulted in reduction of the transportation charge to illegal possession, Barraclough said.

Game and Fish officers received a tip about the illegal killing of the elk after Jacobs had left the area, Barraclough said. U.S. Fish and Wildlife Service officers served a search warrant on Jacobs' residence in Lakeport on

December 9, and found about 120 packages of elk meat.

Game and Fish officers, on February 11, issued an arrest warrant for Jacobs on the fourth degree felony charges, and Jacobs was arrested March 4 in California. He waived extradition to New Mexico, and Jacobs and his attorney entered into the plea agreement.

—AND—

A Barbary sheep taken out of season has cost a New Mexico man and his two companions \$3,330, according to the Department of Game and Fish.

Braulio Cruz of Picacho, in southeastern New Mexico, and Leroy J. Romo and Geraldine C. Chavez of Albuquerque, were each cited June 11, by New Mexico Game and Fish Officer Ernie Sandoval, with illegal killing of a Barbary sheep. They appeared June 20 before a Lincoln County Magistrate who fined them each \$1,000 for killing or possessing Barbary sheep.

Civil damages of \$300 assessed by the Department of Game and Fish for the loss of the game animal, were split among the three defendants. Each also paid \$10 court costs.

Sandoval said a state police officer heard shooting near his home in the Hondo Valley at about 7:45 p.m. June 11, and saw the trio hauling the animal off a nearby hillside. The officer contacted Sandoval and the county sheriff. Sandoval arrested the trio and booked them into Lincoln County Jail, where they posted bond.

Wisdom

The true test of civilization is not the census, nor the size of the cities, nor the crops — no, but the kind of man the country turns out.

— Ralph Waldo Emerson
*Society and Solitude 1870
Civilization*

did you know?

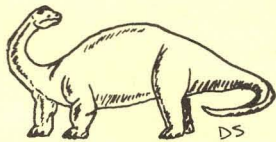
NATURE



... The saying "they breed like rabbits" did not come out of thin air. A single female rabbit, theoretically, could have 16 million descendants in four years.

... A living ferret had not been seen since 1965 in Wyoming. But ever since September, 1981, when Lucille Hogg of Meeteetse, Wyoming walked into a local taxidermy shop with a dead "mink or something" killed by her dog, biologists have been sweeping the Wyoming prairie with spotlights, looking for the unmistakable emerald stare of perhaps the rarest mammal in North America — the black-footed ferret.

... Although birds and mammals evolved on nearly identical time schedules, there are more than twice as many different species of birds, than mammals alive today. At last count, there were over 8,700 species of birds, ranging in size from the condor to the tiny hummingbird, compared to 4,000 species of mammals.



... Not all flowers attract bees and butterflies, in hopes of being pollinated, with the allure of sweet smelling scents. The skunk cabbage attracts flies with the help of its foul smelling odor like that of rotten meat with skunk spray and garlic.

... There are fish in Amazon rivers that have developed teeth with molars strong enough to crush hard nuts. They come in handy each year when the fish swim into flooded Amazon forests searching for seeds and fruit that drop from trees. Without this important source of food, the fish would probably die from lack of nutrients.

... Before cutting down a dying tree on your property, think about this. There are over 80 species of birds that only nest in dead or dying trees, such as red-bellied woodpeckers, screech owls and chickadees, says National Wildlife magazine. In return for supplying them a home, they'll eat many of these pesty insects around your neighborhood, including mosquitoes.

... To reach under bark and into wood, the European green woodpecker can stick its tongue out 25 inches beyond its beak. *National Wildlife*

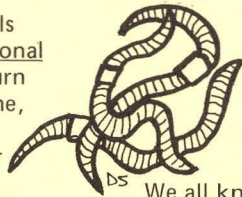
Oh, What a Relief!!

The owner of a collection of valuable fish in England accidentally broke the glass cover of a tank holding a seven-pound catfish, and a shard of glass lacerated the fish from head to tail. He rushed the victim to a veterinarian who decided to stitch the wound, provided he could find some way of putting the creature to sleep. After some study, the doctor decided on Alka-Seltzer as an anesthetic and a few tablets released in the water created enough carbon dioxide to

send the fish to dreamland. It was then removed to a moistened table for a ten-minute stitching job.

The catfish was then placed back in his tank, oxygen was pumped around his head area, and by the next morning he was well enough to have eaten four of the goldfish which shared his abode.

It'll Gag Ya!



We all know that worms play an important part in wildfowl diets. The early bird that got the worm might have been a quail, a robin, or any number of other species of birds in which the worm is a key element in their diet. A young robin, for instance, consumes up to 14 feet of earthworms each day.

Scientists now are looking at worms as a possible protein source for humans. The thought of eating a worm might sound repulsive, but up to 72 percent of the dry weight of a worm is protein, and keep in mind that worms already constitute a major portion of the diet of many persons throughout the world, including New Zealand, South Africa and Japan.

The North American Bait Farms, Inc., of Ontario, California, are interested in seeing the earthworm on the table, and each year sponsor the Ver de Terre Recipe Contest. Don't let the French fool you, ver de terre means earthworm. And if you don't mind experimenting, you

might win the annual prize of \$500 for the best recipe.

According to the sponsors, worms must be washed in cold water first, then boiled to remove stray bits of soil and kill undesirable bacteria. Properly prepared, worms are entirely safe and nutritious. They are entirely edible, contain no bones or gristle, are an excellent and potentially economical source of animal protein, and supposedly have a subtle flavor lending itself to all sorts of ingredients and methods of preparation. We say "supposedly" because we have not got around to trying them as yet.

Recipes are judged for eye and taste appeal, ease of preparation, and economy of ingredients. The company also has published a recipe book which may be of interest to worm lovers.

And just for the record, worms also can be pickled. If you saw the movie *Urban Cowboy*, you might remember the part when the villain eats the worm included in the bottle of Monte Alban Mezcal. Those worms are agave worms, and while we don't know how they do for bluegill, mezcal drinkers apparently find them tasty!

Natural Cure for Ticks

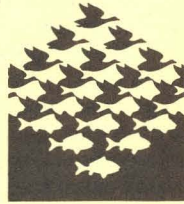
Ticks are a chronic summer problem for dogs and cats. The usual treatment involves dipping the animal in a chemical insecticide each week. However, if you prefer

a more natural approach, try this organic preventative.

The preventative is simply a mixture of brewer's yeast and garlic which is mixed into your pet's food each day. Use two tablespoons of the mix for medium to large dogs, and less for smaller dogs and cats. Brewer's yeast and garlic mixtures may be purchased at most health food stores. Cheese-flavored yeast is also available if your pet has highfalutin' tastes. —N.C. *Wildlife Newsletter*

NATIONAL HUNTING & FISHING DAY®

Sept. 24, 1983



We observe September 24, 1983, as National Hunting and Fishing Day in recognition of the historic contributions of America's sportsmen to our national conservation efforts.

Conserving our national and wildlife resources is one of the most important responsibilities we have to this and future generations of Americans. For nearly a century our nation's hunters and fishermen have been in the forefront of efforts to preserve these natural assets and end the loss of essential animal habitats. Through special license fees and taxes, the men and women who enjoy our outdoor resources have helped support effective conservation programs. The \$5 billion raised by sportsmen's self imposed fees are largely responsible for the wildlife heritage we treasure today.

Hunting and fishing activities provide outstanding recreational opportunities for fifty-eight million Americans each year. Hunting plays an important part in scientific wildlife management programs as a means of keeping animal populations in balance with available habitats.

On this notable occasion, I urge all our citizens to join with outdoor sportsmen in their efforts to ensure a bright future for America's natural and wildlife resources.

Ronald Reagan

CARVER'S ART

BEAUTY & the BEASTS



Robert Carver is a unique and innovative artist of today. His paintings are alive and three dimensional. He has an uncanny sense for the spiritual vibrations that make his paintings live and throb with a rebirth of reality.

A native Kansan, Robert Carver was born in 1940 in El Dorado, Kansas. Carver began producing

State University. Carver has advanced through many goal plateaus to his present status as an artist. He has been an aircraft mechanic, aircraft supervisor, a technical writer and illustrator, the latter of which left him with a burning desire to pursue a life long ambition to be an artist.

In the last several years, Robert Carver's accomplishments as an artist have been praised and rewarded with numerous juried show awards. His paintings have found their way into many discriminating galleries and private collections from coast to coast.



drawings, paintings and hand made objects in his early childhood. He attended El Dorado High School and Junior College. He later moved to Wichita, Kansas, where he attended Wichita

Carver's work, along with that of many other renowned wildlife artists, is featured each year at the National Hunting and Fishing Day Wildlife Art Show in Wichita.

Flying Pneumonia

Betty Patterson of Midwest City, Oklahoma, mentioned during a recent phone conversation that a

martin landlord in her area had lost 10 martins in early June. This man was also a veterinarian and dissected one of the dead birds. He found the lung blackened, and the cause of death pneumonia.

Although the weather during that period was erratic, with many cool nights, the severely cold weather of early spring had long since passed.

It's a Hard Life

An attempt to restore endangered peregrine falcons to Sequoia National Park in California turned into a picnic for golden eagles, according to the Wildlife Management Institute. The eagles ate the released falcons.

Three fledgling peregrines were turned loose in the park at a natural nesting site. Two of the birds were caught and devoured by eagles. The third was recaptured by biologists before the eagles could get it.

Biologists report that the eagle predation will set the peregrine restoration program back a full year. The restoration is sponsored by the Peregrine Fund, a group dedicated to returning peregrines to the Sierra Nevada Mountains.



EAGLES HAVE LANDED

NATURAL ISSUES



Despite setbacks such as the recent illegal mass slaying in South Dakota, the endangered bald eagle — national symbol of the United States — has begun its comeback, according to Regional Director Galen Buterbaugh of the U.S. Fish and Wildlife Service.

Approximately one-half of the recovery goals for the bald eagle have been achieved on a nationwide basis," Buterbaugh said. "The Service has set goals and objectives to insure the long term security of the bald eagle, and they include habitat protection measures improvements in the number of breeding pairs, and increased population levels."

Buterbaugh said the estimated 200 to 300 bald eagles believed killed and sold in illegal "feather traffic" over the past three years on or near the Karl E. Mundt National Wildlife Refuge in South Dakota were a significant number, but other recovery efforts have tripled the number of active nests in the contiguous 48 States over the past 10 years. Still, he said, 48 States have only an estimated 1,450 breeding pairs of bald eagles, compared to an estimated 25,000 bald eagles historically.

The eagle killings in South Dakota resulted in about 50 people being charged nationwide following an undercover investigation by Service special agents.

Although habitat alteration has contributed to

the decrease in the bald eagle population, the most dramatic and widespread decrease has been attributed to the use of the pesticide DDT, which no longer may be used legally in the United States.

In 1963, after almost 20 years of widespread DDT application, a survey of bald eagle breeding areas identified only 417 active nests in the lower 48 States. But 11 years after the ban on DDT, the number of active nests has increased to approximately 1,450.

Since 1976, the Patuxent Wildlife Research Center in Maryland has been producing bald eagle chicks for release to the wild. A total of 52 chicks have been released. Last year, 13 of these eaglets went to eight States, and this year, five States will receive eaglets from the Patuxent facility.



In addition, 10 States are expected to release approximately 64 young eagles to the wild this year. Also, the Canadian Provinces of Nova Scotia, Manitoba and Saskatchewan will donate approximately 24 eaglets to the Service for bald eagle restoration efforts this year.

Buterbaugh said that the efforts for the bald eagle have been assisted significantly by private business — principally through cash donations. An

example in this region was the donation by the Southland Corporation of a percentage of its soft drink profits toward acquisition of the Karl E. Mundt National Wildlife Refuge, which is the major winter concentration area for bald eagles.

Steel Shot for Eagles

Recent evidence from the U.S. Fish and Wildlife Service indicates that significant numbers of the endangered bald eagle are dying from lead poisoning. Concerned about the continued survival of the eagle, and rights of sportsmen to hunt waterfowl, the National Wildlife Federation has asked the Fish and Wildlife Service to begin a formal consultation of the problem under Section 7 of the Endangered Species Act. One study shows over 7 percent of the eagles recovered between 1967 and 1982 died from lead poisoning. It is believed eagles are being poisoned after feeding on dead and crippled waterfowl containing lead shot.

Raptors For Sale



A new rule by the U.S. Fish and Wildlife Service now allows certain birds of prey, including the peregrine

falcon, to be bred in captivity and sold for profit. Scheduled to go into effect this month, the new rule was developed to provide breeders with an opportunity to recover costs associated with raising falcons and other raptors. The National Wildlife Federation, which supports falconry, opposed the rule change because it strengthens incentives for persons to poach wild falcons for foreign markets where some birds can sell for as much as \$25,000! The new rule also gives raptor breeders limited authority to sell raptor eggs and young taken from the wild.

Critters, Crops & Cash

The Association of Midwest Fish and Wildlife Agencies has offered recommendations to Congress for a new farm bill that would reduce federal expenditures and create millions of acres of additional wildlife habitat on agricultural lands, according to the Wildlife Management Institute.

The Association, which is made up of fish and wildlife agencies from 14 midwestern states and three Canadian provinces, has passed a resolution that encourages Congress to develop a new farm program that would reduce federal payments now being made due to overproduction of certain crops. The idea is a familiar one . . . to reduce supplies through land retirement programs. The group said that 10 to 25 percent of the acreage now

planted in surplus crops should be retired for multiple-year periods. It said that funding should be provided for landowners to establish cover crops beneficial to wildlife on the retired acres. The Association recommended that Congress eliminate federal funding and technical assistance for wetland drainage and filling, tillage of native grasslands and pasture, removal of woodlands and riparian vegetation, channelization of streams and other practices destructive of soils, water quality and fish and wildlife habitat. It recommended that county agricultural committees implementing the new program include a broad spectrum of conservation interests instead of farmers only.

Wetlands Bill: Look Closely—

This summer, Congress is tackling several bills aimed at reversing the rapid loss of the nation's swamps, marshes, estuaries, and other valuable wetlands.

In addition to Section 404 of the Clean Water Act, the bills are S.1329, introduced by Senator John Chafee (R-RI) and its House companion measure H.R.3082, offered by Representative Edwin Forsythe (R-NJ). Both are meatier alternatives to Interior Secretary Watt's so-called POWDR or "Protect Our Wetlands and Duck Resources" legislation, an ineffectual proposal which rang hollow for conservationists from the very beginning.

On July 12 testimony before Chafee's Environmental Pollution Subcommittee, the National

Wildlife Federation supported Chafee's wetlands protection bill as "sound" and said Watt's proposal provides "little, if any, meaningful protection for wetlands." Stressing the urgent need to protect the nation's wetlands, NWF legislative representative Dr. Robert Davison said from the mid '50s to the mid '70s,



more than 9 million acres of wetlands were lost — 87 percent of those were converted to cropland.

Chafee-Forsythe v. POWDR.

NWF has publically backed the Chafee-Forsythe bills at recent hearings on both sides of Capitol Hill largely because the measure provides more than \$1 billion over the next 10 years for state and federal wetlands acquisition. Among NWF recommendations included in the Chafee-Forsythe bills are provisions to:

- * automatically appropriate \$75 million per year from the Land and Water Conservation Fund for state and federal wetlands purchases over a 10-year period;
- * extend the Wetlands Loan Act, which authorizes loans to the duck stamp fund (derived from a stamp required of all waterfowl hunters) to hasten wetlands acquisition;
- * gradually up the price of the duck stamp to \$15 over a five-year period;
- * earmark current duties on imported arms and ammunition for wetlands acquisition;
- * and authorize entry fees at selected National Wildlife Refuges for the purpose of collecting more funds to buy refuges and wetlands.

The Chafee-Forsythe bill takes a sound albeit overly cautious, approach toward wetlands protection. While most conservationists support the bill's call for the report to Congress assessing the federal role in wetlands losses, NWF and its allies are concerned that study may stymie action.

"We already know enough about the problem," Davison said, "to take some steps now — toward curtailing the federal role in wetlands destruction and degradation."

A number of studies have pinpointed federal programs and policies (various income tax deductions, for example) that allow developers to shift the cost of wetlands conversion to the general taxpayer. Based on this evidence, NWF joined the Environmental Defense Fund in recommending an addition to the Chafee-Forsythe bill that requires federal agencies to seek "reasonable alternatives and practicable modifications" to programs encouraging wetlands loss.

Hunter's Guide Book

With the opening of the 1983-84 hunting season fast approaching, more than 100 pages of current hunting information are available in the National Rifle Association's new Hunter's Planning Guide and Directory.

Previously sold as the NRA Hunting Annual, this new, expanded publication features the latest hunting information on a state-by-state basis. It has a wealth of information including game surveys, where to hunt, how to find local outfitters and taxidermists, and

explanations of firearm and game regulations.

The publication costs \$4.00. Further information on the new guide is available from the NRA's Hunter Services Division, 1600 Rhode Island Avenue N.W., Washington, D. C. 20036 or phone (202) 828-6240.

to ferret the ferret

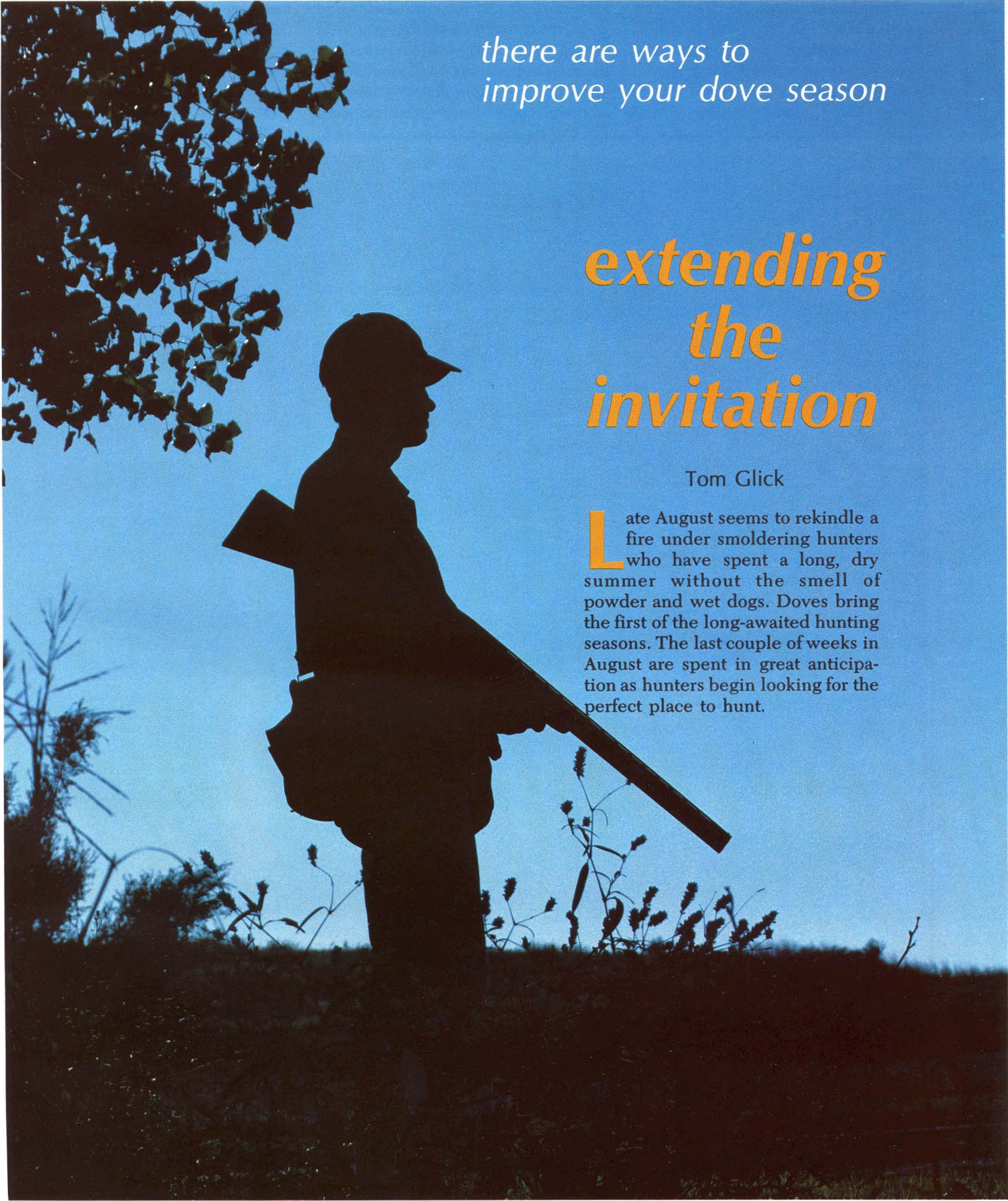


Plans involving upcoming research efforts on the world's only known population of black-footed ferrets were finalized by the Black-Footed Ferret Advisory Team at a recent meeting held at the Pitchfork Ranch headquarters near Meeteetse, Wyoming. The advisory team is comprised of members of state and federal agencies and private individuals.

Part of the upcoming research will be an attempt by the team to improve the estimates of the ferret population through extensive night surveys. This will involve many areas not previously surveyed. The night surveys will be conducted by biologists from BIOTA, a private research and consulting firm from Jackson.

The team also hopes to gain more knowledge on where the young ferrets go after leaving their burrows and severing family ties. To do this, U.S. Fish and Wildlife researchers plan to fit several young ferrets with radio collars so that travel patterns and habits can be closely monitored.

It is hoped these intensified studies will provide much needed information on the ferret population and enable researchers to find new populations in other areas.



*there are ways to
improve your dove season*

extending the invitation

Tom Glick

Late August seems to rekindle a fire under smoldering hunters who have spent a long, dry summer without the smell of powder and wet dogs. Doves bring the first of the long-awaited hunting seasons. The last couple of weeks in August are spent in great anticipation as hunters begin looking for the perfect place to hunt.

Wouldn't it be nice if a hunter could design his own dove grounds, assembling all the components that appeal to dove and hunter alike? It would contain plenty of food for the birds . . . especially wheat

and sunflowers. A pond and some good roosting trees could be added attractions. The hunter needs a place to hide as well; tall sunflowers or other vegetation near the feeding area are ideal. Bare ground makes

downed birds easier to find. To the dove hunter, a place with all these ingredients is almost paradise.

When opening day arrives, such an ideal location is chock-full of doves. The shooting is fast, and



photo by Gene Brehm

those with an ample supply of shells can go home with a limit long before sundown.

The second day of shooting is just as hot, but the birds are more wary. More long shots are taken. More shells are spent. By the third day it becomes apparent that the spot is no secret. There are even more gunners, but markedly fewer doves. Paradise is lost.

It isn't hard to determine the cause of the doves' untimely exit. They were "burned" off by too much intense shooting without a break. The hunters effectively educated the birds about the perils of such a "paradise."

Mourning doves are generally hunted in one of four area types: feeding fields, water holes, roosting sites, and flight paths between these areas. The birds can be burned off of any of these areas if shooting pressure is heavy enough. This is a very common occurrence in the Sunflower State.

Wildlife managers have tried a number of ploys to fool the doves into hanging around for more shoot-

ing. Some have worked very well. The general objective is to create an area which is heavily used by doves, while keeping hunter use somewhat curtailed. It may seem slightly incongruous, but reducing the number of days of hunting on a dove field can yield a great increase in the number of doves taken on the site during the season.

To do this, the area is closed to all hunting every other day, and shooting hours are restricted to times when the doves are not in peak feeding activity. This means no morning or late afternoon hunts. The result is a large group of doves with a false sense of security.

All of this regulation of shooting would be in vain if there were no large numbers of doves to be harvested. So, wildlife managers set out to create an irresistible situation for the birds. Food is the key.

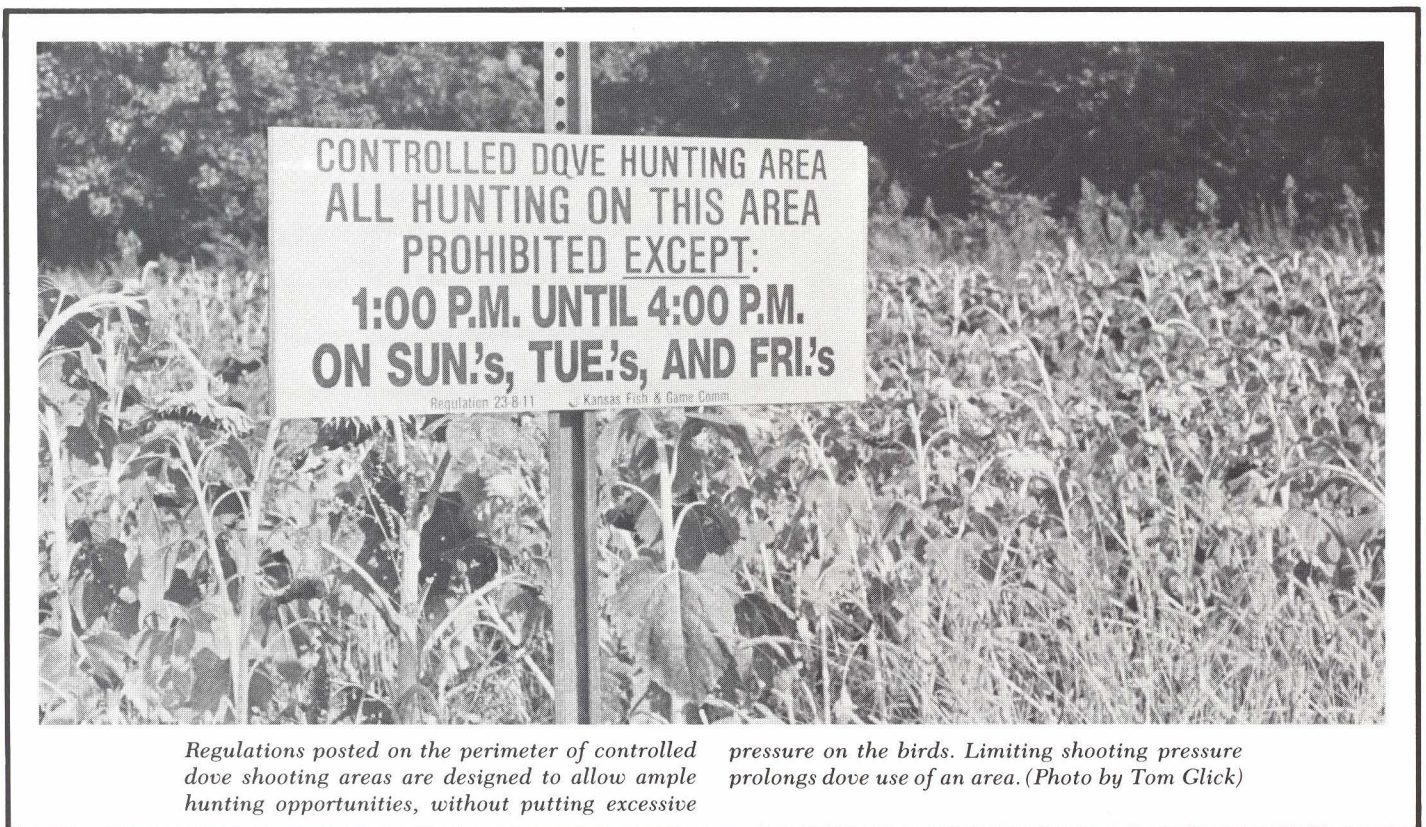
Doves will eat just about any sort of seed or grain. Dove enthusiasts are blissfully aware of the bird's passion for burned wheat fields, early harvested milo, and fields cut for silage. But nothing stirs a dove's

culinary lust better than good ol' sunflowers. It is this food preference that allows game biologists to create a dove hunter's paradise.

Any crop intended to attract doves must reach ripeness prior to the height of the birds' migratory visit. The field should be ready in time for use by local doves before the last week in August. The presence of local doves in the feed plot will act as a decoy for incoming fliers from the north—a legal version of live waterfowl decoys.

Biologists with the Illinois Department of Conservation were pioneers of these management techniques. They have utilized controlled shooting areas for several years with some very impressive results.

The first attempt at creating a controlled dove shooting area in Kansas was at the Neosho Wildlife Area, a public hunting area in the southeast region. Neosho is a long-time favorite for duck hunting, but few doves were harvested there prior to the advent of the specially managed areas.



Regulations posted on the perimeter of controlled dove shooting areas are designed to allow ample hunting opportunities, without putting excessive

pressure on the birds. Limiting shooting pressure prolongs dove use of an area. (Photo by Tom Glick)



photo by Ron Spomer

In 1980, a 40-acre plot was seeded with Peredovick Sunflowers. When the seeds were ripe in the heads, doves were available by the bushel. Hunting on the plot was restricted to Mondays, Wednesdays, and Saturdays, from 3 p.m. to sundown. These shooting hours were chosen to allow the after work-hunter a chance to enjoy some shooting.

On opening day that year 20 gunners were present to test the new dove hunting area. They went home with a total of 184 birds. The average bag for the day was 9.2 birds . . . pretty impressive, when one considers the daily limit in those days was only ten. During the course of that 60-day season, over 1,300 doves were taken on that single 40-acre tract, despite the fact that a large percentage of the birds were burned off by mid-September.

Favorable weather conditions persisted through September of that year, and good numbers of doves returned to the area for some decent shooting into October. Still, even with the excellent harvest results, Fish and Game personnel involved with the project felt that more restricted shooting times would have produced even better results.

It is interesting to note that, prior to the use of sunflower plots and controlled shooting hours, Neosho Wildlife Area was anything but a dove hunter's paradise. Neither doves nor dove hunters used the area. After implementation of the controlled area, dove hunting became a major activity there.

Wet spring weather prevented timely planting of sunflowers on the Neosho area for the 1983 dove season. So, this year's prospects for a controlled dove shooting area were not so bright. However, two similar areas have been developed on the Mined Land Wildlife Area in Cherokee County. Units 17 and 43 have been set aside for dove hunting. Unit 17 is open to hunting only between 1 p.m. and 4 p.m. on Sundays, Tuesdays, and Fridays. The same hours apply to unit 43, with hunting allowed there only on Mondays,

Wednesdays, and Saturdays. The remaining units on the Mined Land Area are not affected by the controlled shooting restrictions. All controls on the areas will be lifted before the start of quail season.

Area managers have learned some valuable lessons on the operation of controlled shooting sites since their first attempts at the Neosho area. The knowledge gained in these early experiences should benefit hunters on the newer Mined Land controlled shooting areas.

A major change made on the mined land areas is the expansion of the controlled areas. At Neosho, the edge of the sunflower plot was also the edge of the controlled area. This failed to limit perimeter hunting, allowing harassment of the doves during times when shooting hours were closed on the area. Each of the controlled shooting units on the Mined Land Area has a sunflower plot of about sixteen acres. To eliminate perimeter shooting, these food plots are situated in large acreages of surrounding land. One of the units is nearly a full section, and the other is approximately 120 acres. These buffer zones allow doves access to the food plots without undue harassment from perimeter shooters.

A second major change in management of the mined land controlled shooting areas is further reduction of shooting hours. As previously discussed, shooting is allowed from 1 p.m. to 4 p.m. only. This allows the doves to move in during their normal late afternoon feeding time without being gunned. Doves have been found to come in to a food plot in a steady stream during the early afternoon, while they often congregate into large flocks to come in for late afternoon feeding. Biologists have found that the birds seem to be "educated" at a slower rate when they are not under fire in large assemblages.

The newer controlled dove shooting areas also are designed to be more attractive to the birds. The mined land units sport watering

areas, roost trees, and diversified food plots which include wheat stubble and weeds.

Another difference between the Neosho area and the Mined Land Wildlife Area is the fact that the latter is a traditional dove hunting ground.

Controlled dove hunting need not be restricted to public wildlife areas. The same management practices will work equally well or better on private lands. Private land managers can exert further control over the amount of shooting pressure on the birds by limiting the number of hunters allowed in the area at any one time.


One Allen County landowner established a stand of sunflowers on an infertile eight-acre field. The owner restricted hunting on the area to every third or fourth day, and granted hunting permission to only a few gunners on any one day. Dove use of the area remained high into late September, and several hundred of the birds were taken during the season from that one small plot.

Similar situations could be established on any field where dove use is high, even if the attractant is merely an undisturbed patch of weeds in the corner of a fallow field. The key is to restrict shooting pressure.

Despite the positive benefits of food plots and controlled hunting pressure, there are other factors beyond man's control. Cold weather can ruin even the best attempts at dove management. If the winds get nasty and the temperature dips too low, doves will move south, regardless of the amount or quality of food and habitat.

In many years, however, mourning dove hunting need not be limited to early September. With good food plots and controlled shooting pressure, they will often remain well into October, and on to the season's end. And that is a bonus well worth the effort.

Tom Glick is a district wildlife biologist, stationed in Pittsburg.



once you've
seen one, you
won't forget it

the ibis

Bob Mathews

Gene and I slogged toward a large cattail “island” in the middle of a pool at Quivira National Wildlife Refuge. It was a stifling August mid-day and there was relatively little activity around us. An occasional carp bumped around our ankles, then disappeared in the knee-deep water, leaving behind a ghostly cloud of fin-roiled mud to mark its passing. A solitary, unmoving bittern stood next to a band of cattails thirty yards away.

As we approached the nearest stand of cattails, the action picked up; we were greeted with kamikaze-style forays of Forster’s terns. I turned to identify the source of a harsh chorus of nasal beeps just in time to flinch at an onrushing blur of white feathers on a collision course with my forehead. By the time I untangled my feet and regained my balance well enough to avoid falling face first in the marsh, the attacker had rejoined the loose aggregation of terns hovering behind us. Another bird suddenly dipped out of the group and zipped toward my head. Instinctively, I ducked as the

aggressor peeled off his course a few feet from my head and wheeled back up to join his peers.

"Feisty birds, eh?" chuckled Gene, as we resumed wading toward a narrow opening through the first line of cattails.

Before I had time to reply, another distinctive bird voice fell on our ears from off to our right. It sounded a little like a band of hoarse hen mallards but the source of the sound—white-faced ibises—were anything but mallards. This is one bird that can be easily recognized at any distance. The plumage of the ibises gliding around our right flank was not particularly distinctive; each member of the distant group looked a featureless black. In reality, the plumage of adult white-faced ibises is an iridescent purple or green or bronze, depending on the play of light illuminating the bird. But the profile of the ibis is unique and unmistakable.

That sickle-shaped bill is as distinctive as the fins on an Eisenhower-era Cadillac . . . but more functional. The long, decurved bill is this bird's meal ticket. The ibis stalks around the shallows on its long legs, probing and stabbing for crayfish, insects, worms, frogs, and minnows.

As we waded further into the dense stand of cattails, many more ibises launched themselves into view until a total of more than eighty wheeled around the edges of the pool. Alternately flapping and gliding, the characteristic silhouettes—necks and legs extended—faded off into the distance.

Rarely will you see a single ibis. These are extremely sociable birds. Whether feeding, nesting, or loafing in the marsh, they are hardly ever seen without the company of others of their kind. At Quivira, the number of ibises has grown dramatically in recent years.

Kansas lies on the northern portion of their range. The primary breeding range of white-faced ibises stretches from Oregon and Utah south to southern Mexico, and

east along the southern U.S. to Louisiana. They are also found in South America. The closely related glossy ibis occupies coastal regions of the eastern U.S., ranging from the Gulf of Mexico eastward to Florida, and north along the Atlantic coast to New Jersey.

Sharing similar range with the glossy is the white ibis, the commonest member of North America's ibis family. In breeding livery, the white ibis is even more easily distinguishable than its relatives; it reaches the same size as the glossy or white-faced, but adults wear a sparkling white plumage accentuated by glowing red bill and legs.

Although white-face ibises have been recorded in Kansas for years, the dramatic increase in their numbers at Quivira National Wildlife Refuge indicates a growing density, if not a genuine extension, in the northern reaches of their range in the U.S.

"We've got a lot more than we used to have," says Charles Darling, manager of the Quivira wildlife area. "Now, just about anywhere that has shallow water on Quivira is likely to appeal to the ibis."

Darling's coworker at Quivira, Ralph Bryant, has documented a significant increase in ibis numbers over the past three years. Nesting surveys compiled by Bryant reported thirteen ibis nests in 1981. The number swelled to thirty-four by 1982. This year, Bryant found sixty-two nests. Summer bird counts at Quivira this year regularly registered upwards of 200 white-faced ibises.

Bryant believes the wet spring on the Great Plains in 1981 may have been a major impetus behind the recent increase documented in his nesting surveys. Good water conditions in Kansas attracted more ibises, and succeeding generations of the growing colonies are returning to their central Kansas birthplaces. The numbers of white-faced ibises returning to Kansas each year may be bolstered further by more recruits gained on the wintering grounds.

For ibises in the core of the species' range, breeding range and wintering range are one and the same. Little, if any, fall migration occurs for them. However, Kansas-reared ibises and other members of



photo by Gene Brehm

the species occupying the northern extremes of their range must escape to warmer climates. Wintering range for migrating ibises lies in the southern coastal U.S., southern Mexico, and in South America. Kansas ibises begin their southward migration in October or November.

They return to Quivira and Cheyenne Bottoms in April and early May. They prefer to nest in colonies hidden in dense stands of cattails surrounded by expanses of open water. In the heart of their range, these colonies may contain thousands of nesting ibises.

Nests are substantial, though not especially durable, bowl-shaped platforms. Most of the Quivira nests appeared to be attached at their margins to standing cattails, and suspended a few inches above the water. The nests are built of coarse pieces of dead cattails, and deeply cupped. They are often lined with finer pieces of marsh vegetation and grasses.

Three eggs is the norm for an ibis set. Usually, the eggs are pale blue. Both parents incubate the eggs, which hatch in about three weeks. A newly-hatched white-faced ibis is not a beautiful creature. The bill is flesh-colored, with black at the tip and base, and a black band in the middle. The rich, iridescent hues of adult birds are missing in the young, who wear a dull grayish-brown or black for the most part.

Young birds undergo a partial molt their first fall, producing a head and neck plumage much like that of the winter adult, streaked with brown and dull white. At their first postnuptial molt, the young bird assumes the adults' winter plumage. Adults have a partial prenuptial molt in early spring, and a complete postnuptial molt in July and August.

By late summer, the young birds take wing and begin wandering the countryside with the rest of the colony. In some portions of the species' range, white-faced ibises often make long flights to their feeding grounds. You'll see them traveling

in groups, flying in long diagonal lines toward their destinations. They are strong fliers, with a characteristic pattern of alternating several rapid strokes of their wings with short periods of gliding.

It doesn't seem right that a gangly-looking creature with outsized bill and legs should be capable of

manifesting such grace on the wing. What *does* seem right is the fact that their numbers are growing in Kansas. Although their habitat in Kansas is limited, here's hoping we'll always have what it takes to keep white-faced ibises coming back to raise new generations of this fascinating bird.

As long as there are marshes and cattails, there will be places for ibises to live. These birds are part of a growing colony of white-faced ibises at Quivira National Wildlife Refuge in central Kansas. (Photos by Gene Brehm)



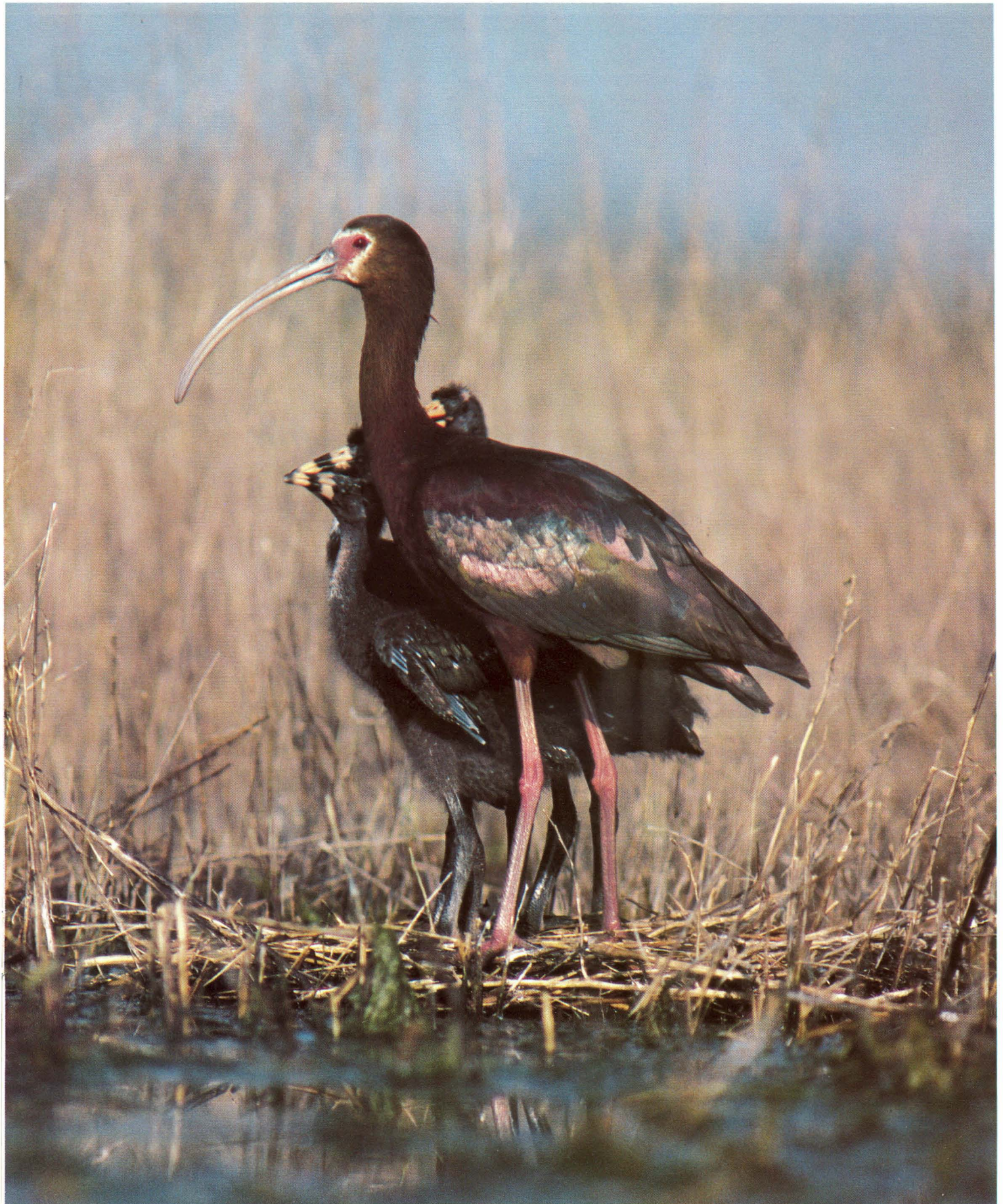




photo by Rob Manes



*what have we
learned from the dewatering
of western Kansas?*

eyes on the west

Randy Schademann

My first contact with Cedar Bluff Reservoir was in September of 1980. I had been hired as the district fisheries biologist, and was taking an orientation tour of my region. I remember spending the first day of the tour driving through hundreds of miles of drought-scorched prairie. I looked forward to seeing the lake that was to be the focal point of my work. I also remember how disappointed I was when I drove across the dam the next day. I had visualized a big blue lake, but was greeted with a windswept remnant of a reservoir, which was giving way to an encroaching forest of dwarf cottonwoods, tamarisk, and fireweed. My eagerness gave way to despair.

Had I been there twenty-five years earlier, my first impression of the lake would have been exactly the opposite. Completed in 1951, Cedar Bluff dam was a recreational godsend to the people of western Kansas, who couldn't wait the five years projected for lake filling. As it turned out, they didn't have to. Locals were pleasantly surprised

and the Bureau of Reclamation began counting flood damage dollars saved as heavy rains filled the basin in less than a year. The 6,900 acres of blue water quickly became a recreational magnet, and its heyday continued for more than a decade.

Unfortunately, Cedar Bluff could be used to substantiate the eternal pessimist's philosophy: "A good thing never lasts." In the fifteen-year span between 1963 and 1978, the lake's waters receded forty-one feet in elevation and 5,000 acres in surface area.

Some 51 billion gallons of water had vanished and has not since been recouped. What is left is some 1,900 acres of water, only one quarter of its original size and one fifth the volume.

The causes of such unabated dewatering? The decline began upon completion of the irrigation canal and lateral system below the reservoir. During the irrigation district's years of operation, an average of three billion gallons of water was delivered to some portion of the 6,800 acres in the district each year. It didn't take a hydrologist to make a connection between a falling water



Terracing and contour plowing (upper left) do an effective job of keeping the raindrop where it falls, thereby reducing surface runoff to streams. Irrigation canals, such as Woodston Diversion (above) down stream from Webster Reservoir, are criticized for their inefficiency and plagued by unreliable supplies of reservoir water. State Park Authority shelters at Cedar Bluff Reservoir (right) are now far removed from the retreating lake shoreline. (Photos by Gene Brehm)

level and the gushing stream of water which fed the irrigation system. The fact that irrigation was part of the reason for Cedar Bluff's construction didn't make recreationists feel any better; many of them still shake accusing fingers at the irrigation district.

By 1978, however, that was a moot argument. The irrigation function ceased that year, due to low water levels, and the reservoir's water levels failed to rebound. While running water down a ditch to a field of corn in western Kansas wasn't conserving any water, there

were other factors inhibiting the flow of the Smoky Hill River into the reservoir.

In an effort to define those factors in the similarly depleted Solomon River basin, the Bureau of Reclamation has conducted an extensive, multimillion-dollar study which is presently being adapted for the Smoky Hill River drainage. While the research was conducted to aid operating and future irrigation districts in their long range planning, it has provided insight into related problems which deserve statewide attention.

Many contend that it just doesn't rain like it used to, but records indicate that we still receive just as much rain as in the past. Annual rainfall variations exist, with this year bringing only sparse amounts of precipitation in many areas, but the longterm average shows little change. Storm frequency, magnitude, duration, and intensity have been investigated in several studies, with similar results. Although minor fluctuations occur, changes in precipitation factors are not a major cause in the decline of the reservoir.

Ironically, water conservation



practices of a different sort played a big role in reduction of inflows. Vast amounts of prairie above the reservoir have been converted to crop production. Between fifty and sixty percent of the watershed is now under the plow, with a third of the prairie still intact. Any conversion on this scale has a direct impact on the amount of water which runs off the land and eventually to the reservoir. While farmers intensify efforts to hold moisture on their land, storm runoff has been severely impeded.

Much of the agricultural ground is

in wheat production. The practice of tilling under the stubble left after wheat harvest is a very efficient method of controlling runoff and conserving water. This stubble mulching, when used in conjunction with a properly designed and constructed terrace system, can reduce runoff by more than ninety percent. Construction of stockwater ponds is another method of manipulating the terrain into being more effective at holding rainfall. All told, watershed conservation practices have reduced historic inflows to Cedar Bluff by almost two-thirds.

Another significant cause for inflow reductions is water well development in the watershed above the reservoir, particularly along the Smoky Hill River. The correlation between river flows and groundwater supplies, although not directly visible, is very real. A stream owes part of its existence to the seepage of groundwater from a zone of sediment. This water-saturated zone of sediments, called an alluvium, was deposited by the stream and actually underlies the surface flow of water. The seepage from this alluvium accounts for much of the

flow of water during dry spells and makes up a portion of the total stream during periods of runoff. These base flows, then, are directly affected by the amount of water in the alluvium. When water levels in the alluvium are reduced naturally during dry periods, or artificially from groundwater mining, baseflows are also reduced.

A severe reduction in baseflows has occurred in the Smoky Hill River. From 1965 through 1982, the acres of irrigated land from Cedar Bluff Reservoir westward to the confluence of Ladder Creek and the Smoky Hill River, in southeast Logan County, quadrupled. Consequently, the amount of water removed from the alluvium for irrigation greatly exceeds the amount regenerated by rainfall seepage. The effect on the river has been that the amount of groundwater seepage which sustains baseflows has reached zero. For all intents and purposes, the Smoky Hill River above Cedar Bluff Reservoir flows only during periods of runoff.

Some of the effects of reduced inflows are obvious. Boat ramps and paved access roads end with water not yet in sight. Coves which once offered isolated and protected fishing spots now harbor populations of deer and pheasant. The south shore marina is a good hike from the water's edge. And a large supply of extension cords is needed to be near the water and still have electricity from park authority hookups.

Other effects are not as visible. The reduced lake size and inconvenience of limited access and remote facilities have diminished the number of recreationists. The prolonged dewatering played havoc with the fish population. As habitat and spawning sites were rendered unavailable, both sport and prey fish populations suffered. The overall quality of a Cedar Bluff outing was diminished.

The dewatering of Cedar Bluff, and the subsequent loss in water-associated recreational opportunities, would cause less distress if it

was unique. Unfortunately, similar scenarios have been played out at Kirwin, Sebelius (formerly Norton), and Webster reservoirs. In total, there's a shortfall of some 13,000 surface acres of water between what the reservoirs were designed to hold and what they now contain. A tremendous loss in both economic and psychological benefits to the state has occurred, and the process continues.

While the design of Cedar Bluff dictates an unlikely doubling of the reservoir's volume before irrigation releases can be made, other reservoirs in the west are operated differently. This summer, spring inflows to Webster and Kirwin were used to irrigate crops in the districts below those reservoirs.

However, the poor efficiency of the irrigation system, in which approximately half of the water released from the reservoir is lost before it reaches the crops, has spawned serious questions. Given the system's inefficiency, is irrigation the most beneficial use of water still reaching the reservoirs? This type of wholesale dewatering will severely impair fish population development and limit recreational use and quality for years to come.

On the other hand, the irrigators themselves are in precarious positions. Their ability to repay the Bureau of Reclamation for the building of the irrigation system, and part of the dam itself, is contingent on income derived from irrigated crops. Additional expenses of maintenance on the canal brings the total annual bill to around \$15 per irrigated acre. Cheap water . . . if you can get it. Cedar Bluff's irrigation district has not gotten water since 1978. The other three districts' water supplies have also been spotty. Deferment of the construction repayment can and has been done, but the balance of the loan remains, and annual maintenance costs continue.

Perhaps even more controversial is the use of groundwater supplies for irrigation. Mining of alluvial

water has already been addressed as a cause for reduced inflows to the reservoirs. However, there is a more direct impact resulting from reduced flows than that of impaired use of reservoir water for recreation and irrigation. The damage done to the streams themselves is of equal importance.

The South Fork of the Solomon River above Webster, the Solomon's North Fork above Kirwin, Prairie Dog Creek above Sebelius, and the Smoky Hill above Cedar Bluff flow only during periods of heavy rainfall. Streams not associated with reservoirs are less studied, but have equally depleted flows. Beaver Creek, Sappa Creek, and Big Creek in the northwest, as well as Walnut Creek, the Pawnee, the Arkansas, and the Cimarron rivers further south, are only remnants of their former selves. For much of the year, these streams are dry.

The scenario has become sickeningly familiar: desirable fish give way to rough fish, then to small fish and minnows, and finally to no fish at all as the stream flow deteriorates. In some areas this progression is reaching more advanced stages, where trees and associated wildlife are dying out. Domestic use of downstream water is impaired as upstream pumping leaves no water for livestock and household use. Municipalities become concerned and begin to look for alternative sources as their wells become less productive. The irrigators themselves see their wells going dry and begin to look at dryland farming once again.

How has it been allowed to happen? It's a good question. For years, many state agencies have been involved with water, largely operating independently of each other. As a result, water as an elemental natural resource has been inadequately studied, overappropriated, and in some cases squandered. To help consolidate the efforts of state water agencies and to give the future of water use in Kansas some direction, a state water plan is being devel-

oped. While it is definitely needed, the wellbeing of wildlife under such a plan is in question. A comment by a Kansas Water Authority official listing the ranked priorities for water as “. . . municipal, industrial, agricultural and, of course, wildlife . . .” reaffirms those concerns. This bottom-of-the-list, incidental-to-everything-else approach to wildlife can be damaging.

Still, some bright spots appeared in the preliminary draft of the water plan. Drafted by the Kansas Water Office, it included considerations for minimum stream flows, an action to preserve the biological resource living in streams. However, this and other considerations may prove too little too late for western Kansas aquatic systems.

For Cedar Bluff, the immediate future looks relatively bright. A new, semi-stable equilibrium between decreased inflows and losses to evaporation and seepage has been reached. Sportfish populations are rebounding. Walleye, once considered by Cedar Bluff anglers to be extinct, are now developing into one of the best populations in the state. White bass and crappie are showing similar responses to the presently terminated declines. Yet, the low amount of inflow received this spring may be some foreboding of things to come. Hydrologically-unimproved croplands above the reservoir are still available for further water conservation practices. New, more water efficient means of farming insure more declines in the amount of runoff. And the only reversible cause of depleted inflows—irrigation—continues at its overallocated pace. The extended outlook for all four western Kansas reservoirs is not an optimistic one.

Of further concern is the eastward movement of this scourge of low water reservoirs and dry streams. The next downstream tier of reservoirs includes Glen Elder, Wilson, and Kanopolis. All have been considered for irrigation use. As the threat of water shortages increases, more serious consideration will also

be given to these and other reservoirs as additional municipal water supplies. As for inflows to these lakes, already in 1983 the Smoky Hill River was dry above its confluence with Big Creek in Russell County. Continued groundwater development will cause streams to become intermittent and finally dry farther and farther east.

There is no happy ending. The

issue of water supplies and use will intensify as competition increases between agricultural, municipal, and industrial sectors. Without widespread public support, wildlife may receive the short end of the stick. Measures must be taken to insure enough of the stick remains for wildlife to hold on.

Randy Schademann is a fisheries biologist in northwest Kansas, stationed at Hays.



The far-reaching adverse effects of depleted flows in the Smoky Hill River (above) and other Kansas streams emphasize the importance of preserving minimum stream flows. (Photo by Gene Brehm)



Cover photo by Gene Brehm