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P. O. Box 1028 Pratt, Kansas 67124 316-672-5911

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November-December, 1976

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Magazine Staff

VIC MCLERAN	Editor
George Anderson Staff	Writer
GEORGE VALYER Staff V	Writer
BOB WELLBORN Staff V	Writer
KEN STIEBBEN Photogr	apher
Bev Aldrich Editorial Ass	sistant
JUDY MESSECAR Editorial Ass	

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Cover Credits

Mallards and winter scene by Ken Stiebben

Editorial ____ PREVIEW



McLeran



Anderson



Schwilling



Wellborn



Valyer

It's November again and I'm reminded of what the late Havilah Babcock once wrote. . . . "My health is always better in November." If you're a hunter, you know what he meant. November is a time of burning leaves, brilliant autumn colors, woodsmoke, an eager young Brittany, oiled shotguns, pre-dawn coffee and a cock pheasant's raucous flush. It's a time when most of the doves have drifted south to the cut milo fields of Oklahoma; a time that's seen most of the teal come and go, winging on into Texas; and a time of Canada geese falling into corn stubble. And too, if you're a duck hunter, November means big greenhead mallards, down from the prairie pothole country of Alberta and the Dakotas—down to work the cut grain fields and gobble the acorns of eastern Kansas.

All this brings us to the lead piece in this month's issue—a story on shooting mallards in flooded oak timber. The article should provide you with some fundamentals as well as some pointers on taking mallards in the timber.

A good number of Kansas duck hunters think about Cheyenne Bottoms when they think of waterfowl. And to a lot of these hunters, Marvin Schwilling is synonymous with the famous waterfowl area north of Great Bend. Serving as the Commission's waterfowl project leader for 15 years, Schwilling was stationed at the Bottoms for 14 years. Prior to his work in Kansas, Marv worked for several years as a researcher on prairie chickens and sharptail grouse for the Nebraska Game, Fish and Parks Commission. A native Kansan, Schwilling is a Chase County product that drifted west to pick up a degree in zoology from Colorado State University. A widelyrecognized authority on ducks and geese, Schwilling has served for the past 15 years as Kansas' representative on the Central Flyway Council's technical committee. With these credentials in mind, we asked Marv to prepare an article on duck identification. His informative piece is accompanied by a color centerspread of the most common ducks in Kansas—all designed to make our Sunflower waterfowlers a little more adept at duck identification.

In addition to duck season, deer season also opens in November. To accommodate our deer-hunting readers, George Anderson has written a story on those flag-waving whitetails. If you didn't get your buck last year, Anderson's article may tell you why since he outlines several of these intelligent animals' survival techniques.

Former staff writer Bill Scott did some research on the goose flock at Brown State Fishing Lake in the northeast corner of the state. He came up with an article which pretty well documents the situation. If you're a goose hunter and live in northeast Kansas, you'll want to read it.

There are a lot of people in Kansas, even outdoorsmen, who've never seen a weasel. But these shy, savage little predators are more common than you think. George Valyer, staff writer, has written an interesting profile on these little-known Sunflower residents.

If you've been afield during the fall or spring months in the central or western part of Kansas, there's a good chance you've seen the subject of our next wildlife profile—the sandhill crane. Written by Bob Wellborn, staff writer, the article provides some interesting information about this unusual long-necked bird that migrates through the Sunflower State twice each year.

Finally, there's a piece written by Daniel A. Poole, President of the Wildlife Management Institute. Poole talks about the future of hunting and what we all can do to insure its continuance.

> VIC MCLERAN, Chief Information-Education Division



G HOSTLIKE FINGERS of mist reached out from the river, clawing into the flooded riverbottom oaks around me. A November sun, just above the eastern horizon and climbing, shot oblique shafts of pale gold through the timber.

The early morning silence was broken every few moments by a loud "plop" as acorns released their grip on the parent oak and surrendered to gravity. Several yards away, a bluejay flashing blue and white lit on the limb of a scrawny oak. Spotting me, he screamed profanely, indignant at my presence.

A few feet to the north, in a small flooded clearing, a dozen mallard decoys bobbed peacefully. Off to my right, looking like he'd just stepped from the pages of an Eddie Bauer catalog, was Joe Goodeyon, a veteran duck hunter from Chanute.

"They're not comin' in as quickly as they did yesterday," Joe said, cradling his battered old Model 12 and leaning back against an oak.

"Maybe word got around about my excellent shooting," I suggested. "Probably made those mallards cautious."

"Hmpph," Goodeyon snorted. "If those ducks had heard about your shooting, they'd be in here right now, gobblin' up acorns and feelin' real safe about it."

Unable to think of a quick reply, I just muttered something hateful.

The oak timber around us was inundated with brown backwater from the Neosho River. About three feet deep, the water was dotted here and there with floating acorns and fallen leaves.

A large number of different wildlife species are fond of acorns and mallards are no exception. They'd been falling into this flooded timber for the past several days to feed on the floating nuts.

Up to now, the ducks had been fairly predictable, coming in twice a day—once in the early morning and again in the late afternoon.

We'd spread our dekes in a small clearing then positioned ourselves at the base of oaks around the clearing's edge. Garbed in camouflage clothing and hip waders, we'd found a blind wasn't necessary as long as we remained still.

"Here they come," Joe hissed, looking to the northeast.

Sure enough, through the branches and out across the river, I caught a glimpse of six or eight mallards winging our way. Goodeyon, a pretty fair country duck caller, cut loose with a "highball"—one of those raucous screams designed to get the ducks' attention. At first, the mal-



Ken Stiebben

Fish and Game

lards didn't pay much attention though they did begin a wide circle around us. Joe continued calling, blending the low-muted feeding chuckle into the higher-pitched calls.

As the birds circled closer. Joe splashed water with the toe of his hip boot—a tactic many duck hunters say simulates the noisy splashing of feeding ducks.

The mallards tightened their circle, coming closer and closer with each pass. Finally they set those beautiful purple and green-tinted wings and began a side-slipping descent through the oaks toward their phony counterparts below.

With bright orange legs and feet extended, the first two ducks—a drake and a hen—splashed down among the bobbing decoys. The others were right behind.

"Take 'em," Joe muttered and stepped from behind an oak to neatly fold the first drake off the water. With adrenalin pumping, I swung the Browning past a climbing drake, touched off and dropped him among the decoys.

When the smoke had cleared, we counted five ducks on the water—four drakes and a hen. Twenty minutes later Goodeyon called another small flock into the decoys and we finished out our bag limit for the day.

It was timber shooting at its finest. John Cartier, midwest field editor for *Outdoor Life*, probably describes it best in his book, *Modern Waterfowling*: "The most famous timber shooting spots are in the pin-oak flats of Arkansas and neighboring states. Flood water is the ingredient that produces the shooting bonanzas. The country is so low that heavy fall rains easily cause many rivers to overflow. The water backs up into low-lying timber and stands until the rainy season is over. Depths of the flood water measure from six inches to a couple of feet, making it perfect for wading hunters and shallowfeeding ducks. The attractions for puddlers are the acorns that fall off oak trees by the thousands. All the ducks have to do is swim around and gobble them up."

Although this type of shooting is normally associated with places like the pin-oak flats around Stuttgart, Arkansas, it's also available in a surprising number of areas throughout eastern Kansas. Our shooting was done along the Neosho River in the southeastern part of the state, but this kind of duck hunting certainly isn't limited to the southeastern corner. And you don't necessarily need to wait for a river to flood the oak timber. A lot of farm ponds back up into adjacent oak woods when the fall rains come and they too, can offer excellent shooting. In fact, just about any pond or backwater slough which is bordered with oaks, can produce this super shooting.

Sometimes it can be quite a trick to locate areas of this type. Here's where good landowner relations can pay off. Since ducks have daily feeding flights, they're often spotted by farmers working their field. If you know farmers who have riverbottom timber on their place, give 'em a call. Maybe they can direct you to some good shooting. And always remember to obtain landowner permission before hunting any area.

Larry Tiemann, game biologist for the Commission, and an avid duck hunter, uses a plane to locate good areas. He hires a commercial pilot to fly him around. Using a map, Larry marks those areas that are holding ducks or look like good spots. Back on the ground, he contacts the landowner for permission to hunt.

Bob Hinman offers this advice in his publication, *The Duck Hunter's Handbook:* "If no naturally flooded woods can be found near you, keep an open eye for bottom timberland that could be flooded through the use of pumps or diversion of water."

One of the nicest things about timber shooting is its simplicity. You just don't need all the equipment that is associated with other kinds of duck shooting.

Take decoys for instance. In larger bodies of open water, the more dekes you can spread, the better off you'll usually be. This isn't true with timber shooting. A half dozen to a dozen dekes will usually suffice. This means you're not bothered by having to carry in several dozen decoys in bulky, burdensome bags. Goodeyon and I used one of the "Camo Deke Toters"—a poncholike camouflaged affair which carries a dozen dekes, each one in its own compartment. You just slip the thing over your head and have both hands free for your shotgun and anything else you might want to take into the timber. The "toter" spreads the dozen dekes full circle and distributes their weight evenly. It's a real handy item for the duck hunter.

Hip waders are a must—chest waders if the water is deeper. But you usually don't need a blind for timber shooting. Just position yourself at the base of an oak or other available foliage and wait quietly. Try to flatten yourself against the trunk as the ducks move closer. When they show some interest, kick up ripples in the water with your feet. The commotion is supposed to convince the ducks that other mallards are busy feeding in the area. Remember to keep yourself hidden by either circling the tree to keep the trunk between you and the ducks or simply remain frozen against the trunk. As the birds swing closer, keep your face turned down but try to watch the ducks out of the corner of your eyes. If you're still enough, you sometimes don't even need the cover.

I recall one afternoon when Goodeyon, myself and Jim a Chanute pharmacist, were gunning the oaks. Goodeyon and the pharmacist were out in open water positioning the decoys when several mallard swung in from the north. Both men froze without looking up. As I watched from the timber, the mallards splashed down within several feet of both hunters.

Good calling is essential. As Cartier writes in Modern Waterfowling, "Ninety-five percent of decoying success in timber hinges on the hunter's ability to use a call. The other five percent is in keeping your shooting area looking absolutely natural. Clothes must blend with tree trunks. Gun-shy puddlers will never descend through the limbs if they spot floating lunch wrappers, empty shotgun shells or other debrist. But top calling ability is the heart of the system. Because of the trees, you can't see many flocks until they're in your immediate area. That's the reason that veterans keep calling almost continually. They'll frequently pull ducks they don't even know are in the vicinity. As soon as the birds are spotted the calling is toned down and the water-disturbance trick begins."

Camouflage clothing of course is essential and early in the season mosquito repellant is helpful. There are always a few hardy mosquitoes that have survived the first frosts and have found refuge under the bark of the oaks. Trying to wait motionless for the big mallards to set their wings is a miserable hassle when mosquitoes are working you over.

The choice of shotguns is purely a personal thing but 12 gauges seem to get the nod simply because of their heavier loads. Since much of the shooting is done at fairly close range—15 to 25 yard shots are common improved cylinder is a pretty good choice of choke. And even then, there are gonna' be times when you wished you had a skeet bore.

Preferred shot sizes run the gamut from No. 4 all the way up to S's, but the high brass No. 6's are probably the best all around shot size for most timber shooting.

Because of the close shooting and the shallow water, a retriever isn't necessary. Even if you drop a cripple, it's usually an easy matter to take care of at the close ranges.

Though the mallards usually fall into a pattern of feeding in the oaks during the early morning hours and again in the late afternoon, there are times when they'll spend the midday hours loafing and preening in the timber. It's an opportunity to get in some good jump shooting. Easing your way through the oaks you can often move to within shooting range, especially on a windy day when the wind muffles the sound of your approach. But the shots are generally made at greater distances so your choke should be a little tighter and your shot loads heavier than when shooting over dekes.

Once you've got your mallards—What then? Well, ol' Goodeyon did it again; showed me a super way of preparing the ducks. It's a method similar to the one I described for doves in the September-October issue of Kansas Fish & Game.

You first tear away the skin and feathers over the breast, exposing the meat. Then with a sharp knife, filet the breast meat away from the bone, one side at a time.

Then rinse the breasts thoroughly, washing as much of the blood from the meat as possible. I usually soak the breasts overnight in a mixture of salt, baking soda and cold water. When you're ready to prepare them, take the breasts from the water and rinse them again. Dust them with black pepper, garlic salt and dried onion flakes to taste. Then take some cheap bacon with a lot of fat and wrap each piece of meat, skewering the bacon with toothpicks. When the coals on your charcoal grill are just right, place the meat on with a pair of tongs, being careful not to dislodge the toothpicks. Once the bacon becomes brown turn the breasts. Don't let the bacon become crisp because this tends to dry out the meat. When the other side is done take the breasts off and serve them with baked potatoes and tossed salad. I guarantee it'll have you thanking the Lord for mallards and acorns.

Mallards, like the hen pictured here, are extremely fond of acorns.



Leonard Lee Rue

Fish and Game

Here's a close look at the wary whitetail deer.

By George Anderson

HE DOE stood like carved stone in the alfalfa field. Head erect she sensed our presence in the dim early light of the spring morning. Behind her, at the edge of the field and close to protective cover, was the reason for her concern—twin fawns.

We were watching the deer through binoculars from a hill 300 yards above the meadow. The only sound to break the morning silence came from a lone bobwhite quail as he called to his mate. A perfect day for the job at hand; locating and marking deer fawns for a study being conducted by the Kansas Fish and Game Commission.

This writer was then a game protector stationed in northwest Kansas and was helping Bill Hlavachick, big game biologist, locate fawns to be tagged in a movement study. An interesting job, but the fawns we were watching this morning were too old.

Fawns have to be located when they're no more than a week old in order to catch them. Once they're traveling with the doe it takes a broken-field runner to catch one. Hlavachick had proven this to me several times, returning from a chase out of wind, hair down in his face and rivers of sweat poring off his body. Bill would generally terminate the chase after a brave 400 yard dash with a gasping,"Oh, to hell with it."

There would be no chase this morning. Suddenly the doe spun around and broke for the timber at the far end of the field.

"Whitetail," Bill mumbled still looking through the binoculars at the departing deer. "Look at her wave that flag."

Even in the gathering light of early morning there was no doubt as to what species of deer we were watching. The whitetail is aptly named because of the white undersurface of its flaglike tail. With the white hairs erected



Leonard Lee Rue



Ken Stiebben

Well-equipped for survival with its dappled camouflaged markings, this whitetail fawn sits motionless for the photographer.

and the large, white "flag" waving back and forth from side to side, no one can mistake the distinctive trademark.

The fawns, taking a cue from mom, bounded towards the timber but only one of their tiny flags was waving. One of the young deer failed to raise the tail and as it caught up to the doe, waiting at the edge of the trees, it stopped. The old doe walked around the youngster and when they disappeared in the brush the fawn was carrying its tail erect.

"Looks like she chewed the little fellow out," I laughed. "Sure got his tail up in a hurry."

"Probably told him if he was gonna' be a whitetail to act like one and get that flag in the air," Bill replied as we drove off in search of fawns small enough for Hlavachick to catch.

Kansas has two species of deer. The whitetail and the mule deer. The area we were working was on the Smoky Hill River in southern Trego County. Both species of deer inhabit the area and while the big mulies are a grand animal in their own right, the whitetails seem to be the most elusive of our Kansas deer.

The whitetailed deer is an animal of the north, east and southern regions of the country. There are thirty subspecies of Odecoileus Virginiana, the proper name of the whitetail, ranging from the large northern woodland deer to the Florida Key deer which isn't much taller than a collie dog.

Unlike mule deer, whitetails are most numerous along

stream courses where deciduous trees such as cottonwood, elm, ash, hackberry, willow and oaks are found. In addition brushy species including the sumacs, coralberry, dogwood, plum, chokecherry and currant provide permanent year around habitat. Adjacent croplands also provide food and cover during the growing season.

Mule deer prefer and are more abundant in the river breaks and uplands, often ranging many miles from the nearest drainage.

Whitetail deer are so well known that only a brief description is necessary. During the summer months the coloration is a reddish-brown to a tan color and is often referred to as the "red coat." In winter, the coat is similar to summer but is more gray to grayish-brown or "blue phase."

Fawns at birth are reddish to reddish-yellow in color, spotted with white. As the fawns grow the spots become dimmer until uniform coloration is attained at three to five months.

The air-filled hairs insulate the animal so well that it can bed down in snow for hours without melting it. By the same token, the hairs provide the deer with sufficient buoyancy in water to allow it to swim or paddle for great distances. The whitetail is well equipped for survival.

Gestation period for whitetail deer is from 200 to 205 days. Most fawns are born during the last two weeks in May and the first two weeks in June. Some does that were bred late in the winter (particularly fawns) may have their young in July or August. Fawns born later than August would be unusual but it can occur. The writer, while still a game protector, received a call from a Trego County farmer reporting such an occurrence on a farm south of Ogallah.

Receiving a call on a fawn sighting was not uncommon during the spring because we let it be known of our interest in marking fawns for the movement study. But this was November and the first real cold snap of the year had set in with nineteen degree temperatures and light snow. It certainly wasn't the fawning season.

Early the next morning, with the assistance of Bill Hlavachick and several local farmers, the area was searched for the fawn. Within an hour a set of tiny deer tracks was located at the frozen edge of a creek. A short time later the deer that left those tracks was found half frozen, blind in one eye, lying at the edge of a snowswept meadow above the creek.

The fawn was about five weeks old and would have to have been born in October. "Mother Nature" had done it again—defied the normal. This is a trait she has a bad habit of doing.

Due to the condition of this fawn, and the total lack of evidence of the doe being in the area, it was taken to the Brit Spaugh Zoological Park in Great Bend for care. This was a rare case of removing a fawn from the wild but one that we were certain had been abandoned.

Each spring well-meaning people come across fawns lying in the woods or at the edge of a meadow. Many times they come to the conclusion that the fawn is an orphan and remove it. This is a tragic mistake. The doe is generally in the area and knows exactly where she left her young. Leave wildlife where it belongs—

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SPORTSMAN'S CALENDAR

SEASON	OPENING DATE	CLOSING DATE	BAG LIMIT	POSS. LIMIT
Rabbit, Cottontail	Season Open Year	Around	10 20	
Rabbit, Jack	Season Open Year Around		No bag or possession limit	
Squirrel	June 1	December 31	5	10
Bullfrog	July 1	September 30	8	No possession limit
Furbearer (running)	August 1	October 31	May not be killed	
Furbearer (hunting)	November 10	January 31, 1977	No bag or possession limit	
Furbearer (trapping)	November 20	January 31, 1977	No bag or possession limit	
Beaver (trapping)	January 1, 1977	February 15, 1977	No bag or possession limit	
Mourning Dove	September 1	October 30	10	20
Teal Duck	September 11	September 19	4	8
Rail, Sora & Virginia	September 11	November 19	25	25
Snipe, Common	September 11	December 26	8	16
Antelope (Archery)	September 25	September 29	1*	1*
Antelope (Firearms)	October 2	October 4	1*	1*
Woodcock	October 9	December 12	5	10
Geese	October 23	January 16, 1977	5**	5**
Ducks (East of US 283)	October 23 December 18	December 12 December 26	100 points	Two days limit
Ducks (West of US 283)	October 23 December 18	December 12 January 13, 1977	100 points	Two days limit
Pheasant	November 13	January 31, 1977	4	12
Quail (West of US 81 & North of I-7	November 13 0) November 20	January 31, 1977 January 31, 1977	8 8	24 24
Prairie Chicken	November 20	December 19	2	6
Deer (Archery)	October 1 December 18	November 30 December 31	1*	1*
Deer (Firearms)	December 4	December 12	1*	1*

* - Special Permit Required

** - Special restrictions - check regulations brochure.

OBSERVATIONS on the shooting sports

WHY I LIKE TO HUNT WITH YOU by Gene Hill Executive Editor, Sports Afield



I've been thinking about why I especially like to hunt with you. I don't remember ever having a day together that I didn't enjoy, because you care much more about why we are together in the field than about what we take away in game.

I like the fact that you don't talk too much, don't make excuses and never brag — unless you say something nice about my dog, something more than being plain polite.

When we gun the covers that you've chosen, I know you always let me take the choicest spots and often pass up shots in hopes the bird will swing my way. I know you count the few birds you've hit and lost against your limit, and I've seen you time and again refuse a chancy shot that might touch a bird we couldn't fairly bring to bag.

You always remember a littlesomething gift and take some pleasant time to chat with the men that own the land we like to gun. You make a point of stopping in the local store to say hello.

You've always been on time and do more than your share of the little things that make a hunt a happy day — regardless of the birds we've found—if any.

I always know that you know where I am in heavy cover. You are careful to let me know your whereabouts as well — and I have never, not once, looked down the end of your gun barrel. Nor do I ever expect to.

When the day is over and the guns are put away, you show me that your gun is empty. You know when to drink, how much and when not to.

You never complain about being too hot or too cold or too tired—unless you think I might feel the need of leaving early, and somehow you make it easy then for me to say "let's go." If you think I'm just plain tired, you say you are and suggest we sit and smoke a pipe and ease the dogs.

You always seem most pleased when I've had some sort of outstanding day. You never forget the few things I've done more or less well and tend to say "barely all right" about yourself, when in all fairness it was often just the other way around.

It seems you pick and clean more than your share of the birds — and then offer the most and choicest to the rest of us.

You manage to keep the camp cheerful, claim you like to cook and wash and dry as well as make sure of the wood supply. And somehow everywhere I go you're there. You turned up my Texas bunkie who helped me do my whitetail buck in half the time and twice as well as I'd have clumsied it through all alone.

I remember the time you gave me a stand that "wasn't very special," when we gunned an Arizona sunflower field for doves—and then you marked my birds and quit when I had gone the limit even though your gunning day was far, far less than you deserved.

We met in Pennsylvania gunning grouse, and somehow you put me just so behind your soft-footed little setter where I got the kind of shots that even I can make.

You marked my singles down in waist-high South Carolina broom and never failed to say "nice shot" when I took one bird where I think you might have taken two.

I remember how well you called the pintails in that Utah lake and how you let me take first shots at swinging honkers on the Eastern Shore.

Sometimes I've called you Tex, or Billy Joe or Little Jim or Pat. No matter now—like the outdoors gentleman you are—names don't mean a thing. I know we'll meet up again this fall, and I'll be all the richer for it.

You'll be the man who remembers to bring a flashlight, an extra sweater and that I like my coffee black. And just in case I never said it to your face before, you're as big a reason as I know to spend a day outdoors. You make the days seem all too short and too few and far between, my treasured friend. You are everything that puts real meaning in that simple phrase: "a Sportsman."

Provided as a public service by The National Shooting Sports Foundation

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ANTELOPE SEASON SUCCESSFUL

(released Oct. 7, 1976)

PRATT--The 1976 archery and firearms antelope seasons are now history and the Kansas Forestry, Fish and Game Commission reports that hunters had good success.

A total of 72 hunters harvested antelope during the firearms season last weekend and seven archers got their pronghorn during the firearms season the previous week.

Firearms permits were issued to 80 hunters for the firearms season but game protectors and biologists report that only 72 hunters were checked in the field and everyone contacted checked in with an animal during the three-day season.

The seven successful bow and arrow hunters came from a field of 50 who had permits. If all of them hunted, which is unlikely, the success ratio would be 14 per cent.

The most satisfying aspect of both seasons was the fact that no accidents were reported and no complaints were received from landowners.

Commission biologists report that the antelope herd in northwest Kansas is in good condition and prospects look bright for continued good seasons in the future.



Duane Smith, Smith Center was one of seven successful bow hunters during the first archery antelope season in Kansas.

Smith took his antelope on the last day of the season which ran from September 25 to September 29.





PHEASANT HUNTING EXPECTED TO BE FAIR

PRATT--Pheasant hunters planning to hunt in western Kansas this year can look for something less than a bumper crop of birds. Except for isolated pockets, pheasant numbers are only fair in most sections of the West. The Kansas Fish and Game Commission advises hunters that numbers are down in the northwest counties compared to last year due to the loss of brood stock in last winter's blizzard.

Areas which showed a population increase over last year include the north-central and southwest parts of the state. In those areas, hunters should experience some fair shooting with isolated good spots.

Agricultural practices of the past few years have caused a reduction in pheasant habitat with the most critical factor being the loss of adequate winter cover. Until such times as economic factors allow the landowner more latitude in leaving wildlife cover, we can expect the present level of pheasant populations to continue.

The Kansas pheasant season opens on November 13 and continues through January 31, 1977. The daily limit is four cock birds with a possession limit of 12 on and after the third day of the season. in the wild. The little buck fawn, given the chance, just might have developed into a fine trophy animal.

One of the more impressive sights in the wild is a buck deer in the prime of life with a massive set of antlers. The antler is some of the fastest growing tissue in the animal world. Food conditions control the growth of antler development. The so-called "super racks" are a product of nutrition, age and heredity.

One of the more common misconceptions is that you can tell the age of a buck deer by the number of points on his rack. That idea simply won't hold water. Antler points have nothing to do with the age of a deer. John Madson, in his book, *The White-Tailed Deer*, tells of a whitetail shot in Texas some years ago that had 78 antler points. Like Madson says, "You can lay odds that he wasn't 78 years old!"

The most reliable age indicator of deer is their teeth, which can show progressive wear and reveal the deer's year class.

A buck's antlers are solid, bony growths protruding from the skull. They are not horns. Horns are hollow or nearly so, and once grown are not shed. Sheep, goats and cattle have horns, while deer, elk and moose have antlers that are shed every winter with new growth starting in spring.

In Kansas, new antlers begin to form during April and early May. They are covered with skin and short hair known as "velvet". This velvety skin is filled with blood vessels that nourishes and builds the growing bonelike material of the antlers. As the blood supply is cut off during August and September they harden and the velvet starts to peel off.

Bucks, while testing their strength on limber saplings prior to the rutting season, hasten the removal of the velvet. As the rut or breeding season peaks there is much "shadow boxing" and a few encounters with other bucks.

I witnessed an encounter involving three whitetail bucks several years ago southeast of WaKeeney on Big Creek. The largest of the three, and apparent "king of the valley," was carrying a heavy five-point rack. The second buck, and most serious challenger, was a threepointer. Watching the two from a safe twenty yards away was a little "spike" whitetail. The little fellow acted like he knew he was supposed to do something, but he wasn't sure what it was.

The big buck stood his ground as the three-point made several charges with his head low. Antlers would rattle and dirt fly for a few seconds on contact then the smaller of the two would back off for a second look.

While the two bucks stood glaring at each other at a distance of five feet the little spike decided to make a move. With short pogolike jumps he approached the big deer and stopped. Obviously upset with this pesky little intruder, the buck spun around, stamped his feet and shook his head from side to side. The spike must have thought this was a good way to get hurt and beat a hasty retreat.

Satisfied that the little deer had departed, the large buck whirled back to his challenger and hooked the short, three-point rack on one side. With a downward

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thrust he drove the deer to the ground. Once again he had met the challenge and won.

It was not until the defeated buck had been released that I noticed a doe in a stand of willows not far away. She had quietly been watching the joust for her affections.

Seldom do bucks fight to the death. On occasion their antlers become locked and they are doomed to die a horrible death from starvation and thirst.

C. W. Severinghaus and E. L. Cheatum, writing of the life and times of whitetailed deer in *The Deer of North America*, say, "Only a few cases of locked antlers are found each year. Even if there were a hundred pairs of bucks in a million who permanently locked antlers each year they still are a small part of the potential number, for each buck may have several fights during the breeding season."

Kansas hunters have found the remains of deer with locked antlers while bird hunting during the winter months. Several sets of locked racks are on display at the Fish and Game exhibit hall in Pratt.

While deer move around during the breeding season, they normally spend most of their life within several miles of their birthplace. Deer are not migratory.

Big strong racks like the one exhibited by this whitetail buck are indicative of healthy deer.





In his informative book, The World of the White-tailed Deer, author Leonard Lee Rue comments on deer movements. "White-tailed deer are not migratory in the true sense of the word. Caribou, elk, or even mule deer, on the other hand, may travel great distances. The whitetail does make occasional shifts of its home range to a more sheltered area in winter to 'yard', if forced to do so by the elements. However, this seldom means a move of more than a few miles," Rue explains.

In Kansas, a deer movement study conducted by the Kansas Fish and Game has shed some light on this subject. Most deer tagged were mule deer fawns and recovered tags indicate an average movement of the deer of 51 miles.

"The study has shown that deer do most of their traveling the first year," said Kent Montei, big game biologist for the commission. "Tags recovered from fawns showed very little movement while the yearlings had moved a considerable distance from their birthplace. Once established in their own territory the deer move very little."

The most dramatic shift in range involved a whitetail doe. On June 3, 1970, the doe fawn was tagged by state game protector Wes Wikoff at the old Sheridan Lake site in Sheridan County. On December 5, 1971, the deer was harvested by a deer hunter two miles west of Rago in Kingman County. The doe had wandered some 170 miles from her birth site.

Whitetails on the move are indeed a study of grace and beauty. The mule deer are a delight to watch as they bound off like a stiff-legged pogo stick when alarmed. The whitetail on the other hand appears to glide almost effortlessly after gathering speed and can reach speeds up to 30 mph. The whitetails jumping ability has been documented many times. John Madson, in *The White-Tailed Deer* tells of a Michigan deer biologist who has seen a scared buck leap from the middle of a township road and clear the right-of-way fence . . . "a good thirty feet". A New York biologist once measured a running broad jump of twenty-nine feet which involved clearing a windfall over seven feet high!

While the whitetail has the ability to move with speed and grace, they also possess the knowledge of "when not to move". Perhaps one of the most important tools in their survival kit.

The whitetail, given the proper amount of cover, can be as inconspicuous as a leaf on a tree. Unless startled or the hunter comes too close, many bucks are content to let the hunter walk right on by.

I watched a sly old buck outwit three hunters several years ago on opening day of deer season in northwest Kansas. I was parked on a rim overlooking the public hunting area above Page Creek on Cedar Bluff Reservoir. This area is ideal habitat for whitetail deer and it was common knowledge that at least one trophy buck resided in the area.

I'd noticed several vehicles parked along the access roads and decided this was as good a place as any to observe the hunt. Daylight had washed the valley but made little progress in warming the air. It was cold. In fact, it was damned cold and I was glad to be an observer and not a participant in the hunt.

Below, three hunters were moving through a large patch of sunflowers. This obviously was not a quiet stalk as the dried stalks of the plants popped and cracked like a wet log in a fire. The hunters were spread out through the patch at thirty-yard intervals and moving slowly. Suddenly, I noticed a movement behind the hunting trio at the edge of the sunflowers. A whitetail carrying a four-point rack had just stepped out of the area the hunters had passed.

The buck stood at the edge of the field with his head held low in a sneak position. As the hunters moved another ten yards through the sunflowers the old deer stood erect and calmly watched the departing hunters disappear into the trees. Satisfied that the danger had passed, he walked back into the sunflowers and bedded down. A good example of how a deer becomes a trophy animal.

Intelligence. You don't get that big by being stupid. If you're the average American hunter don't get upset at letting a deer out-fox you on a hunt. It happens to the best. Even the experts. Jack Denton Scott, writing in *National Wildlife*, mentions a study conducted in the Cusino Wildlife Experiment Station in Michigan.

This study began with the building of an eleven-foot fence around a square mile of hardwood forest and conifer swamp. Thirty-nine deer (7 bucks, 14 does, 18 fawns) were released there, and six veteran hunters were asked to try their skill at locating them.

In this small area from which the deer could not escape it took the men four days to see a single buck! During a continuing four-year period, with at least 34 deer within the fenced mile, the best sighting record obtained had the experienced stalkers taking 14 hours to get within "shooting" distance of any deer, including fawns, and 51 hours to locate one buck.

Why? Well, the old flag waver, in spite of man and his advance technology, has learned to survive. This animal has taken everything man has thrown at it and unlike numerous game species, its numbers have increased.

The whitetail is as much American or maybe even more so than the thundering herds of buffalo that served this nation. In *The White-Tailed Deer*, John Madson describes our country and its relationship with deer this way.

"America grew up eating venison and wearing buckskin. We were weaned as a nation on deer meat, took our first toddling steps in deerhide moccasins, and came of age at King's Mountain and New Orleans when our deer-trained riflemen cut down foreign regulars in long scarlet swaths.

We scraped, oiled and streched buckskin over our cabin windows in lieu of glass. When the crops were put by, maybe we walked down the mountain to a turnpike tavern and swapped deer hides for the venomous rum we called "The Crown's Revenge". In early Kaintuck when there was no flour we gave our babies boiled venison instead of bread. Moving west, we spliced the first telegraph lines with buckskin thongs and tipped our 30-foot bullwhips with buckskin poppers. We dressed our heroes in buckskin shirts, gloves or mukluks, and sent them off to Lundy's Lane, the Alamo, the Little Big Horn, Attu and Aachen."

With a list of credits like those outlined by Madson it would be difficult to argue the animal's value both yester-

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day and today. To the wildlife observer the whitetail is a picture of grace and beauty. To the sportsmen it's the common man's big game animal.

Today, we have as many or more whitetails than at any time in our history. With the current trends in forest and game management the deer's future is secure. In Kansas, the herd is stable and there is no reason to believe that the whitetail won't be waving it's flag across the state for many years to come.

Photos by Leonard Lee Rue







HE IDENTIFICATION of any one species of waterfowl is no more difficult than the identification of a species of quail, pheasant or other bird. In fact, much less skill is necessary to identify a specific duck or goose than many of the larger families of smaller-sized songbirds. We are more aware of the difficulties of waterfowl identification because they are game birds. Then too, the one and three-quarters million waterfowl hunters are required to identify the duck or goose they bag if they are to avoid violating hunting laws.

Identification cannot be made as simple and easy as desired because there are 48 species of ducks, geese and swans—all residents of the North American Continent. And as with most endeavors, there is no substitute for experience. Efforts toward mastery of waterfowl identification should begin with a good identification guide. But the final test of skill must take place observing the bird in its natural habitat in our great outdoors.

The old duck guide who has spent much of his life

The drake mallard, our most common and probably the most easily recognized duck, is characterized by a green head.



observing waterfowl has no problem identifying a familiar species about as far away as he can see it. Slightly different shapes, flight patterns, behavior and appearance as well as depth of wing arch, speed of wingbeat, body conformation and flock formation provide him with the clues needed to name the bird.

On the water, ducks often appear slightly different from the way they are shown in many illustrations. To begin with, most resting ducks are shown with too much of the speculum wing color exposed to view. Most artists wish to display as much of the color markings as possible, so they tend to overemphasize the speculum wing color as well as other wing markings. Yet when ducks fold their wings the wings become partially covered by the side feathers. The speculum and other wing markings may either disappear completely or appear as narrow slots.

The need for a helpful identification guide dates as far back as waterfowl hunting regulations. *The Ducks*, *Geese and Swans of North America* by F. H. Kortright first printed in 1942 was an excellent treatise of North American waterfowl and served well as an identification source. However the cost of such a complete treatise was more than the average waterfowl hunter was willing to pay and the book was too large and heavy to carry afield. This original classic work was completely revised, expanded and improved by Frank C. Bellrose in 1976.

One of the earlier identification guides for sportsmen was the Wildlife Management Institute's publication in 1946, Sportsman's Guide to Wild Ducks. This was the best available low cost guide for many years. This guide has been followed with numerous posters, magazine articles and a colorful packet guide printed in 1952 by *Sports Afield*. The U. S. Fish and Wildlife Service published an expanding pocket sized folder for hunters, in color, in 1962.

Guides up to this time were almost entirely of waterfowl in their most colorful spring plumages and so were quite confusing to the hunter when he encountered ducks in their different and much less colorful fall plumages. Some guides had come to recognize the wings of ducks to be the least changeable and stressed identification by learning these wing colors.

In 1963 the Central Flyway Technical Committee, which is composed of state fish and game departments' waterfowl biologists from the ten states in the Central Flyway, published their first waterfowl identification guide. This guide was not in color and stressed identification by using various characteristics as well as color.

To first determine which of the two main groups the duck belonged, characters such as legs being placed near center of body, does not dive but tips up to feed, generally has iridescent color patch in wing, hind toe not lobed and springs into air on takeoff for dabblers as compared to diver characteristics of legs set far back on body, dives completely under water to feed, color patch in wing generally dull and with iridescence, hind toe lobed and foot large, runs on surface for take-off.

The drake pintail, with its brown head, light breast and long spiked tailfeathers, is fairly easy to spot.



The U. S. Department of the Interior, Bureau of Sport Fisheries and Wildlife, printed a color guide *Ducks at a Distance* in 1963 that also provided waterfowl in more realistic less colorful fall plumages.

Identification charts were available on calendars and from ammunition companies. More expensive identification guides for all birdlife such as the Peterson Field Guide series and the *Birds of North America*, a guide to field identification put out by Golden Press.

All this effort to encourage hunters to learn to identify waterfowl continued to fall short of what wildlife administrators hoped for and in fact needed to permit better species management utilization of the resource.

Special regulations for various waterfowl species were in use before the Migratory Bird Treaty Act of 1916. But it was not until the initiation of the point system bag limit regulations that full possibilities of this type of management got a long hard look.

The U. S. Fish and Wildlife Service gives credit for the original point system bag limit idea to a Minnesota sportsman named John Rose. The idea was proposed back in 1966, then pushed into prominence by Milwaukee outdoor writer Don Johnson. Southern Colorado's sprawling San Luis Valley hosted the humble beginning of the experimental point season, in 1968. In 1969 the point system bag was expanded to include the High Plains Mallard Management Unit of the Central Flyway and the Shiawasse State Game Area in Michigan. In 1970, 12 states adopted the system. Many more states have now adopted the point system duck bag limits. No state



The drake shoveler, with its green head and wide, spoon-shaped bill, is easy to identify.



The redhead drake is one of our most common transient ducks.

that has offered the point system bag to their hunters has returned to conventional bag limit seasons.

Many hail this as the coming of a new era of enjoyment for the waterfowler. Some view it differently saying that while such a bag limit looks good on paper and in theory it is practically unenforceable and does not obtain the desired objectives and contributes to violations.

Dr. Walter F. Crissey, former Director of the Fish and Wildlife Service Migratory Bird Populations Station expressed the change well when he stated that "if waterfowl hunting is to provide its share of the total recreational need, it is evident that management by species is necessary."

The unique feature of the point system is that a hunter does not have to identify a duck until he has it in hand. The hunter knows he can have so many points worth of ducks per day. Each sex and/or species of ducks has an assigned point value based on its abundance. Each time a hunter kills and retrieves a duck, he identifies it (by use of a pocket guide or waterfowl identification key if necessary), and calculates its point value and then adds it to the accumulated point value of the ducks he has already taken. When the last duck he takes gives a point value that is equal to or in excess of the daily point limit he has achieved a full daily bag limit and must quit hunting.

The point system offers new benefits to both the hunter

and wildlife administrator. (1) A hunter does not have to identify a bird until he has it in hand; this allows for a legal mistake bird; (2) permits hunters to display their varying degrees of skill by allowing the expert to take a large bag limit of low point birds and the novice hunter to take a smaller bag limit of high point birds; (3) provides an incentive for novice hunters to learn "in flight" identification so he can enjoy a larger bag limit of low point birds; (4) hunting pressure can be directed away from ducks in short supply and increased on these species or sexes of waterfowl that are abundant and/or have been underharvested under standard bag limit seasons; (5) it will reduce waste; (6) it will increase the man days of hunting while reducing the drain on the resource.

Another approach to identify ducks in the hand was provided by means of a pictorial key in 1970 by the Fish and Wildlife Service. This was an excellent assist to the hunter in that he could observe the shape, flight pattern, colors, etc. of the duck prior to bagging the bird, make tentative identification then verify this by use of the pictorial key.

The Central Flyway Committee provided a complete revision and modification of their identification guide in 1974. The revised guide, entitled Waterfowl Identification in the Central Flyway, available free on request from Kansas Fish and Game, is pocket sized, printed on plastic to make the booklet rugged and encourage its use while hunting. It is also in color showing the birds in fall adult and transition plumages—in flight and standing —as well as the detached wing, pointing out identifying characters. Additional characteristics of the first identification guide were also retained.



The male wood duck (above) is the most brilliantly-colored duck in the Central Flyway. The drake green-winged teal (below) is commonly seen or farm ponds in the fall.













THE GEESE had to be moved. Most of a brand-new population were roosting on a tiny lake at one time, creating problems and potential problems.

But how?

You do it by facing slashing winds, chill factors down to 50 degrees below zero, intense fog, darkness and snow.

And tens of thousands of yelling geese piling in from the sky, trying again and again and again to come down your throat and land on Brown State Fishing Lake, a 62-acre impoundment eight miles east of Hiawatha. Subject of articles that appeared in many Kansas newspapers, radio shows heard in dozens of Kansas towns, and a TV show seen in eight cities, the Brown operation had its tense moments.

But they won.

Game biologists of the Kansas Fish and Game Commission-Bob McWhorter, Wayne Vassar, Bob Bergquist, Stan Brown, George Hartman, Ronel Finley, and George Carson—claimed a complete and total victory when they retired from the field, a triumph of goose management.

From a peak population of 300,000 snow geese on 62-acre Brown Lake for several days in December, 1974 to tens of thousands of birds warily eyeing the silent lake by January, 1976, the Brown operation had all the elements of suspense: Determined biologists employing the latest scientific techniques in goose rallying, and thousands of equally determined geese bent on using the traditional watering and night roost area.

Snow-blue geese (blue is simply a color phase of the snow-it's the same goose) began their love affair with Brown State Lake in the early 1960's when new breeding colonies on the west and southwest coasts of the Hudson Bay area established themselves. These colonies had new "staging areas" and migration routes compared to older populations in their trek from the barren wastes of the tundra to the Louisiana coast. Staging areas are collecting points where hundreds of thousands of birds come together, prior to launching their migration.

It's hard to grasp the extreme significance of the Mid-Continent flock's development.

Not only had new colonies of snows appeared, but these birds had altered for the first time in thousands of years traditional migration patterns and staging areas. Wintering on the Great Plains was a first, and it had all occurred within only the last 20 years!

Although snows used Squaw Creek Wildlife Refuge at Mound City, Missouri, north of White Cloud, Kansas, before the new colonies established themselves, numbers began to swell as the new geese multiplied. As concentrations built at Squaw Creek, the geese began fanning

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out, establishing five "satellite refuges." A satellite is a subordinate area, one of the spokes of the wheel, in effect. In this case, Brown was one of the five spokes with Squaw Creek being the hub. In 1961, the first fall or wintering flock, some 5,000 birds, appeared on Brown.

Numbers on Brown steadily increased over the next six years, for several reasons. For one, the goose population from new areas was rapidly increasing. For another, Brown was the only satellite sanctuary offering protection from bitter northwest winds, and its water remained open after Squaw Creek froze over. And, Brown was a "spillover" area. As Squaw Creek filled with waterfowl, some geese swung to Brown State Lake.

By 1968, Kansas Fish and Game magazine reported on what had happened there the preceding winter: "Veteran waterfowl observers in Kansas could hardly believe their eyes! Suddenly, and without warning, the small Brown County State Lake near Hiawatha in northeast Kansas, was literally covered with geese—70,000 of them."

"They came in late December and stayed for more than three weeks."

The magazine quoted one federal warden as saying

"If we can get them in the habit of returning to Brown County Lake each year, it will be a big advantage to Kansas." Fish and Game went on to exult: "Anyway, the geese were welcome to Kansas. The sight of the big flock, blackening the sky when they rose to feed or alighted from a field like a swarm of blackbirds, gave a thrill to a lot of folks. It's hoped, too, that they'll come back next year—"

They sure did.

The federal warden didn't need to worry about getting the geese to come back.

As the new colonies of snows continued to grow, the big birds liked what they saw so well they decided to overrun the place. Ever-increasing hordes swarmed onto Brown. By December 1, 1974, 300,000 snow-blue greese totally blanketed the tiny 119-acre area of land and water, spilling over onto adjacent fields. Area corn and wheat fields were covered with a pulsating, waving mass of greese that all but obscured the sun as they rose and landed.

Now dubbed the "Mid-Continent" goose flock because of its habit of wintering on the Great Plains, it didn't

Snow geese by the thousands moved into Brown State Fishing Lake.





Leonard Lee Rue

Snow geese are some of the first geese to migrate through Kansas.

take long for the huge band to attract goose hunters from Topeka, Leavenworth, Atchison, and other area cities. This led to the unsavory and unsporting practice of the "firing line."

Goose hunters, frantic to blast away at the wall of geese lifting off or coming into Brown, formed an unbroken line of shotgunners at the fence separating the state lake property from surrounding private lands.

It was an intolerable situation. In the fall of 1974, the Commission marked off a two square mile sanctuary area, encompassing the entire lake, and decreased the loss of unretrieved birds. That headache was relieved, but the basic problem was unsolved.

The basic problem was too many geese on a small area to be a healthy situation.

Concern was hightened among professionals after Lake Andes, South Dakota, and Squaw Creek reported an outbreak of epizootic disease in its waterfowl. Losses at Squaw Creek were significant, and other areas were also reporting the fowl cholera and duck viral enteritis (DVE). A massive concentration of geese in a small area, such as the Brown situation, was a possible target for the diseases to strike next. If that happened, a resulting epidemic could virtually wipe out a significant part of a major continental goose population.

Those hungry geese were creating another problem a social one. While crop depredations always exist with large concentrations of geese in an agricultural area, their feeding was by far restricted to crop residues like a picked cornfield. However, one landowner did file a depredation complaint.

So, it was decided that fall, 1975 would be the year to prevent the geese from using Brown.

At a public meeting held in Hiawatha August 27, 1975, the Commission presented its case. It admitted this type of rallying operation had never been tried on snow geese before, but felt there were some successful precedents on other species and that it should be tried.

Attitudes of goose hunters and landowners were largely scornful, pooh-poohing the idea. "Ya'll never do it." "It can't be done with that many geese." But when the final vote came, the group gave the biologists the nod to go ahead and try it.

The Great Goose Chase was born.

Heavy noise-making devices were to be used on the geese. Propane automatic exploders, big firecrackers and cracker shells—a firecracker projected into the air by a shotgun—were among the scare techniques selected. Called "pyrotechniques," the sound devices were designed to alarm the geese, not harm them.

Flags made from black plastic bags were also to flutter from six-to 6½-foot posts. It was hoped the motion would serve as a further scare tactic, kind of like pie pans shaking in your garden to keep off the blackbirds.

An outboard boat was lined up to chase any geese off the water that flew through the barrage to land, and a portable light rig, powered by a Model "A" motor, was to throw a blinding beam at the snows.

A rallying crew, composed of McWhorter and his five district biologists, three aides, and Migratory Bird Biologist George Carson was tabbed. They were issued orders to be on Brown 24 hours a day from October 14, 1975 through January 17, 1976.

Headquarters were established by renting Brown Lake's concession stand. Later, as the weather turned cold, a 10-foot camper-type trailer was rented by the biologists from the concessionaire. The rent was paid out of the biologists' own pockets.

As the plan developed, the biologists requested Kansas Gas and Electric to disconnect the carbon arc light at the concession stand. This was aimed at decreasing the lake's attractiveness at night.

Propane exploders were located at five locations, and 55-gallon barrels were rigged with a wire across the top to hang the lit firecrackers on "kaw kaw" rope, if needed. Kaw Kaw rope is twisted cotton fuse rope, which allows the explosions to go off at timed intervals. Rain shelters for the barrels were made from tin and hung on the wire.

Operations began October 15. The Brown State Fishing Lake Journal recorded on that date: "Thirty-three geese flew around the lake, did not light—2:30 p. m."

October 16 demonstrated how stubborn the geese

could be to dislodge once they landed. The Journal reported:—"One juvenile snow came in and lit at approximately 8:15 p. m. It took five cracker shells, plus spotlight to flush bird, and 15 minutes of scare gun blast to make it leave."

Small flocks kept up their persistent activity through October, but most of them would simply fly over the lake without attempting to land.

Snows changed their behavior just after mid-November. Numbers swelled, they became more aggressive and more persistent. November 21, McWhorter wrote, "On November 21 we estimate 80,000 snow-blue geese tried to land on Brown SFL. A few did. Flocks started arriving at 8 a. m., 500 to 4,000 birds each." The Journal recounted: "High northwest winds—clearing. Temperature—24°. Eight a. m. snow geese start arriving in flocks of 500 to three or four thousand each from north and east. Continuous arrivals until 11 a. m.—The larger the flock the less difficult to rally. No geese have touched down—"

With moderating temperatures, the rest of November and early December allowed Squaw Creek to thaw and remain open. Brown remained relatively quiet, as a result.

Mid-December brought a vastly different story. Temperatures plummeted December 17 and set the stage for the snows' most desperate attempt to take over Brown.

McWhorter wrote, "The most significant and persistent attempt made by snow geese to put down on Brown SFL was 3 p. m. to 9 p. m. December 17. We estimate 60,000 birds, of which many did land. Temperature was eight degrees F., wind northwest 15 to 30 mph—All exploders, hundreds of shell crackers and firecrackers were used—"

Lawrence Journal-World reporter Dave Chartrand wrote in that paper's December 29 issue:—"(on December 17) Squaw Creek waterfowl refuge in northwest Missouri, where the geese had been huddling, froze over. The birds needed a new roost and decided to take another stab at Brown.

"At 4:30 p.m. 15,000 to 20,000 blue geese swooped over Brown Lake and set three biologists into a frantic scamper.

"While five propane guns blasted around the lake, biologists Wayne Vassar, Ronel Finley, and Bob Bergquist fired more than 1,000 cracker shells. But it wasn't enough."

"About 100 geese lit on the water—the first group to touch down. Finley and Bergquist headed for their motorboat. That flock had to be dispersed or it would draw others."

—"Luckily for the men they didn't need the boats. Amidst all the commotion the geese elected to retire to a large hill northwest of the lake—and wait."

"By 8 p. m. the 20,000 birds had grown to 60,000. 'They were over a quarter-mile away in the darkness and we could still see that white mass on the hill,' Vassar said."

"Whether the birds were admitting defeat or just waiting for their tormentors to give up will never be known. For, while the geese regrouped on the hillside, the thermometer kept falling and the first ice appeared on the water. By midnight, Brown Lake was frozen."

December 17 had been the beginning of the end.

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McWhorter wrote, "After 'the December 17 push' little happened of note until January 3, 1976. Brown SFL froze over. Squaw Creek froze over.—100,000 snow geese arrived in Brown SFL area. That is they covered a three to four square mile area north of Highway 36, north of the SFL. They made little attempt to land on the lake and sat in fields, rested, and fed."

It is believed the January arrival flock demonstrated the attractiveness of the Brown area for them. They roosted on the Missouri River, least likely of all water areas in the three-state area.

So now where does the Commission go? McWhorter feels strongly these "hard-core mid-continent wintering birds" can't be moved, nor is it desirable that they be moved. He wrote that the flock should be studied for breeding origin areas, longevity, percent of annual young, general welfare, and other factors.

Squaw Creek's area will continue to have geese. "We didn't and won't chase 'em back to Missouri," McWhorter said. "They were dispersed to Perry, John Redmond, Elk City, and other larger, safer management areas in Kansas."

Commission biologists are enhancing the attractiveness of these areas for the birds. This will spread an exciting sport to hundreds of Kansas sportsmen.

The geese are a blessing.

But as with any blessing, you have to learn how to properly use it.





By George Valyer

EASEL

Photos by Leonard Lee Rue

AS ACTIVE AS popcorn in a hot skillet—quick as a bolt of lightning—fearless as a tiger—pugnacious as a wounded grizzly bear. All of these phrases can truthfully be used to describe the weasel, one of the most interesting of the small mammals of Kansas. Seldom seen by man, this nocturnal predator is probably more abundant than most people realize but still scarce enough to incite curiosity when he is discovered.

Perhaps the best description of the weasel I've heard compares him to a fur-covered sausage with short legs. He has small beady eyes and sharp teeth on one end and a medium sized furry tail on the other. When aroused, he has a temper like a buzzsaw. He has the appetite of a glutton and his curiosity can be likened to a half-grown cat. When he's awake, he is perpetual motion but when he's asleep, he is as hard to arouse as a teenager on Sunday morning.

The weasel is a member of a large family of musk carriers. His cousins include such species as the mink, martin, fisher, striped and spotted skunks, wolverine, badger and river and sea otters. Also to be included in the list is the endangered black-footed ferret.

Of all the members of his clan, only a few are found in Kansas. Of course everyone is familiar with skunks, and badgers are relatively common. Mink are found along nearly every Kansas river and stream. The blackfooted ferret is a question mark. Probably never abundant, this masked marauder of the prairie dog towns may still be around in very limited numbers but confirmed sightings have been absent for at least several years.

The most abundant of the weasels in Kansas is the long-tailed weasel. According to Dr. Jerry Choate, mammalogist at Fort Hays State College, this weasel is found in almost every county in the state, generally in timbered areas associated with streams and rivers. The least weasel, a much smaller species, is occasionally found along the northern tier of counties and its range is apparently moving slowly southward. The least weasel is the smallest of all the weasel family, averaging only eight inches in length including its short one and one-half inch tail. In winter, its fur coat turns a solid white, thus enabling it to escape detection by predators such as owls since it is almost invisible against a backdrop of snow.

The long-tailed weasel also turns white in winter over the part of its range where snow is a usual feature of the winter landscape. However, it is different than the least weasel in that the tip of its tail remains quite black. In the northern part of the Sunflower State, most weasels take on the ermine coloration while the winter coloration in southern Kansas may be a light brown or brown mottled with white. In summer, all weasels have dark brown or chocolate fur.

In the Great Plains, the long-tailed weasel averages 18 or 19 inches in length with its tail measuring twofifths to one-half the combined length of its body and head. When running (which is nearly always) it bounds along with fluid grace; its tail is almost always held extended and parallel to the ground.

The diet of the weasel includes a wide variety of small animals such as mice, rats, rabbits, gophers, moles, young ground-feeding and nesting birds, small snakes and occasionally squirrels. Although the greatest part of its menu is small rodents, it has been known to raid the farmer's chicken coop. It is this latter activity which has brought the weasel his reputation of being a voracious killer.

Once inside a brooder house, the weasel has been known to lose all descretion and kill chickens without regard to his immediate need for food. Weasels have been known to kill a sizable percentage of the poultry in a chicken house even though there was little chance to drag even a few back to their den for consumption. These raids on poultry houses were the source of one of my earliest contacts with an eastern Kansas weasel.

When I was about 12 years of age, my father built a 12' by 12' brooder house on skids. It could be moved from place to place with a team of horses and later with a tractor in order to take advantage of the best available location for the chickens it housed. Shortly after the

building was completed, it became my lot to paint the structure. While I was wielding my paintbrush, I noticed several knots in the car siding which formed the exterior of the coop. I thought nothing about it at the time but a few months later, one of those knots was to figure quite prominently in a midnight drama.

It was a soft June night with hardly a breath of air stirring. My mother had been up for some reason and was about to return to bed when she heard a noise through the open window. The third-grown fryers which were occupying the brooder house about 30 yards from the house were making a fuss so Mother woke Dad and together they went to investigate. What they saw in the rays of the old battery lantern was not pleasant. Seventeen of their prize White Rock fryers lay dead.

If Mom hadn't just happened to be awake and heard the ruckus, probably more would have been killed. Upon inspection, it was noticed that one of the knots in the rear siding had become a knothole about as large as a 50 cent piece. The hole was about a foot off the ground and was the only possible entrance for the varmit. The chickens had been neatly nipped in the back of the head leading my father to believe that the predator had been a weasel. It didn't take Dad and I long to locate a piece of tin and tack it over the knothole. The next day all the knots were carefully inspected to see if any more had become loose. bend through the northwest part of our farm. In the past every shock of corn had contained four or five mice before it was hauled into the barnlot for feeding. This year, they were strangely scarce, especially in the cornfield just east of the creek. For two years the supply of mice around our farm showed a marked decline but then the weasel family apparently moved on down the creek or was killed by another predator.

On two occasions the year following the chicken episode, I caught a glimpse of a weasel along the creek below the barn; on both occasions it was late evening. The first time, I had been sitting quietly for some time fishing the pool below a spreading sycamore tree. High waters had washed the dirt away from the roots on the streamside and the roots formed a tangle which was an ideal spot for a den. A slight movement at the base of the tangle caught my attention and I was quite surprised to see a small brown animal staring at me from between the roots. Presently it scurried out into full view and sat there on its hindquarters apparently testing the air for my scent. About that time, my bobber did a dipsy-doodle and my attention was drawn to my fishing pole. When I looked back, the weasel had disappeared.





Seldom seen, the weasel is one of the most efficient predators around.

Later on that fall, I caught another glimpse of a weasel. Dad and I were loading shocks of corn to be hauled to the corral for shucking and feeding. As we approached one particular shock, a small furry animal flecked with white scurried away from the shock. His bounding gait left little doubt that he was a weasel. When the shock was loaded on the wagon, we found two freshly killed mice on the ground where the shock had been. Apparently, the weasel had his mouth full when he left since it is unlikely he would have left behind anything he could have carried. He probably returned later that night for another meal.

The weasel has a voracious appetite and can consume over one-third his weight in food each day. At that rate, a 180-pound man would need 60 pounds of meat per day or 420 pounds per week. That's a lot of grub! The logical explanation for this food requirement lies in the frantic activity and high metabolism of the small animal.

Although extremely quick and elusive, the weasel is not an especially fast runner. Any moderately active human can overtake one in a short chase. However, the weasel is quite adept at dodging to avoid capture. Should you ever be able to catch one, you will probably wish you hadn't. A scientist who grabbed one in the wild wasn't sure who had captured who. The weasel clamped his sharp teeth onto the man's hand and refused to let go. Since the scientist wanted the weasel alive, he was forced to walk a half mile to a stream where he nearly drowned the little beast before it would turn loose.

To illustrate the ferocity of the little musk carrier, one poultry farmer tells about interrupting a weasel on its intended raid on the chicken house. When the farmer got between the chicken and the weasel, the predator attacked him. It was only with repeated kicks that the animal was driven away.

Although the weasel is definitely the "tiger" of the small animal world, he is not always successful in his attempts at predation. George Whitaker, Game Protector Supervisor in the northwest district, tells about an encounter he had with a weasel and a cottontail rabbit. After rounding a curve on a country road, Whitaker spotted a weasel and a cottontail facing each other about 20 yards ahead. Coming to a quick stop, Whitaker watched one of nature's dramas unfold. Concerned only with his intended victim, the weasel jumped at the rabbit which leaped in the air reversing itself and kicked out with its hind feet. The weasel went sprawling. After this episode was repeated several times, the weasel apparently tired of the pummeling and bounded off into the weeds. Evidently the mother rabbit had been protecting her youngsters.

As we have stated previously, the weasel is quite adept in keeping the mouse and rat population in check but he also takes his share of other rodents such as ground squirrels and gophers. Biologists checking gopher populations for disease and parasites occasionally take weasels in gopher traps set in the runways of this rodent. Dr. E. Raymond Hall, former head of the Kansas University Museum of Natural History, relates such an incident. He had set 50 gopher traps the evening before. "At daylight the following morning the first trap visited was found to be pulled back into the burrow," the naturalist writes. "When a gentle tug was given the wire anchoring the trap, a decisive jerk at the other end showed that the catch was still alive. Since the skin on the trapped animal is often damaged if pulled out by main strength, I reached into the burrow to pull back the sod. An adult long-tailed weasel promptly fastened its teeth into my forefinger and hung on, bulldog fashion, while I lifted it into the air with the attached trap swinging." Dr. Hall went on to describe his difficulty in ridding himself of the viselike hold of the weasel. When he would force its jaws apart on one finger, the "vicious little beast" would clamp down on another. Only by killing the animal was he able to free himself. Dr. Hall noted that no gophers were taken in traps within 150 feet from where the weasel was trapped.

The lawn around my garden spots is pocked with gopher mounds. Apparently it could well stand the visitation of a whole family of weasels. If you know of any which are looking for a new home, you might send them my way.

Dr. E. Raymond Hall as well as several Kansas game protectors have noted the fact that many weasels are killed on roads and highways in the state each year. Dr. Hall notes that weasels rarely exhibit fear of man or his

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EXHIBIT HALL CLOSES OCT. 1

(released Sept. 28, 1976)

PRATT--Exhibit Hall, the fish and wildlife museum of the Kansas Forestry, Fish and Game Commission will be closed to the public for the winter, effective October 1.

The museum is located east of Pratt on highway K-64, across from Commission headquarters. It will reopen next spring. The closing of the museum for the winter is part of an energysaving move started several years ago by the commission.

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GET PERMISSION BEFORE HUNTING

(released October 7, 1976)

PRATT--With major hunting seasons just around the corner, the Kansas Fish and Game Commission urges all sportsmen to remember an important rule--Get Permission From The Landowner Or Tenant Before Hunting!

Hunting on all private lands require the consent of the landowner. There is a mistaken opinion that if land is not posted it can be entered and hunted on without permission. Not so.

"Many landowners will grant permission to hunt if the hunter will just take the time to ask," said Harold Lusk, Pratt, chief of law enforcement for the commission. "Three simple words, "May I Hunt?' can go a long way in promoting good landownerhunter relations."

Lusk noted that landowners have the right to escort any trespasser from their land or sign a complaint for court action. In addition, hunting from county and township roads and railroad rights-of-way, requires permission from the adjoining landowners.

It only take a few thoughtless persons to ruin a hunting season for hundreds of other people.



FISH & GAME RELEASE

WATERFOWL SEASON PROSPECTS APPEAR GOOD

PRATT--Precipitation during the last two weeks of September and the first week of October has brought about a feeling of optimism regarding this year's duck and goose season. The Cheyenne Bottoms, nearly dry in late summer, has now received some water and prospects now look good for a productive opening at the central Kansas waterfowl area. Localized heavy rains have also filled ponds and potholes in parts of the state and, if the rains continue there should be excellent duck hunting in the state this year.

Marvin Schwilling, waterfowl project leader for the Forestry, Fish and Game Commission, reports that the Dakotas and Nebraska are generally dry yet and waterfowl may fly right over these statesto Kansas waters.



The Kansas duck and goose seasons both open this year on October 23 and an earlier than usual migration for most species is in prospect. Schwilling notes that dry weather hit the Prairie Provinces in Canada in late summer and the ducks and geese may be forced to depart ahead of normal migration schedule.

Waterfowl numbers are already beginning to build on Kansas waters and good to excellent populations are in prospect for opening day.

CHANGE OF ADDRESS NOTICE

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

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

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

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Fish & Game News

BROWN SFL OPEN TO HUNTING

(released Sept. 23, 1976)

PRATT--Brown State Fishing Lake near the Brown-Doniphan County line on Highway US-36 will be open to hunting in 1976 according to Art Hanson, first district commissioner of the Kansas Forestry, Fish and Game Commission.

The opening of the 62-acre lake and surrounding 127 acres of land is part of a continuing effort to prevent reoccuring buildup of snow geese on the lake. The area will be open to hunting from October 15, 1976 to January 31, 1977.

In recent years snow geese populations have been as high as 300,000 birds from early December to mid-January. This concentration of birds poses an extreme risk for a disease outbreak of epidemic proportions. Outbreaks of fowl cholera and duck viral enteritus (Dutch duck plague) in the Central Flyway during the past two years has increased this concern.

During the 1975 season Commission personnel were successful in rallying the geese from the area with exploding scare devices and pyrotechnic displays. This effectively interrupted the established roosting pattern on the lake.

"We do not plan to have a controlled hunt situation which would place only light pressure on the birds," said Lee Queal, Chief of the Commission's Game Division. "We are opening the area so the hunter can benefit directly from the hunting opportunity and indirectly from relieving the agency of the high cost of rallying the geese. If birds are using the area then hunters can hunt them; if not, many geese will still remain in the general area. Last year approximately 100,000 geese were still in the area in late December and early January although not roosting on Brown State Fishing Lake.

In opening the area to hunting, no pit blinds will be permitted on the state land nor will existing vegetation be cut to develop a blind. Portable blinds can be used but must be removed the day of the hunt. The area will be closed to fishing and trapping to avoid conflict with hunters.

In addition, the lake will be lowered approximately four feet this fall, to allow field service crews to construct a new boat ramp.

The refuge area at Perry Reservoir will be maintained in an effort to attract displaced geese to this facility since it is large enough to accommodate a significant migrating or wintering population.

The U.S. Fish and Wildlife Service permitted a separate framework for snow geese in the Central Flyway in 1976. An 86-day season has been established from Oct. 23, 1976 to Jan. 16, 1977 with a daily bag and possession limit of 5 geese. machines and are quite curious. This probably accounts for the high number of road kills, presumably out of proportion to their actual numbers. Since the weasel is so small, many are run over without being detected by the driver and only a keen-eyed observer will notice the small bundle of fur the next day on the road or highway.

The male weasel may be twice the size of the female and mating occurs in early summer. After a delayed gestation period, from one to twelve tiny youngsters are born in April. They are pink, blind, toothless, have practically no fur and squeak lustily. By the time they are five weeks old, their eyes are open, teeth formed and they have been weaned and are eating whatever their parents supply. By fall, the young weasels are on their own and busy making a living for themselves.

Although the weasel has a keen sense of hearing and smell, its eyesight is obviously not so good. It readily detects movement but a stationary object may go undetected. Rabbits have been known to escape a weasel's detection by leaving a maze of trails and then remain motionless a short distance away. By the time the weasel has sniffed out the first set of tracks, the rabbit moves off a little ways to repeat the process. After awhile the pursuer gives up in disgust and hunts elsewhere.

For as small an animal as it is, the weasel has relatively few enemies among the animal world. Many predators several times its size respect the weasel for its ferocity. George Heinhold, a New England naturalist, tells of an occasion he once witnessed. While watching a weasel scurrying along a rock wall hunting mice, a sharpshinned hawk dove down and grasped the little animal and bore him aloft. Before the hawk could gain the comfort of a nearby tree, the weasel had twisted around and established a death-grip on the bird's throat. Down they came amid a shower of feathers. When they hit the ground, the hawk's talons relaxed and the weasel scurried off. The hawk never rose again; its jugular vein had been severed.

Naturally, the weasel doesn't always win encounters with avian predators. The great horned owl is known to include weasels in its diet since owl pellets occasionally contain their remains.

In former years, nearly every farm contained a flock of chickens and a weasel family was not welcome on the premises. Nearly any farmer would respond to the sighting of a weasel with the blast of a shotgun. Now, with farm poultry flocks becoming scarcer, the weasel does not arouse the animosity he formerly generated. In fact, many farmers and ranchers welcome his presence because they recognize him as an efficient mouser and rat catcher. One farmer friend of mine told me, "If you have a weasel around the place, you don't have to buy De-Con."







By Bob Wellborn

WAS EARLY April. The sky was clear, the sun bright and the air warm with the expectation of balmy days.

Sweat crept from under the big man's Bailey as he dug into the deck of the boat with the heels of his hip boots. Hoisting the trap net over the gunwhale, he began pulling the 16-foot flatbottom into shore. This was usually a two-man job, but Tom Bowman was working out on the lake alone. All the other fisheries biologists in the area were busy with their own projects. Help was short.

"Oh well, you see more when you're by yourself," he thought.

He was about to see it. On that chilly but warm April day in the upper end of Jewell State Fishing Lake near Mankato he noticed the long-necked, graceful gray birds.

Geese?

Some might have thought so, but Bowman knew better.

Sandhill cranes—harbingers of the southwest summer wind, up from Mexico, West Texas and New Mexico. The birds were on their way to breeding and nesting grounds in the Arctic Circle areas of Canada, Alaska, even Russia.

"Boy, the whole sandhill crane nation was up there at Jewell yesterday," he told me.

I've always trusted Tom's judgment. He's probably taught me as much about fishing, hunting and wildlife as anyone while I have been with the Commission. After doing some reading and studying on the cranes, I saw why he was so excited.

Nebraska hosts 150,000 to 200,000 of these gregarious birds every spring. The cranes roost and feed on the Platte River, a perfect area for their unyielding habitat demands. It's a wide, shallow area that protects the wary birds by sheer distance from disturbances by people or predators.

It seems as if they never completely sleep while roosting. They'll spook at little or nothing, trumpet their call into the night air, alarm more of the flock, then settle into troubled silence.

Long before sunrise a few of the flock begins to stir. They call to other cranes, rousing them to head for the feed fields.

When you're talking about 200,000 three to four-foot birds taking off from one area and heading out, you're talking about a lot of noisy confusion. As some of the cranes take off, they call to the rest of the flock on the ground, encouraging them to follow.

The encouragement becomes a din.

Cranes stopping in Kansas or Nebraska in the spring usually are feeding, getting ready for the mating season farther north. But cranes don't feed like geese who may down an entire head of grain at once. They pick at everything meticulously breaking grain heads down to their smallest parts. Being omnivorous, cranes also feed on frogs, toads, snakes, crawdads, small birds and lemmings. The cranes pick apart feed fields, digging down and locating tender tubers in addition to insect larvae found in cow chips. Their beaks hit the ground like a pick, penerating deeply. Some say the sandhill crane can hit the eyeball of a man and penetrate to the brain with its beak. This thought gives some wildlife biologists and hunters cause for concern.

Sandhill cranes do a little dance, and that probably first comes to the mind of anyone who has watched the birds.

F. Seymour Hersey writing in Life Histories of North American Birds by Bent says, "Today I watched two cranes for about 20 minutes. They were walking about over the tundra some half mile from where I lay concealed. As they drew near together they turned, facing one another, and first one and then the other would jump into the air to a height of about three or four feet. They would do this six or seven times with halfopen wings, then run along side by side for a few yards, again wheel and face each other and resume their odd dance. This was repeated until both birds passed out of sight."

A courting ceremony? Authorities say yes, but they also say the sandhill does his grave and ceremonious

ground, the nest is lined with grass stems. An area with an unobstructed view is usually selected.

The incubating hen's head is poised like a periscope. As observers approach, the female slowly drops her head from sight. The little brown crane can put on quite an interesting show of stealth and secrecy. If an observer looks directly at the nest, the crane will skulk away with neck low, legs bent and wings drooping. She will not abandon her nest completely at this point, but will call to her mate.

The greater sandhill crane builds its nest more elaborately than the lesser. It is usually surrounded by water, six inches to one foot above the water and about one yard wide at the top.

The sandhill cranes usually lay two eggs, the eggs of the lesser being darker than the greater's, according to Bent in his Life Histories of North American Marsh Birds.

The eggs vary in "ground color from pale greenish clay color to buffy brown. The entire surface is irregularly marked with spots and blotches of chocolate brown, rather sparcely distributed at the small end, but numerous about the large end," writes Dr. E. W. Nelson in Bent's book.

bowing, wheeling and spurting into the air to relieve tension when intruders are near. The birds' curious bowing and neck-craning may have been the origin of their name.

The sandhill crane's dancing becomes more practiced as mating season approaches. Short hops with wings outspread accelerate into 20 foot leaps as mating behavior heightens.

There are three well-known subspecies of sandhill cranes. One, the little brown crane, which is also known as the lesser sandhill crane; another the intermediate sandhill crane, and the greater sandhill crane. Two other lesser known subspecies are the Mississippi and Florida varieties. The Mississippi and Florida cranes don't migrate and it's believed the breeding ranges of all five cranes was continuous in the past. But the habitat has been broken up over the years.

Study of the 14 species of cranes can be pretty confusing, but most of the migrating sandhill cranes' courting and nesting habits are similar.

The lesser sandhill crane usually builds its nest on grassy flats. Frequently found in a hollow in the

Photos courtesy Texas Wildlife and Parks Dept.

Fish and Game



Sandhill cranes, first cousins to the whooping crane, migrate through Kansas twice each year.

The size of the egg is about three and one-half inches by two and one-fourth inches.

The eggs normally hatch at two-day intervals. The chicks are precocial, meaning they can immediately stand. They are out of the nest and following their parents on foot in about two days.

The behavior of the subspecies of sandhill cranes is similar, though Kansas Forestry, Fish and Game Commission Waterfowl Project Leader Marvin Schwilling says the greater sandhill crane will not bunch as tightly on the roost as the little brown crane.

He also says the greater sandhill is a much lighter color, a "steel gray." This occasionally accounts for erroneous reports of whooping cranes.

"When we get reports of whooping cranes in the spring where we think it would be highly unlikely to find whoopers, they usually turn out to be greater sandhill cranes," Marv said.

Quivira National Wildlife Refuge is probably the crane capital of Kansas, according to Schwilling. The refuge hosts more cranes in the spring than any other waterfowl area in the state. In the fall, however, Kansas is not a stopping place for the southbound cranes.

Sandhill cranes in flight are distinguishable by their steady wingbeats, their outstretched necks, trailing legs and their trumpeting call, a rolling Krr-roo, K-r-r-oo, Ku-k-r-oo.

They are a shy bird, but they're funny about that, too. They can be watched from busy highways feeding in fields by the thousands. And they can almost be walked up on as long as the stalker does not head directly for the crane or look at the bird. They're always watching what is going on, but are sometimes slow to flee if there is no eminent danger.

They're curious, too.

Dr. Nelson wrote, in Bent's book, "I have frequently decoyed them within gunshot by lying upon the ground and waving a hand or some conspicuous article in the air. As the birds approach from a distance they will almost invariably turn and try to investigate the matter before passing on their way."

F. Seymour Hersey in Bent's Life Histories of North American Marsh Birds, wrote that "while lying in my boat in a narrow channel in the canal a crane came down close to the bank. Only his head could be seen, but after looking at me for awhile he ran along some 50 feet in a series of hops of about six feet in distance, stopping at each to raise his head and survey the boat. He then turned, looked me over carefully and went back to about an equal distance the other side of his first position, examined me critically from that point of view and then returned to the point where I first saw him."

Their call can be heard from a long distance, a trait of all cranes, attributed to their physiological structure.

"A distinctive anatomical feature is their trachea, or windpipe, which is shaped differently in each species, but is always strongly convoluted like the coils of a trumpet. In some species it pierces through the breastbone and the flying muscles. This organ gives cranes their resonant and far-carrying cries which can be heard several miles away," says Oliver Austin Jr., in his Water and Marsh Birds of the World.

The Texas Parks and Wildlife Department says the sandhill cranes are being studied at Texas Tech because of their interesting flight pattern. They have been seen flying as high as 22,000 feet, higher than man can function in thin air.

The U.S. Air Force is sponsoring the study. They are interested in studying the crane, since jet planes have crashed after mid-air collisions with the big birds.

Hunt this majestic, high-flying bird? You bet. The sandhill crane, here restricted to the migrating lesser sandhill cranes, are great sport for the hunter. Not in Kansas, but Texas and New Mexico have annual sandhill crane hunts, with a daily bag limit of three and a possession limit of six in New Mexico.

The cranes have been clocked at speeds up to 60 mph. A large bird moving that fast is a deceptive target to the hunter.

The results of lesser sandhill crane hunting in New Mexico have been encouraging and indicate no detriment from the hunting pressure. If there were a detriment, the season would end.

New Mexico Wildlife magazine notes, "Some people have recently expressed concern that the present level of harvest might be excessive. If one accepts the recruitment rate figure of four to eight per cent as promulgated by some, concern is justified. And, if one accepts the figure of 20 per cent or more suggested by field checks during the hunting seasons, then obviously there would be no problem since annual recruitment would be more than sufficient to maintain current populations. What appears most likely is that annual recruitment is somewhere near 12 per cent."

To the uninformed observer, some behavior of these longnecks is just crazy. But one story about them is not. It is straight from the human perspective and is filled with pathos, told by George H. Mackay, again from Bent's Book.

"Mr. Horace Thompson of St. Paul slightly wounded with a rifle ball at long range an immature sandhill crane which with several others was resting on the prairies. At the report they all flew away except the wounded bird and one other which apparently was its parent. The wounded bird, after a number of unsuccessful attempts to fly (assisting itself first by running, accompanied by the parent which kept beside it), finally succeeded in rising some 10 or 15 feet from the ground, but evidently could not sustain itself in the air. The parent bird, perceiving this, deliberately placed itself underneath the wounded one, allowing it to rest its feet on her back, both birds flapping away all the while. In this position she actually succeeded in bearing it off before our eves for quite a distance to a place of safety where we would not follow it. It was one of the most touching examples of parental affection in a bird that has ever come under my observation."

Colorado Cranes

Colorado has a population of greater sandhill cranes that winter in New Mexico and farther south. They migrate north only as far as Colorado to nest and rear their young. Possibly because the high altitude climate they find in Colorado is similar to more northern nesting and breeding grounds that other cranes use.

"After leaving their wintering grounds in New Mexico, the greater sandhill cranes gather on their dancing grounds in northern Colorado in the early spring. The cranes 'dance by alternately bowing low, and spring up and backward and flapping their wings.' The dancing grounds are occupied until the high country nesting areas are free of snow. .Then the cranes, which mate for life, leave; each pair going to its own nesting territory," writes Diane I. Blake in "Colorado Outdoors."

But Colorado's cranes may be in trouble. With more and more of Colorado's lands coming under use by road or reservoir building or merely more backpackers taking to mountain trails, the cranes' nesting areas can be disturbed.

"The survival of the sandhill crane in Colorado depends on the protection of their nesting habitat," Blake continues. "In 1974, less than 200 cranes remained in Colorado. Many areas where cranes once nested are now deserted and where they remain, there are threats of development and increasing human disturbance."

Colorado is not the only state with decreasing sandhill crane populations.

Mississippi Cranes Endangered

Last year in Mississippi the first action under the Endangered Species Act of 1973 was taken to halt the destruction of crane habitat.

The U. S. Fish and Wildlife Service designated about 100,000 acres of Mississippi crane habitat as critical. This halted the use of federal money in any project degrading the cranes' habitat.

The problem had been a highway construction project. The argument held that the highway would not destroy the cranes' habitat, but excavation of nearby barrow pits would drain the meadows which cranes use for nesting and feeding. This they contended, would wipe out the 40 remaining Mississippi sandhill cranes.

The problem had been further complicated because much of the 100,000 acres declared as critical habitat by the Fish and Wildlife Service was privately owned by timber companies.

The Nature Conservancy was also battling the problem by simply buying the land, a tough answer to a tough problem. Last summer, 1975, they bought 2,000 acres of the land which they had planned to turn over to the Fish and Wildlife Service for use as a refuge.

New Projects for Other Cranes

Though the sandhill crane may be in trouble in Mississippi, Fish and Wildlife Service personnel used the birds nesting in Idaho in an experiment to save or expand the population of yet another endangered species of cranes, the whoopers. There are currently only about 50 left in the wild.

The Fish and Wildlife Service took 14 whooping crane eggs and transferred them to sandhill crane nests. Whoopers usually lay two eggs, but raise only one chick. Six chicks survived and were raised by the foster parents at last report.

The Fish and Wildlife Service says the goal of the experiment is to get the whoopers to pair off and start anew wild breeding populations.

The Future of Hunting

By Daniel A. Poole, President Wildlife Management Institute

To have hunting, there must be huntable supplies of wildlife. To have wildlife, there must be habitat. To enjoy wildlife, there must be access to public and private lands. And to attempt to take wildlife, there must be public acceptance.

This latter facet—public acceptance—has much to do with the future of hunting. It is directly linked with anti-hunting sentiment. And it is in this important area that our wildlife agencies do the least.

In the view of my organization, hunting's future urgently requires that more attention be given to the public-acceptance factor. We envision four avenues of approach:

Better service to hunters.

Better discharge of personal responsibility by the sportsman.

Better understanding and service to land-owners by both the wildlife agency and the sportsman.

Better understanding among the profession as to what constitutes sport hunting.

Starting with service to hunters:

All of us are aware of the intensification of anti-hunting sentiment. Its causes are many and complex. Some people plainly are against blood sport, and little probably can be done to change their views. They will not respond to explanation.

The great bulk of the people, however, are indifferent to hunting. Today, they apparently don't care if it continues or ceases. Who knows how they will react tomorrow? What is being done to at least maintain their neutrality? Could it be that we risk offending them?

Let me give some examples of where disservice is being done to hunters and hunting. In State X, pheasant or deer season opens on a weekend and thousand of anxious license holders turn out. Ranchers and farmers see mostly armed hoodlums, many not bothering to request permission to enter private lands, even where required. Property damage occurs and there is shooting near occupied buildings and settlements. Sometimes a hunter or two or even a non-hunter is shot or wounded. Farmers hang bells on livestock and pen their pets. Lands and roadsides are littered. Sportsmanship and hunting quality go out the window.

All this results in bad press and hard feelings. The hunter's image is tarnished. Landowners say never again, and more no hunting signs go up. Others root for anti-firearms legislation. Cynics say the game department doesn't give a darn because all it is interested in is selling licenses to get more money to do it all over again.

Now we can joke and laugh and say that's the way it goes. But remember, that also may be the way hunting goes-right out the window for many citizens.

In part, the future of hunting demands that the wildlife agencies—and they cannot do it alone—are going to have to exploit every opportunity to make sportsmen of all hunters and to help give them a better public image. This will involve fundamental changes in hunter's attitudes, shooting regulations, licensing requirements, proficiency in firearms handling, and all the rest. Nationally, we have barely made a beginning on this aspect of the problem. We cannot wait much longer in some areas. State agencies have got to face up to their responsibility, even to the point of ramming it down the throats of sportsmen where the alternatives are clear. Doctors sometimes must argue with their patients in order to help them. Wildlife agencies should realize a similar client relationship with hunters.

My second recommendation is that much more must be required from the individual sportsman. A European once told me that few North Americans have any respect for the animal they shoot. "You are too intent," he said, "on getting your limit in the shortest time. The essence of the hunt is lost upon you." He may be right.

My third suggestion is for more understanding and greater service to landowners by both the wildlife agency and sportsmen. This is nothing new. Leopold and his North American Wildlife Policy Committee called for it back in 1930. But on the whole, the states have done relatively little to curry the landowner's favor. Actually, we know relatively little about the landowner, why he does or does not permit hunting or what can be done to encourage him to maintain or plant wildlife cover. We don't know because little has been done to find out. Researchers have chosen largely to focus on animal biology. We have been slow, if not reluctant, to take sociologists, economists, political scientists, and other disciplines into our councils. We have faint communication with agricultural specialists, whose work has great impact on wildlife.

A good step made several years ago was the drafting of a model liability relief act to protect landowners permitting recreation on their properties without charge. Many states have enacted it into law.

My fourth point calls for better understanding within our profession of the meaning of sport hunting. Too much, I believe, we accept the notion that more is better. But is it?

Anglers now can use electronics to locate fish. Natural knowledge is supplanted by mechanics. A big game hunter, fresh from a warm bed, attires himself with insulated clothing and electric socks, shoulders his precision-sighted rifle, and roars across the back country on his snowmobile or all-terrain vehicle in search of game. A recent ad for a new shotgun sight claims its value for the man who doesn't have time for long hours of practice. Mount it on a gun, slip into the field, get your birds, and be home in time for lunch.

Has anyone stopped to ask, I wonder, what new technological developments the good Lord has hung on deer or elk or any other wildlife in these past decades to better equip them to cope with the technically augmented sportsman? Where does application of technology exceed the bounds of sportsmanship? We have an obligation to blow the whistle on this type of thing.

By working in these four areas, the Institute believes the wildlife profession can help make the future of hunting more secure.

Courtesy of the National Shooting Sports Foundation



LUNKER BASS TAKEN AT CLARK SFL

Although a lot of outdoorsmen aren't thinking about fishing this time of year, here's an item which should get their attention. A Dodge City angler has taken one of the biggest largemouth bass reported to the Commission this year. Aris George caught the 10-pound largemouth while fishing off the dam at Clark State Fishing Lake near Ashland. He was using a minnow for bait when the lunker struck. George's 10pounder measured 23 inches in length and qualified him for the Commission's Master Angler Award. To qualify for the award in the largemouth bass category, a fish must weigh at least 7 pounds. The Clark County impoundment has long been noted as an excellent bass fishing lake. George's fish was close to the state record of 11-pounds, 3-ounces on largemouth bass.

WATERFOWL FORECAST

The U. S. Fish and Wildlife Service's forecast of fall waterfowl flights for the Central Flyway (of which Kansas is part) indicates the total number of migrating ducks may be down slightly from last year. Ducks Unlimited on the other hand, prophesized that this year's fall flights will be at least equal to last year's.

"We had a good flight last year," said Marvin Schwilling, waterfowl project leader for the Kansas Forestry, Fish and Game Commission. "But the scarcity of water and drought conditions over much of the state really hurt the hunting."

"We should have a good flight of ducks this fall," Schwilling continued, "but the hunting will depend on the availability of shallow water in hunting areas."

The picture on geese is a little brighter. The snow geese that winter in Kansas nest along the western and southern shores of Hudson's Bay. According to USFWS, their production was good. So we should have an excellent fall flight of snows.

The Giant Canada Geese that nest from the southern Canadian provinces down to Nebraska had excellent nesting success. These are the birds that winter in Kansas, so our fall flight should be good. However, the smaller species of Canada that nests along the northern end of Hudson's Bay had its breeding and nesting grounds covered with snow until late June. Consequently, hatching success was poor and the flights won't be as good as in the past.

UPLAND BIRD PROSPECTS

Data obtained from the annual rural mail carriers' upland gamebird survey indicates a slight increase in quail populations statewide, but a decrease for pheasants. Estimates show a statewide population increase of six percent for quail with the largest increase in the Flint Hills region. South Central Kansas also showed a marked increase over 1975 as did the northeastern portion of the state. Southeastern, north-central and western Kansas all reported decreases in their quail populations.

The mail carrier counts show a statewide reduction of seven percent in pheasant populations. Northeast Kansas however indicated an increase of 16 percent over the 1975 gounts. North central and south central Kansas also showed slight increases. The northwestern and southwestern portions of the state both showed decreases.

Prairie chicken hunting prospects appear best in the Flint Hills for greaters, while best hunting for lessers will be found in the sand-sage areas of southwest Kansas. Hunting for greaters will probably be fair to poor in the cropland and blackjack regions of eastern and southeastern Kansas.

DOVE HUNTING BOOK

Well, dove season has come and gone and it was one of the best we can remember. Dry conditions over much of the state concentrated birds around farm ponds, stock tanks and tailwater pits. As a result, the waterhole shooting was excellent during the early season. Cool, rainy weather during the second and third weeks of the season pushed alot of the birds down into Oklahoma and Texas. But we still had a few resident doves plus the flight birds from Nebraska and the Dakotas. Farmers cut their mile in eastern and southeastern Kansas later than normal this year, so hunters in those areas had good shooting later in the season.

If you're still kicking yourself over missed shots or blown chances at these whistling gray comets, I've found a book you'll want to read. In fact, it's must reading for any serious dove hunter. *Dove Hunting*, by Charley Dickey, is available from Oxmoor House, P. O. Box 2463, Birmingham, Alabama, 35202. It sells for \$2.95 and it's cheap at the price. It's the most practical, comprehensive book I've seen on the subject. Three chapters especially: Managing a Hunt, How to Hit a Dove and More on Shooting, contain the best information I've ever read. In addition, Dickey provides the reader with a number of delicious-sounding recipes that'll have you wondering if there are any doves still in the freezer. If you're really into dove hunting, Charley Dickey's book is one you'll want to read and own.

