

A photograph of a black and yellow bird, likely a Yellow-crowned Night Heron, perched on a thin branch in a grassy field. The bird has a bright yellow head and neck, a black face, and a black body. The background is a dense field of green grass.

KANSAS FISH & GAME

SEPTEMBER/OCTOBER 1978

Single copy 50¢

**SPECIAL
ISSUE:
THE UPLAND
GAME BIRDS**

Subscription Blank Inside

KANSAS FISH & GAME

SEPTEMBER/OCTOBER 1978

Published Bimonthly

Vol. 35, No. 5

Contents

MAGAZINE STAFF

Information-Education Supervisor
Ross Harrison

Editor
Chris Madson

Staff Writers
George Anderson
Bob Mathews

Photographer
Ken Stiebben

Editorial Assistants
Bev Aldrich
Judy Becker

COMMISSIONERS

Dick Langenwalter, Chairman
Hutchinson

Dr. Jerome Saylor
Great Bend

Joseph Gregg, Sr.
Prairie Village

William Hawes
Smith Center

Lewis Moon
Independence

ADMINISTRATION

Director
Jerry Conley

Assistant Director
Fred Warders

DIVISIONS

Chief of Administrative Services
George Axline

Chief of Fisheries
Cal Groen

Chief of Game
Lee Queal

Chief of Law Enforcement
Harold Lusk

How Much Should We Save? **1**

Commercial Fishing Comes to Kansas **2**

Special Section: The Upland Birds **7**

Retriever Trials **23**

KANSAS FISH & GAME is the official bimonthly publication of the Kansas Fish & Game Commission, Rural Route 2, Box 54A, Pratt, Kansas 67124 (316) 672-5911. Subscription rates: one year (6 issues) \$3.00, two years (12 issues) \$5.00, and three years (18 issues) \$7.00. Single copies are available at 50 cents per copy.

Articles in the magazine may be reprinted with permission provided proper credit is given. Second class postage paid at Topeka, Kansas, and additional mailing offices.

Cover Credits—Yellow-headed blackbird and striped bass fishermen by Ken Stiebben.

How Much Should We Save?

The first snow geese I ever saw were hanging over a frozen stubble field on a Mississippi River refuge. There were better than 5,000 of them, I would guess, coming in like leaves on a whirlwind, a huge spiral of birds. A few were rocking from wing tip to wing tip in a series of side slips that brought them almost straight down, but there wasn't much room for aerobatics; most of the flock seemed content to set their wings and circle down through the landing pattern. They were about half a mile away, but I could hear the soft, constant goose talk as the flight touched down. As I watched, a dozen other cars pulled off onto the shoulder, and the whole group of us stood silent for ten minutes while the birds settled in. On other days, I've seen seasoned waterfowlers empty their guns at such flocks without drawing a feather or crouch under the cloud of approaching birds without shooting at all, paralyzed by the sight and sound overhead.

With the exception of an occasional blackbird roost, most people no longer see wildlife congregations of this size. As a result, there's a tendency to think that seeing one duck is about like seeing 50 or 50,000. This sort of reasoning leads to compromises. According to this line of thought, we should be able to get by with half as many ducks as we have now. After all, who benefits from a continental population of 100 million ducks instead of 50 million, or 30 million?

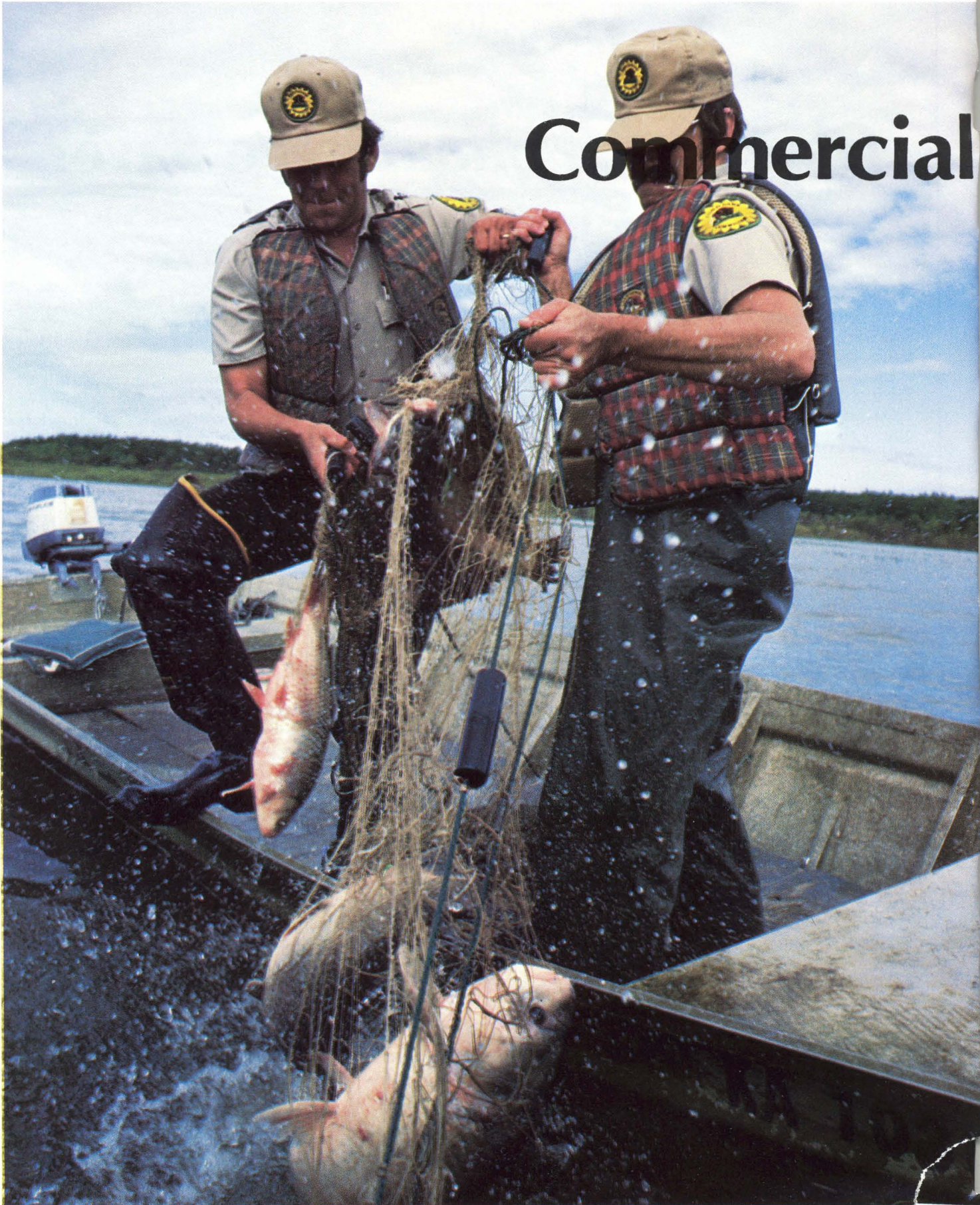
The most obvious answer is "the hunter." Abundant game populations are a vital part of good hunting, so much so that the hunter has been the one outstanding supporter of increasing wildlife numbers over the last seventy years. I suspect that, for most hunters, this consuming interest is more than simple concern over the number of available targets. When the first flock of Canadas passes over a Midwestern town on an October evening, the folks who step out on the back stoop to listen to the traveling talk in the night are usually hunters. Their appreciation for waterfowl goes far beyond the shooting. After years of experience in the marsh, they've also learned that there's a difference between a single mallard and a feeding flock of a few hundred birds. It's the big flock that puts a tremor in the hand and brings the breath a little faster. The flock is infinitely harder to fool, more intelligent and suspicious than the single, as if the individual wildness of the birds is pooled and magnified in the group. In fact, the big fall flock is probably as important a part of a duck's biological identity as the color of his speculum; both have developed over the centuries-long test of the species. When that cloud of waterfowl is reduced to a few stragglers, something essential is lost, and the species itself is diminished. That loss is as evident to the dedicated few who watch and enjoy the annual migration as it is to the birds themselves.

In the last few years, we've paused long enough in our headlong rush toward profit and progress to recognize that an endangered species of wildlife is worth saving. But, while we've made concessions to some of the rarer and more spectacular species, we haven't bothered to recognize the more subtle processes of extinction brought on by our mistreatment of wild country. Long before an animal becomes so rare that he's turned into a side-show freak or zoo exhibit, he passes mileposts that measure his decline. One of the first for a huntable species comes when there are no longer enough critters to support hunting pressure. Hunting itself doesn't cause this loss; the usual villain is massive habitat loss. Unfortunately, only hunters and a few other concerned outdoorsmen are in a position to recognize this first milepost. The majority of the public never sees it pass.

Waterfowl biologists are pessimistic about the future of waterfowl hunting in North America. There will probably always be ducks, but it may not be too long before there aren't enough ducks to shoot. Most people see no problem in that. Only the hunter seems to realize that, shooting or just watching, there's a vital difference between one duck and a thousand.

—Chris Madson

Commercial



Fishing Comes to Kansas

Bob Mathews

The Fish and Game Commission has added a promising tool to its bag of reservoir management techniques.

Earlier this year, a contract was awarded for the first commercial fishing operation in a Kansas reservoir since the mid-1950's. Biologists are hoping the commercial fishing endeavor will ultimately benefit the sport fishermen they serve.

The pilot project was set up at Lovewell Reservoir in north-central Kansas. Awarding of the contract culminated three years of research on the feasibility of establishing marketable fishing in the state. Under guidelines set up by fisheries officials, the commercial fisherman awarded the contract is allowed to remove five species of rough fish, including bigmouth buffalo, river carpsucker, carp, drum, and longnose gar. Concurrent with the removal of many large rough fish is the stocking of predator fish by Commission biologists.

"In 1975, we decided that we had never adequately addressed the potential of commercial fishing in reservoirs," said Bob Hartmann, supervisor of fisheries research. At that time, the only legal, ongoing commercial fishing in the state was confined to that portion of the Missouri River bordering the state's northeast corner. The only other commercial fishing venture ever undertaken in a Kansas reservoir was a short-lived rough fish removal operation at Fall River Reservoir in the mid-1950's.

Although the possibility of allowing commercial fishing in the state's reservoirs was not extensively studied before 1975, fisheries biologists were aware that large populations of rough fish did exist in many Kansas reservoirs. Knowledge of the quantity and average size of marketable species was limited but sport fisheries investigations had indicated large populations of bigmouth, buffalo, carp, and carpsucker. Persistent illegal commercial fishing activities in certain reservoirs merely confirmed that belief.

"It (illegal commercial fishing) indicated there was a resource worth looking into," said Hartmann. If out-law fishermen were willing to risk heavy fines and confiscation of their equipment, they must have been driven by a strong profit incentive.

A federal grant appropriated through the National

Marine Fisheries Service provided the funds necessary to embark on a three-year study of marketable fishing potential in the state's reservoirs. Lovewell and John Redmond reservoirs, both frequent targets of illegal commercial fishing crews, were chosen as the two target impoundments for intensive study. The investigation was aimed at finding out which fish species inhabited the reservoirs and estimating how many of those nongame fish were of marketable size. Using netting and marking techniques, biologists were able to eventually compile that information.

Test netting revealed that Lovewell's rough fish population had grown over the years to 700 to 800 pounds per acre, said Ken McCloskey, north-central regional fisheries supervisor and a former coordinator of the marketable fisheries investigation. As a result of that proliferation of rough fish, the gamefish sought by sport fishermen comprised a progressively smaller share of the total weight of fish in the lake.

Changes in fish population structure in man-made lakes present a complex array of problems for fisheries biologists. Not the least of those problems is control of rough fish populations.

"Most rough fish are stream fish by nature," said Jim Stephen, marketable fisheries investigator since November of 1977. "Their populations in a stream habitat are controlled by the size of the stream. But when a stream is impounded it provides ideal conditions for expanding rough fish populations."

Biologists anticipate the removal of many large rough fish from Lovewell will result in more prolific spawning activity by certain species of rough fish remaining in the lake. The expected result is an improved forage base for predator species.

"If we didn't put something in there, the rough fish would simply reproduce and take over again," McCloskey said. "So, if we stock predators heavily they should take up some of the slack." Last spring, biologists bolstered gamefish populations at Lovewell with heavy stockings of some highly efficient predators. Some 80,000 northern pike fingerlings, 50,000 white bass-striped bass hybrids, and 1,000 northern pike-muskellunge hybrids were stocked in June of this year. If the techniques complement each other as ex-

pected, the highly desirable gamefish should grow faster and larger on a profusion of small forage fish.

Introduction of the northern pike-muskellunge hybrid, known as tiger muskie, marked the first time that species had been introduced to Kansas waters. "Tigers are more easily adapted to new waters than muskies and are easier to grow than either parent species," McCloskey said. "The tigers, which should grow to twenty to twenty-five pounds, will be stocked again in Lovewell the next two years," he said, "and intermittent stockings may continue in succeeding years if the species adapts well to the reservoir."

White bass-striped bass hybrids, known as "wipers," have been stocked on a limited basis in Kansas before, but the 50,000 stocked at Lovewell represent the first full-scale effort to establish the species in the state. That species is also expected to grow to about twenty pounds in eight or nine years.

"We're here to serve the Kansas sportsman," McCloskey said. "He always takes precedence, so we're not going to allow commercial fishing operations to interfere with the sport fisherman." For that reason, he said, specific guidelines drawn up to govern the commercial fishing venture will be strictly enforced to avoid any conflict between commercial and sport fishermen.

"We're going to see that the commercial fisherman complies with the agreed-upon restrictions," Stephen

"Illegal commercial fishing activity indicated there was a resource worth looking into."

emphasized. He said other states which have implemented similar commercial fishing operations have encountered some difficulties because they haven't regulated them closely enough. Much of the effort by fisheries officials during the investigation was devoted to design of an effective set of rules for the commercial fisherman to live by.

Among the equipment authorized for commercial fishing at Lovewell are hoop or fyke nets, entanglement nets, or seines. Mesh size, as well as overall size, of that equipment also is prescribed in the contract. Although the fisherman will be allowed to leave nets in the water overnight, the nets can only be tended during daylight hours. Further, no commercial fishing will be allowed on weekends or holidays or during periods of ice cover. Access for placement and removal of fishing equipment, processing and loading of fish, and other activities related to the operation are restricted to two specific locations. In addition, daily records must be kept by the fisherman of all sales and business transactions.

That daily log will help biologists keep track of fish population shifts resulting from the commercial fishing endeavor. Combined with test nettings by Com-



Ken Stiebben

Bigmouth buffalo, river carpsucker, and carp will comprise most of the commercial catch at Lovewell Reservoir. Drum and long-nose gar also are authorized as marketable species.

mission biologists, those daily catch reports will provide an accurate picture of the overall effect exploitation of rough fish has on the total fish population in the reservoir.

"The Commission's share of the profits will be based on the total receipts of sale," Stephen said. "That money will be funneled into administrative costs incurred by the Fish and Game for the marketable fishing operation as well as certain related sport fishing projects."

Only the five species of rough fish previously mentioned may be taken by the commercial fisherman; any gamefish taken must be returned immediately to the water. Because of the schooling tendencies of those rough fish which can be taken, however, proper placement of nets and the appropriate mesh size of nets used can virtually eliminate that problem, Stephen noted.

Any noncompliance with the provisions established by the Commission could result in termination of the contract and forfeiture of a \$5,000 performance bond required at the outset of the operation. Stephen said he expects few problems since the fisherman's failure to follow the rules could put an end to his own very profitable operation.

An estimated eighty-five percent of the total poundage of fish removed will consist of bigmouth buffalo. The buffalo, largest member of the sucker family, is the most commercially valuable of the nongame fish authorized for removal. Although rarely sought or caught by anglers, the fish is in demand in fish markets because of its eating quality. Urban fish markets, espe-

cially, report a growing demand for buffalo as well as many other species of nongame fish. The buffalo is ideally suited for commercial harvest, due to its commercial value, size, and the fact that few anglers catch it. There have been exceptions, however. The state record buffalo catch, a 54-pound 4-ounce giant taken on a worm-baited bankline in an Ottawa County farm pond, is exceeded in size only by the state records for flathead catfish and paddlefish. Biologists' test nettings at Lovewell indicated the presence of many buffalo of ten to twenty pounds and larger.

River carpsucker, one of the most widespread species inhabiting Kansas waters, is expected to comprise about ten percent of the commercial catch at Lovewell. Carp, drum, and longnose gar will account for the remainder.

At Lovewell Reservoir alone, the five species together represent hundreds of thousands of pounds of a resource that would otherwise go to waste. While

rough fish species in the U.S. today are generally unwanted, unloved, and underutilized, fishery resource managers across the country project them to be a major source of protein in the future. In recent years, more voices have joined the chorus encouraging wise use of this virtually untapped resource.

For example, Vern Hacker, supervisor of warm water fish management for the Wisconsin Department of Natural Resources and vice-president of the Inland Commercial Fisheries Association, has edited a cookbook aimed at encouraging use of rough fish. In the book, entitled "A Fine Kettle Of Fish," Hacker offers this advice:

"If you have never tried carp, freshwater drum, buffalo fish, suckers, or gar, don't let someone else who has never eaten them convince you they aren't good eating. They may have the reputation of a motorcycle gang, but don't let their reputations frighten you away. Let your taste buds tell you the truth."

Ken Stiebber

"Outlaw fishermen" in recent years have illegally taken thousands of pounds of fish from the state's reservoirs. Game Protectors Don Clarke (right) and J. D. Lichlyter here check an illegal catch of more than 5,000 pounds of fish taken from John Redmond Reservoir in 1973. Lovewell Reservoir, site of the commercial fishing pilot project, also has been a prime target of illegal commercial fishermen.



Similar efforts to launder the soiled reputations of rough fish species have been undertaken in many other states to encourage use of the hundreds of millions of pounds of unused food source in the country.

The comprehensive approach to fish management at Lovewell could reap rich and varied rewards. If it

works as expected, commercial fishing may be expanded to other reservoirs in the state. Much time has been spent to minimize risk and maximize potential benefits resulting from the commercial fishing venture. But, simply putting to use a resource formerly considered no more than a nuisance is a giant step forward.



Ken Stiebben

Test nettings by fisheries biologists indicate Lovewell Reservoir has a rough fish population of 700 to 800 pounds per acre. Removal of many of those large rough fish, combined with strategic gamefish management, should ultimately benefit the sport fisherman.

A man wearing a brown hat and a green jacket is crouching in a field of dry brush. He is holding a black dog. Two pheasants are perched on a branch in the foreground. A rifle is leaning against the brush on the left. The background shows a field with bare trees under a blue sky.

THE Upland Birds

The Ringneck

The ringneck pheasant, now an accepted part of the Kansas wildlife scene, is really a naturalized foreigner. His scientific name, *Phasianus colchicus*, is a description of some of his original territory, the Phasis River in the province of Colchis in western Asia where early Greeks first met him. Introductions of pheasants to North America occurred as early as 1733 when a few pairs were brought to Governor's Island in New York, but early attempts at establishing the species in the eastern United States were unsuccessful. It wasn't until the pheasant was brought to the Willamette Valley in Oregon that he found a place to his liking in the New World. Judge O.N. Denny, Consul General in Shanghai, sent thirty-eight ringnecks to his brother in the Willamette in 1881. They prospered, and it wasn't long before birds from Oregon were being transplanted for release in other parts of the country.

The Fish and Game Commission brought 1500 ringnecks to Kansas in 1905 and released them in 84 counties. These birds, along with a few others that had already been released by interested hunters and game breeders, took to the central plains immediately. By 1939, there were enough pheasants in the western two-thirds of Kansas to justify a hunting season. Twenty-one counties in the northwest and northcentral parts of the state were opened in that first year.

Today, the ringneck thrives in most of the state except the southeast where he is either absent or scarce. Many explanations for this scarcity have been proposed, but none of them completely accounts for it. A combination of several factors seems to limit the survival of southeast pheasants. Soils in the region are not too fertile and tend to be acid and poorly drained. Heavy rainfall—usually more than thirty-five inches a year—along with high temperatures and humidity seem to be tough on young of the year and handicap ringneck populations.

Across most of Kansas, winter flocks of pheasant begin to break up in late February and early March. Roosters establish territories with rather definite boundaries which they announce to other males with a strong crow and a ritual flap of the wings. Crowing also



attracts females. When a hen enters a rooster's territory, he struts around her, tail feathers spread, the wing nearest the hen trailing low. His head is low with ear tufts and neck feathers flared out. His wattles swell and turn bright red. The hen accepts these demonstrations coolly at first but eventually succumbs to the cock's courtship.

The rooster continues his displays until he has established a harem of three to ten hens. This polygamy is the reason behind the cock-only regulation during the season—by the time the shooting stops, the sex ratio in the population is approaching one rooster to every seven to ten hens, the ideal ratio for efficient breeding.

After mating in late April or early May the hen selects a nest site and builds. She scratches out a depression and lines it with grass, leaves, and her own down. The nest also has a lid of grass and feathers which keeps the eggs warm and camouflaged. Alfalfa, wheat, and uncut roadsides are preferred sites for nests. Of the three types, wheat is probably the most productive because clutches usually hatch out before



harvest begins. Alfalfa, on the other hand, can be a death trap for nesting ringnecks. The first June cutting almost always catches hens well into serious incubation. Permanent wild vegetation along roadsides attracts many hen pheasants and provides excellent cover; unfortunately, such narrow strips of prime habitat are magnets for predators as well, so losses of hens and eggs are often high.

The hen usually lays an egg a day, spending no more time at the nest than necessary until the clutch is complete. An average clutch will contain ten to twelve eggs; single hens have been known to lay as many as twenty. If the nest is disturbed during egg laying, the hen may abandon it, but, as incubation progresses, she becomes more attached to the site and is less likely to give it up. Occasionally, several hens will drop eggs in the same place. These “dump nests” may contain twenty to thirty eggs which are usually picked up by predators. This random egg laying is most common early in the breeding season and is discontinued as the females get serious about establishing their nests.

The hen completes the clutch before she begins

incubation so that all the eggs begin developing at the same time and hatch within a few hours of each other. Once she starts, she stays with the nest almost continuously until the chicks hatch out about twenty-three days after incubation begins. The peak of the Kansas hatch occurs around the second week in June and, by July 1, more than seventy percent of all broods have left the nest. Like many other ground nesters, the hen pheasant is persistent—if something happens to an existing nest, she will keep trying most of the summer. In spite of renests, however, only about fifty percent of the hens will bring off broods.

After the chicks hatch and dry, the hen leads them away from the nest. Both chicks and hen feed heavily on insects in the first weeks after hatching; the hen, to replace protein lost in egg laying and later molt, the chicks, to supply protein for growth. Development of the young pheasants is explosive. At two weeks of age, they can fly short distances. They're fully grown in eighteen weeks. It isn't uncommon to see broods with chicks of different sizes. Broods will mingle, and hens sometimes adopt chicks that have been separated from

their own mothers. These mixed groups of young birds are never the result of one hen bringing off two clutches. It takes three to four months to bring one brood from egg to independence; one hen just doesn't have time in a summer to handle more than one set of chicks.

Roosters maintain their territories while the hens nest, occasionally shifting their boundaries to include the nest of an errant female. The cocks have even been known to help with incubation, and they usually keep an eye on the broods under their jurisdiction through early summer. In late July and through the shank of August during their molt, they're hard to find, preferring to stay hidden in heavy cover until they replace worn feathers.

As September approaches, the broods break up, and the scattered birds form small flocks of hens and roosters. These persist until the first snow and sharp weather when the sexes tend to segregate into larger flocks. Hens are usually found in larger groups because they lack the territorial drive of the males and because there are more hens than cocks after the hunting season. These late season groups often contain well over 200 birds and can do a lot to liven up a long December pheasant hunt.

About seventy percent of Kansas hunting license buyers go after the ringneck in November. Between

1962 and 1977, an average of 140,000 pheasant hunters took 577,000 ringnecks a year. The Kansas pheasant population supports about 715,000 mandays of hunting annually. About half of the harvest occurs in the western third of the state; thirty-five percent of the birds are killed in the central third, and fifteen percent are taken in the northeast corner.

Commission biologists follow changes in pheasant population with three surveys. Rural mail carriers make a five-day count in July, October, January, and April; and Fish and Game personnel count broods in July and August. A questionnaire mailed to a sample of license buyers yields information on hunter success and effort. Over the last twenty years, these surveys have shown a long decline in pheasant numbers. Populations fluctuate from year to year depending on weather and habitat conditions during the winter and spring, but the long-term trend has shown that, as habitat disappears, so does the ringneck.

Pheasants are hardy birds, well adapted to the rigors of winter on the Great Plains. They can dig through a foot or two of snow to reach food, and, if they can't find anything to eat, they can live on stored fat for several weeks. But as hardy as they are, they can't survive a Kansas blizzard without good cover. A pheasant forced to face the blast of a winter storm will face into the wind to keep the snow from driving under his feathers. In this position, he may have trouble keeping ice out of his nasal openings, and when he opens his mouth to breathe, even his beak will plug with wind-driven snow, suffocating him. If he turns slightly to get a breath, snow accumulates under his feathers, melts, and finally refreezes as skin temperature drops. A shelterbelt or plum thicket, a brushy draw grown up to Russian thistle and sunflower, or a cattail and smartweed marsh are modest shelters but all the pheasant needs to make it through one of these blue Northers. If there's some corn or milo stubble nearby, he's set for the winter.

Loss of Soil Bank lands in the late Fifties and early Sixties had a definite effect on Kansas pheasants. Odd corners of cover have disappeared year by year to make way for center pivot irrigators and larger equipment. Today, fields don't run from fence to fence but from section road to section road. Fall plowing and discing of harvested wheat fields have eliminated even the shelter of winter stubble. Road ditches have been plowed, mowed, or burned. Insect sprays have eliminated vital summer forage for broods.

The pheasant has adapted well to the agricultural era, but there is a limit to the loss of food and cover he can survive. In Kansas and other midwest states, that limit has been reached, and the pheasant population has responded accordingly. Until the trend in habitat loss is reversed, we can expect the population to decline to even lower levels than those we have seen in the last ten years.

Too many times, we blame pheasant losses on longer hunting seasons or lack of restocking programs and call loudly for shorter or closed seasons and the initiation of release programs. However, the fact remains that where there are no places for pheasants to live we



can't expect to see pheasants.

The burden of increasing pheasant populations should not be entirely on the shoulders of landowners, but rather on the sportsmen and others who gain some enjoyment from the pheasant resource. We must actively assist (physically and financially) the landowner

in providing necessary food and cover.

The pheasant is a tough bird that will respond to an increase in habitat. However, he is at the mercy of man and man's activities.

We know how to support him. All we have to do is make up our minds to try.

Greater Prairie Chicken

The abundance and distribution of the greater prairie chicken in Kansas before the territory was settled by white man can only be inferred from the accounts of early explorers. It appears that the greater prairie chicken did not occur farther west than the middle of Kansas, and that the bird did not occur in impressively large numbers. There are very few references concerning the species in early journals of explorers and traders.

The elimination of the buffalo, a nomadic grazer, changed the structure and composition of grassland vegetation and probably further reduced greater chicken populations.

During the last half of the nineteenth century, farmers planting small grains and ranchers reestablishing grazing on the grasslands dramatically boosted prairie chicken numbers. The expanding chicken population drew attention of market and sport hunters and became a staple food source for local people.

By 1900, intensified agricultural practices in the eastern part of the state had caused prairie chicken numbers to dwindle. At the same time, these birds began to occupy previously unused range in northwestern Kansas. Since the mid-Twenties, the population in northwestern Kansas has for the most part disappeared. The nucleus of the prairie chicken population has been, and still is, the Flint Hills in east central Kansas. The population east of the Flint Hills has continually declined, but chicken numbers have increased in the grasslands of north central Kansas. In Kansas, lack of extensive stands of native tall and mid-grass prairie and overuse of the grass that remains seem to be the factors stopping greater prairie chicken expansion.

Prairie chickens begin an elaborate courtship display in late January or February that peaks in late March and early April. Males will continue to come to these booming grounds through May and into June. In addition, there is a mock-courtship period in the fall which extends from late September into December. The booming grounds are used morning and evening throughout the peak of this display period.

Most booming grounds are located on open ridges, knolls, or slight rises. They are generally in areas of sparse, short vegetation. Most booming grounds cover

half an acre or more, with an average of nine to twelve males per ground. Grounds are used year after year, and records show that some have been used for forty years or more.

The same males come to the ground every day about half an hour before sunrise and display for two hours. Early in the spring, all their energies are focused on claiming a small portion of the booming ground by intimidating other males with vocal and visual displays. Later in the spring, activities are expanded not only to defending territories but courting females as they arrive on the ground. In the most pronounced booming ground display, the male erects his earlike pinnae like a war bonnet and inflates his air sacs until they look like small oranges. With wings drooping and tail spread to its full extent, he produces a resonant booming sound, much like the sound made by blowing across the open neck of a bottle. On a calm day, the sound can be heard a mile or more away.

Evening displays are similar but less intense and begin about an hour and a half before sunset.

Nesting begins in April. Nests are quite flimsy, built in a slight depression scratched out by the hen and lined with dead vegetation. Vegetation around the nest is generally quite thick and arches over the nest, concealing it from above. Every April, the Flint Hills pastures are burned. The heaviest vegetation is good fuel for burning but also is the best nesting cover. Nest success and production of young may depend on the extent of burning.

An average of ten to twelve olive or tan eggs flecked with brown comprise the clutch. It takes about fourteen days for a hen to lay twelve eggs and about twenty-three days of incubation to hatch them. Hatching time from the first pipping to emergence of the last chick varies but generally takes from six to ten hours. Hatching peaks in the latter part of May into the first of June. If the first nest is destroyed, the hen will usually build another nest and try again.

Prairie chicken chicks are highly precocial. Within a few hours after all the eggs have hatched, the chicks, accompanied by the hen, leave the nest. Newly hatched young are covered with greenish-yellow down spotted with black. In several days, the brood leaves the vicinity of the nest and moves to areas of mixed



vegetation or disturbed ground. Such areas of sparse ground cover are easy for the chicks to walk through and provide cover for protection from the summer heat. Habitat for chicks is better in burned pastures because accumulated vegetation from previous year's growth is gone and the mobile chick will have an easier time getting around. During the summer, insects make up eighty-five percent of both young and adult diets.

Weather during the first month of the young chicks' lives is important to their survival. Heavy rains and cool temperatures may drown them or reduce their resistance to disease.

When the chicks are ten to twelve weeks old, the adult female leaves them to complete her molt. The young at this time are good fliers and highly mobile.

They will meet other broods and in some years will start forming flocks as early as August.

The adult males move off into small bachelor groups after the booming ground activities to go through their annual molt. By September, the old cocks and young males begin to congregate on booming grounds again.

The displays of the male prairie chicken as the fall booming begins are considerably less intense than the spring activities. Not all of the spring grounds are used in the fall, so the number of birds on a single occupied ground in the fall is generally two to three times as great as in the spring.

Male prairie chickens begin to appear on the booming grounds for their fall display activities in the last two weeks of September. The largest number of birds



on the ground and the peak of the activity occur during the first three weeks in October. After the first of November, the number of birds visiting the grounds declines, but some birds continue to visit the ground daily until periods of severe weather interrupt display activities and ground visits. During December and January, prairie chickens have been observed on display grounds, but not at regular intervals.

Booming grounds provide ready-made flocks of male prairie chickens. During the fall and winter, prairie chicken flocks are seventy-five percent males. The majority of females are in small groups of two to six birds. After booming activities, the male flocks will fly to the feeding area, preferably a nearby grainfield or where wild weed seeds are plentiful. The females will generally go to the same feeding areas but go earlier in the morning while males are still on display grounds. Both sexes feed again in the late afternoon and evening. The birds will loaf during midday in nearby pastures. During severe weather or in late winter, feeding may continue throughout the day.

In recent years, the hunting seasons for greater chickens have extended from early November to mid-December when the birds are accessible while going to and from feeding areas. A hunter will set up a blind in or on the edge of a grain field used by feeding flocks of prairie chickens. When the birds pass over on their way

to feed, they are shot. On the average, only one out of four hunters bags a bird.


There are three major land-use practices that affect prairie chicken populations: (1) conversion of land-use, (2) grazing and (3) burning.

A never-ending threat to the prairie chicken population east and west of the Flint Hills is the conversion of grasslands to intensified agricultural use. Agriculture's initial surge in the late 1800's proved beneficial to prairie chickens, but as the ratio of cropland to grassland increased, they were eliminated from much of their original range. The development of modern agricultural techniques makes possible the tilling of previously unavailable lands and encourages further encroachment of native grassland. Left unchecked, this could lead to very marginal prairie chicken ranges outside of the Flint Hills.

A second major threat to the prairie chicken in Kansas is over-grazing. Livestock abuse of grasslands is a major contributing factor to low numbers of prairie chickens in local areas. In all wildlife management on private land, it should be noted that the primary concern of the ranches is producing cattle for a living, and not raising prairie chickens. However, good range management produces more beef *and* more prairie chickens.

In the Flint Hills grazing is most common during the

the YELLOW Pages



INSIDE:

	Page
Fall Prospects	4
Granny Goose	5
Letters	8

HUNTERS ON THE OFFENSIVE

Tired of being pilloried by militant anti-hunting groups and harassed by their needless injunctions, angry at being classed with slob hunters, and with growing concern over the future of hunting, fishing and trapping, determined sportsmen are forming new programs and organizations to meet their most serious threats.

ITEM 1

The Ohio group that beat down a powerful anti-trapping effort in its home state in 1977, and helped squelch a similar move in California this year, has gone national.

The new WILDLIFE LEGISLATIVE FUND OF AMERICA was incorporated to "protect the heritage of American sportsmen to hunt, to fish and to trap, and to protect scientific wildlife management practices."

As the Wildlife Legislative Fund, Inc., the group was an underdog in its fight to defend trapping in Ohio. In a decisive political upset, organized sportsmen, landowners and wildlife interests defeated powerful anti-trapping and anti-hunting forces that had chosen Ohio as the first political battleground in a state-by-state campaign.

When California sportsmen faced a similar threat earlier this year, the Ohio victors were called on for help — and the California threat was turned back.

The purpose of the new Wildlife Legislative Fund of America is to "combat the 'anti' movement in the legislatures, the courts, the media, and in the voting booths — and to defeat efforts to destroy our wildlife heritage. The WLFA is prepared to come to the aid of the sportsmen-conservationist and the wildlife professional anywhere in the United States."

The new organization is based as 50 West Broad Street, Columbus, Ohio 43215. President and chief executive officer is James H. Glass, who headed the successful fight to defeat the Ohio anti-trapping bill. Chairman of the board is G. Ray Arnett, immediate past president of the National Wildlife Federation and former director of the California Department of Fish and Game.

ITEM 2

SPORT has gone interstate.

The self-policing hunter program that began in Pennsylvania has been adopted by the Missouri Department of Conservation — joining two major outdoor states in a determined campaign against slob outdoorsmen.

A program to "combat misconduct and disrespect and to improve the hunter's image," SPORT was organized in 1976 by the Pennsylvania Game Commission. It stands for "Sportsmen Policing Our Ranks Together" — a great idea whose time has come. Responsible hunters who are angry at being put into the same social

(Continued)

pigsty as slob hunters now have a rallying point. The acronym SPORT also defines the courses of action:

Support conservation law enforcement

Present a good image by your conduct

Offenders must be approached and warned

Report the game law violator

Together we can preserve our hunting heritage

It's a vigilante effort that will work, for no stronger pressure can be brought against irresponsible hunters than pressure by other hunters. Not even arrest and fine can be as great a deterrent to outdoor slobism as outspoken disapproval by other outdoorsmen. Morality can't be legislated — but it can sure be enforced by social pressure.

* *

Forty years ago J.N. "Ding" Darling complained that "the great popular forces of conservation . . . are as inarticulate as an oyster and equally protesting when their shell is being cracked open and the contents removed."

But it begins to appear that sportsmen, the great popular forces of conservation, are finding new voices and becoming very hard to crack.

(Written by John Madson. Reprinted courtesy of Winchester Western Conservation Department.)

† † † †

NATIONAL LICENSE SALES SET RECORD

The number of persons in the U.S. who hunted and fished last year spent a record \$329 million on licenses, tags, permits, and stamps, although the actual number of fishermen declined slightly from 1976, according to the U.S. Fish and Wildlife Service.

Total income from license sales of all kinds was \$10 billion over 1976 and includes \$156 million for fishing licenses (\$1.56 billion over 1976) and \$172.8 billion for hunting licenses (\$9.2 billion more than 1976).

Last year, the number of fishing license holders decreased by 494,000 to 27.3 million while the number of hunting license holders increased by 86,349 to 16,386,594.

"The slight decrease in fishing license holders is not significant," said FWS Director Lynn Greenwalt. "It can be attributed to some states eliminating the license requirement for senior citizens. The 1977 drought also had an impact on outdoor activities, especially in California."

License sales, however, are not accurate indicators of the actual numbers of hunters and fishermen. In several states, one sportsman may purchase separate licenses, stamps, permits, or tags for taking different kinds of fish and game. Also, most states (like Kansas) do not require persons above and below certain ages to purchase licenses, and many coastal states do not require licenses for saltwater fishing.

DUCK STAMP DATA BOOK AVAILABLE

The latest revision of "Duck Stamp Data," a 50-page looseleaf booklet which pictures and describes each of the federal duck stamps that have been issued annually since 1934, has been published by the U.S. Fish and Wildlife Service. The colorful stamps constitute the longest-running, annually-issued series of stamps in revenue or postage stamp history.

Duck stamps, officially known as Migratory Bird Hunting and Conservation Stamps, are required of any person 16 years of age or older when hunting migratory waterfowl. "Duck Stamp Data" is of interest to philatelists, sportsmen, and other conservationists. It reviews the origin of the duck stamp, reports on how money from stamp sales is spent, and explains how a new stamp is selected each year. Since the first stamp was issued in 1934, more than 72 million stamps have been sold. Funds derived from the sale of duck stamps are used to purchase, develop, and manage national wildlife refuges for migratory waterfowl. Since 1934, over \$200 million in revenue has been collected and used for the acquisition of 2.1 million acres of prime waterfowl habitat.

"Duck Stamp Data," also known as Fish and Wildlife Circular 111, is available for \$2.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Orders should specify GPO Stock Number 024-010-00455-0.

† † † †

BASS ANGLERS WIN IN DISCRIMINATION SUIT

ROCHESTER, N.Y. — The Supreme Court of the state of New York denied the application for a temporary injunction against the Bass Anglers Sportsman Society's (BASS) fishing tournament, planned for upstate New York.

Davena Babcock of Hilton, N.Y., filed the suit seeking a temporary restraining order against the tournament, based on the grounds she was denied the right to participate in the all-male tournament lineup. The American Civil Liberties Union (ACLU) instituted the suit on behalf of the 32-year-old female, calling for BASS to show cause why Ms. Babcock could not participate.

The suit also asked that a temporary restraining order be placed on the event. The ACLU contended BASS invitational tournaments, which accomodate men only, should allow Ms. Babcock to fish in the tournament without regard to her sex.

According to Ray Scott, president of the 270,000-member BASS organization based in Montgomery, Ala., "Ms. Babcock's exclusion was not a matter of discrimination for discrimination's sake, but one of sexual privacy." In BASS tournaments, contestants are paired randomly by draw, on a daily basis. After the check-out in the morning, none of the contestants is allowed to leave his boat, for any reason, for the next eight to nine hours. If a contestant does, he is automatically disqualified.

"This rule generally doesn't create a problem," Scott said, "but when the only bathroom facilities are those found in the confines of a small 16-foot bass boat, there is a problem if one of the fishing partners is a lady."

Sugar Ferris, president of Bass 'N Gals, when hearing the court's decision, stated, "Bass 'N Gals was founded to provide women anglers a competitive field without having to face the embarrassment and problems

(continued)

arising from the lack of bathroom facilities. Our bass tournaments have everything the BASS events do, including top anglers, competition, prize money, and fellowship." The one big difference is that men are excluded from Bass 'N Gals tournaments.

"Just like the LPGA and the other women's groups, we've worked hard to build our organization," Ms. Ferris said. "The New York decision further substantiates our right to conduct our women's events without male interference."

† † † †

GAME BIOLOGISTS LOOK INTO CRYSTAL BALL

Preliminary reports on game populations are beginning to trickle in from field biologists, and the outlook for this fall is good.

Pheasant production in most of Kansas, especially the northcentral part of the state, has been better than last summer's, and the winter was relatively gentle with the exception of a couple of blizzards whose effects were short-lived. With both adults and young-of-the-year on good footing, the ringneck season promises some good shooting.

Forgiving winter weather and relatively good cover brought the greater prairie chicken population into the spring in good shape. Where controlled spring burning of Flint Hills pastures was spotty, breeding success can be expected to be good, and the fall's population should be in good shape.

It's too early to tell how bobwhite fared over the summer. Most broods were flightless until the middle of August and preferred to hide in good cover where they can be difficult to census.

Waterfowl numbers are generally up. Green-winged teal showed the most dramatic rise in population over the summer, but wigeon, shovelers, and redheads also did well on the breeding grounds. Pintails showed a slight increase over last year's populations; scaup, mallards, and blue-winged teal stayed at about the same populations or declined slightly. Canvasbacks are down . . . again. It will be a good year for duck hunters who are willing to settle for something besides greenheads, assuming that weather and fall rains cooperate.

Canadas, whitefronts, and snow geese all had a tough time on the far northern breeding grounds this spring. In many parts of the Arctic, the thaw was two weeks or more late, setting back nesting and lowering production. Goose hunters can expect a reduced flight this year, and there may be more old birds in the bag.

As for doves, it's anybody's guess. Many dove shooters are commenting that there are a lot of doves along the backroads, but whether that is a symptom of an unusually good population or the usual pre-season butterflies is hard to tell. Late summer water shortages over most of Kansas should concentrate doves around remaining waterholds and provide some fast pass shooting.

† † † †

TOUGH OLD BIRD

Banding of waterfowl is an effective tool biologists employ to keep track of migration patterns. Once in a while, one band tells an unusual story about the particular bird to which the band is attached. The following account, written by Wyoming Game and Fish Department writer Bill Brown about a bird banded in Wyoming, is a case in point.

“Twenty five years ago, on the 21st of June 1953, Floyd Blunt was in charge of a waterfowl banding operation at Pathfinder Reservoir. Though rather insignificant at the time, tag no. 049889255 was attached to the leg of an adult female Canada goose. After tagging she was taken to the Tongue River near Acme and released.

“Then last year, 1977, during March, Carlos A. Murillo, who lives in lower Baja California, harvested the well travelled and rather old goose no. 04988925.

“So, what good is this information? Well, we’re not taking up tooth pick collections nor are we sending pressure cooking recipes to Carlos even though this might be appropriate with such a tough old bird.

“This sort of information is very important in finding out migration and flyway patterns which aids in planning and management of our waterfowl resource. We also learned from this tagging that a bird that summers at Pathfinder might winter in lower Baja California. Also, we see that a few geese are able to reach ripe old ages — no. 049889255 was probably 28 years old when harvested. Perhaps this says something for this particular goose’s lifestyle; summering by Pathfinder Reservoir and wintering in Baja California could be good for anyone’s health.”

† † † †

SUCCESS STORIES

Residents of a couple of neighboring states have taken it upon themselves to insure the preservation of their wildlife.

The response of Colorado’s taxpayers to the Nongame Wildlife Cash Fund has been termed “phenomenal.” When all the accounting is complete it is expected that more than 92,000 taxpayers will have given nearly \$350,000. Established by the Colorado Legislature last year, the Nongame Wildlife Cash Fund is a voluntary program allowing the state’s taxpayers to use the income tax form itself to contribute \$1, \$5, or \$10 from their refunds to the state’s nongame wildlife programs.

The Colorado Division of Wildlife originally hoped to raise a total of \$175,000 through the tax check-off. The final results, as you can see, should be nearly twice that amount.

In Missouri, a one-eighth cent sales tax approved two years ago by voters has paid for acquisition of about 38,000 acres in all parts of the state. The newly-acquired land includes wetland and upland wildlife areas, state forests, river access, and natural areas (caves, prairies, and other rare or fragile ecosystems). Some 80 percent of the funds raised with the sales tax is pledged to land acquisition.

† † † †

MICROWAVE FISH & GAME

Got a taste for Ginger Orange Pheasant, Cranberry Barbecued Quail, or Microwave Dove? Fishing, hunting and cooking enthusiasts Karen Green and Joan Cone have compiled a boatload of fish and game-type recipes for your microwave oven.

“There are many wives of hunters who are absolutely scared to death of cooking game,” Cone advises. “There are no deep, dark secrets about it. In fact, the simpler the method, the better — and with a microwave oven, the method is definitely simpler.”

“Perhaps no other food lends itself so perfectly to microwave cooking as does fish,” Green says. “When cooked properly in a microwave oven, it is unexcelled — tender, flaky and moist, retaining all of its delicate flavor.”

If you've got a microwave oven and haven't been able to find a recipe cook specifically for microwave cooking of game and fish, you can obtain a copy of the 16-page booklet for 25 cents in coin or by check payable to Whirlpool Corporation from: Whirlpool Corporation, Fish & Game Recipes, Administrative Center, Benton Harbor, Michigan 49022.

† † † †

KEEP IT COMING!

We don't want you to miss a single issue of KANSAS FISH & GAME magazine. Although we will notify you when subscription renewal time arrives, you can consult the coded address label on the cover of previous issues you have received to find the expiration date of your current subscription.

J Q PUBLIC	055432
BOX 123	1180
ROUTE 1	
NEW CITY	KS 66666

Number indicates the month the subscription expires. In this case, the last issue for the subscription will be the September/October 1980 issue.

So don't wait until you receive your last issue to renew. Do it early.

† † † †

NONGAME PROPOSAL FALTERS

The Nongame Fish and Wildlife Conservation bill is in trouble on Capitol Hill, according to the Wildlife Management Institute. Time is beginning to run out for that proposal and there seems to be little support for it among House members and the House leadership in particular. The White House also is reportedly continuing its strong stance against the bill.

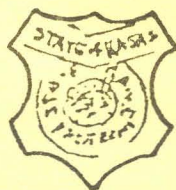
(Continued)

The Senate has passed its nongame bill but a similar measure in the House (H.R. 10255) is stalled in the Rules Committee. Early in June, there seemed to be few obstacles blocking the House version of the bill.

“But a coalition of power associations, labor unions, and the U.S. Chamber of Commerce suddenly bombarded the House with mailgrams and letters against the bill and H.R. 10255 was stopped,” reported one observer. Subsequent meetings with those organizations seem to have eased the fears of the power associations and labor unions, who apparently were not opposed to the nongame program per se but were concerned about several passages of the bill which were not clear to them. Discussions with representatives of the U.S. Chamber of Commerce, however, were fruitless and the bill probably will have to proceed without the Chamber’s support.

The thorniest problem now, however, appears to be the Administration’s threat to veto the bill if it reaches the White House. The House leadership reportedly is not interested in mounting a veto override, and as of now, plans to let the nongame bill die in the Rules Committee.

“Therefore, H.R. 10255 is at the mercy of the Administration and the House leadership and it would take a massive public outcry to break it loose,” one source concluded.



It's The Law.

If you're a waterfowl hunter, you've probably heard something about a new regulation restricting use of lead shot on six major public hunting areas this season.

In case you haven't heard, the new regulation requires use of steel shot loads only for waterfowl (ducks, geese, and coots) hunting at these areas: Cheyenne Bottoms in Barton County, except the goose hunting zone on the south side of Pool 5; Marais des Cygnes Wildlife Area in Linn County; Neosho Wildlife Area in Neosho County; Cheney Reservoir in Reno County, including all Bureau of Reclamation and Fish and Game land; Quivira National Wildlife Refuge in Reno, Rice and Stafford counties; and Elk City Reservoir in Montgomery County, including all Corps of Engineers and Fish and Game land.

The non-toxic shot rule will apply only to 12-gauge shotguns during the 1978-79 season but will likely apply to all gauges in future years. The steel shot decision, mandated by the U.S. Department of the Interior, was the result of studies indicating that more than 2 million ducks die in the U.S. each year from lead poisoning.

† † † †

LETTERS to the EDITOR



EDITOR:

Recently, while visiting the Peter Zerr farm near Grinnell, we were alerted by one of the boys who had heard a rabbit squealing. When we arrived on the scene, a bullsnake was curled around the rabbit, which was still quite alive. Pete grabbed the snake by the tail, shook the rabbit loose, and then dropped the snake. This did not deter the snake, which immediately moved and grabbed the rabbit by the head. Pete again grabbed the snake, shook loose the rabbit and dropped the snake, which again grabbed the rabbit. The enclosed pictures are of the resulting action.

The thing that amazed us all (there were six of us present) was the tenacity of the snake. He paid no heed to being prodded with sticks or held aloft by the tail while consuming his prey. The snake measured just a fraction under five feet long.

R. A. BRENNAN
TOPEKA



EDITOR:

Being a bowhunter, I felt the contents of your article on bowhunting in the September/October 1977 issue were fine, but you did new bowhunters in Kansas an injustice. Two pictures of a bowhunter and one of a hunting bow — all show uncovered broadheads.

What is the beginner going to think of the pictures in this article? He's going to think hunting with quivers without broadhead covers is okay because that's the way the Fish & Game personnel do it. The more experienced bowhunters know very well the many dangers of hunting with uncovered broadheads. A slip on wet ground, loose bark on a tree, or maybe

some vines underfoot could cause a fall and your bow and quiver full of sharp broadheads go down underneath you. Why take chances with uncovered broadheads?

I attended a Hunter Safety Course with my son a year ago here in Topeka. During the archery portion of the course, the importance of covered broadheads was stressed to those kids. I was saddened to see the pictures for your article. Let's show the beginner the proper way of covering broadheads for his and his hunting partner's safety.

RON SMITH
TOPEKA

We stand corrected. The Editor.



Jerry Horak

summer growing season. To prevent deterioration of pastures, about half of the year's growth should be left at the end of the growing season. This leaves enough top growth for the plant to put by some reserves for the winter. Prairie chickens use every type of prairie habitat. Thus, uneven grazing is most desirable for chicken management. Recommended stocking rates in large pastures will provide over-used areas such as salt licks (ideal for booming grounds); moderately grazed areas for loafing, roosting and brood rearing sites; and lightly grazed areas for nesting.

Annual burning of the pastureland has persisted since the Flint Hills settlers discovered that steers selected forage and gained more rapidly on burned rather than unburned range. But, over the years, annual burning reduces herbage yield and eventually leads to overgrazing. Occasional burning is an important ecological factor for maintaining prairies, without which prairies will soon deteriorate. A certain amount of mulch is required for best overall performance of the prairie; the dead matter serves as a source of food and shelter for many types of beneficial soil organisms. It

also protects the soil against surface run-off and evaporation. On the other hand, accumulation of too much mulch depresses prairie herbage yield and reduces the number of plant species. Burning every three years removes this excess mulch, and, in addition, burning at the proper time will control brush.

Occasional burning is necessary to maintain prairie needed for prairie chicken populations. Although previous year's vegetation is needed for nest building and hen concealment, excessive mulch will make it nearly impossible for young chicks to move freely in search of food.

Burning the entire prairie every three years would have a considerable adverse effect on the prairie chicken population for that year because of the complete destruction of nesting cover. Rotation burning, that is burning approximately one-third of the prairie pasture each year, would accomplish two important ends: removal of excessive mulch for brood mobility and control of brush, and preservation of enough mulch each year for nesting cover.

Lesser Prairie Chicken



Lesser prairie chickens were probably found throughout southwestern Kansas before settlement. Early naturalists failed to differentiate between the lesser and the greater prairie chicken, but from sketchy information, biologists assume that the lesser prairie chicken's original range probably extended as far north as the Smoky Hill River and east to Harper and Kingman Counties. The range of the two species overlapped, and both could be found in some areas.

Early market hunting and later illegal hunting took great numbers of the lesser prairie chicken, but nothing indicates any great reduction in their numbers before the drought of the 1930's. During this drought, there was little water, food, or cover available. There were reports of chickens found dead in large numbers, their throat and nostrils clogged with dust. Since the Dust Bowl Days, the land has never returned to its original condition, and the population of lesser prairie chickens has not recovered its former size. Land-use changes have confined the birds to sandsage prairie and, to a lesser extent, the sand prairies. Today, the lesser prairie chicken is found in limited areas in southwest Kansas south of the Arkansas River and west of the Pratt-Barber county lines.

The lesser prairie chicken is slightly smaller than its cousin, the greater prairie chicken. The coloration of the two species is very similar with the lesser prairie

chicken being a little lighter in color. During spring courtship displays, the air sac and eyebrows of the male lesser chicken are rose colored, in contrast to the orange air sac and eyebrows of the greater chicken.

Perhaps the most obvious difference between the two is the sound they make during courtship performances. The voice of the lesser chicken resembles a turkey call or, at times, a series of air bubbles emerging from water, totally unlike the low-pitched booming of the greater chicken. Thus the term "gobbling ground" is used to describe the lesser chicken's display area in contrast to the "booming ground" of the greater prairie chicken. Courtship behavior of both species is very similar.

Nesting of the lesser chickens generally starts in late April. Nests are located on the ground in the open prairies. They are placed in a hollow, scratched out of the sand, about four inches deep and eight inches in diameter, and are usually lined with dead vegetation. A hen feels more secure when vegetation is dense enough to conceal her with an overhead cover of sand sage, sand plum, or some other small bushy plant. She lays an average of twelve eggs in about fourteen days and incubates them for about twenty-three days before they hatch. The young are precocious and leave the nest within hours after hatching.

Broods escape from the hot Kansas sun by spending

much of their day in the shade of shrubs and weeds. While moving through this cover, the birds feed on insects which make up more than eighty-five percent of their diet. When the young are eight to ten weeks old, the adult hen leaves them to go through her annual molt. The broods start associating with each other, forming early fall flocks. By mid-September, the adult males have completed their annual molt and with the young males start visiting the fall gobbling grounds. The fall display isn't as intense as the spring dance but does occur daily from mid-September until winter weather discourages it.

The fall and winter flocks of lesser prairie chickens feed in grain fields both morning and evening. At midday, they loaf in nearby pastures.

There are two types of habitat used by lesser prairie chickens in Kansas: the sand prairie and the sandsage prairie.

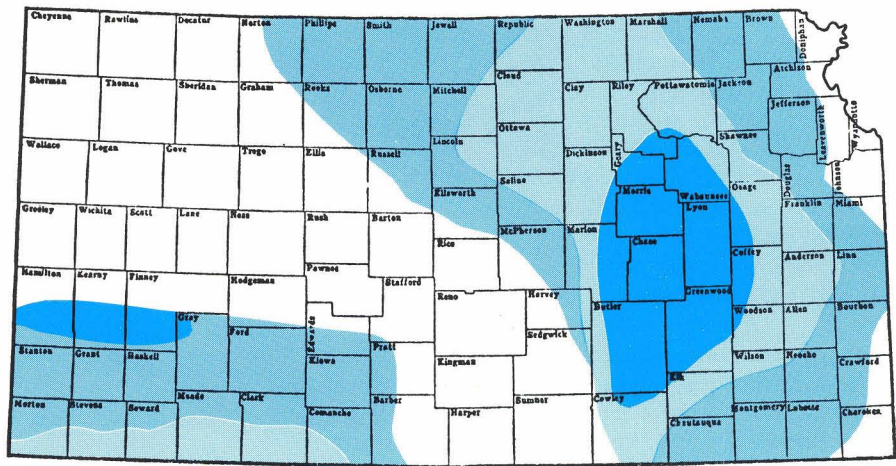
The sand prairies make up a large percent of lands in southwest Kansas. Originally, this area was mid-to-short grass prairie. The lesser prairie chicken breeds best in areas where sixty to eighty percent of the range

is in native grassland. Since the Thirties, the farmers have plowed up large areas of the native grass to plant wheat and sorghum, and much of the remaining rangeland is overgrazed. Only scattered flocks of lesser prairie chickens remain in these areas. The prairie chicken doesn't ask for much. If the rancher took better care of his land, the chicken would thrive and, in the long run, the ranches would also show greater profits.

The highest densities of lesser prairie chickens occur in the sandsage prairies south of the Arkansas River. Since the Sixties, center-pivot irrigation systems have cut into these choice sandsage prairies—at a rate of six percent in the last two years. At this pace, this prime area will be gone in thirty years or less. There is a threshold acreage of grassland below which the future of lesser chickens is in doubt, and that threshold is rapidly being approached in the sandsage country south of the Arkansas River near Garden City.

Both types of the sand country are in danger of being plowed or overused in some way, and the lesser chicken is in danger as a result.

GREATER AND LESSER PRAIRIE CHICKENS IN KANSAS



Lesser chicken

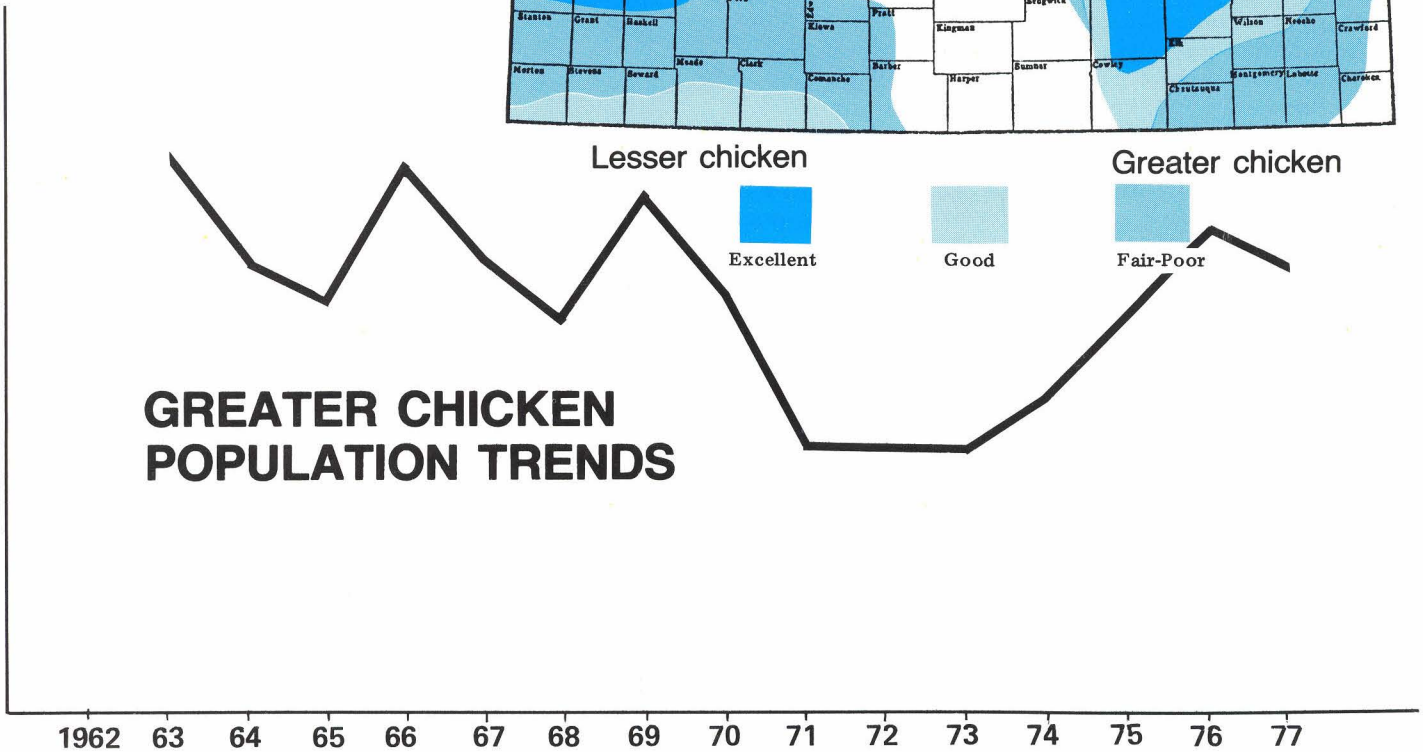
Greater chicken

Excellent

Good

Fair-Poor

GREATER CHICKEN POPULATION TRENDS



Bobwhite Quail



The bobwhite has been in Kansas for quite a while. C.W. Hibbard, a Kansas fossil expert, was poking around in a Meade County rock outcrop in 1937 when he stumbled on the remains of an extinct quail. The fossilized bones dated back to the Pliocene, a million years or so before the first birdy pointer and quail-happy wingshooter came to the plains. A later paleontologist, Alexander Wetmore, named the ancient Meade County quail *Colinus hibbardi* in honor of its discoverer. The modern bobwhite probably counts this long forgotten bird among his direct ancestors.

The Kansas grass that whitemen first traveled into wasn't the best bobwhite cover. On the pristine prairie, the bob was probably found only along brushy creek bottoms and in the mixed brush and grass east of the Flint Hills. When the plow first broke Kansas sod, all that changed. The prairie was converted into a patchwork of fields, fencerows, road ditches, and grass that suited the bobwhite perfectly. He responded by expanding his range to the west and becoming much

more common in his original Kansas strongholds.

The bobwhite has been reported in every county in Kansas, but the species reaches its greatest density in the eastern and central parts of the state. Although there are a few bobwhite in the western third of Kansas, they have a tough time there, hanging on along brushy watercourses for a few years, then nearly disappearing in a year of severe drought or harsh winter storms. Such extreme fluctuations are common in populations that exist at the outposts of a species' range.

Spring in bobwhite country brings with it the familiar call "ah, bobwhite!"—the announcement of a new biological year. Winter coveys break up as the weather softens, usually in April but sometimes as early as March or as late as May. Some birds find a mate before they leave the covey; others prospect a little longer before making up their minds.

The cock whistles early in the season to attract eligible females and later on to declare the pair's territory. In normal years, whistling reaches a peak in

mid-June when most nests are hatching, but unmated males will continue to call well into September. If bad weather forces a large part of the population to renest, the cock's whistle will remain a common sound through most of the summer.

The bobwhite is monogamous, and the cock takes an active interest in nest building, egg laying, and brood rearing. Most pairs prefer open cover with bare ground underneath. Quail like cover they can walk through and usually favor herbaceous vegetation less than twenty inches high for nesting. Sparse strips of weeds next to disced ground, roadways, or mowed hay fields and lawns are attractive nesting coverts. Most nests are within fifty feet of open ground.

Controlled burning can be a valuable tool for maintaining good nesting habitat. The best burning program is probably a two or three-year rotation which leaves some well-established weedy cover mixed in with new growth and recently burned ground. It's important to burn early in the spring before the hens have nested. The length of the burning rotation may vary with the vigor of vegetation; the important thing is to provide variety and keep the cover from getting too thick.

The mated pair build their nest on the ground, scratching out a depression and lining it with dead grass and feathers. Overhanging grass often forms a canopy over the nest. The hen ordinarily lays an egg a day, although it isn't unusual for her to skip a day. She deposits the egg quickly, then leaves the nest unattended until the next laying. After laying an egg, she meets her partner nearby. Average clutch size is four-

teen to sixteen but can vary from two to twenty.

The female starts incubation after the last egg is laid. She stays on the nest almost constantly for twenty-three days, leaving only for short feed-and-stretch breaks in morning and the afternoon. The eggs don't begin to develop until they are incubated, so they all hatch at about the same time. Incubation is a risky business. As many as sixty to seventy percent of first nests are lost either to predators or bad weather. Heavy rains can flood out nests, chill eggs, even drown chicks. If the first summer heat wave comes before the hen begins incubation, the sun's heat may start egg development prematurely. The hen will lead these first chicks away from the nest and leave later eggs to spoil. Chicks may have trouble pipping in extremely dry weather. The hen herself may be lost to a predator or farm implement, but if she survives the destruction of her nest, she will try again, three or four times if necessary. Late nests are not as well built as earlier efforts, and clutches are usually smaller. After continued stubborn effort, about fifty percent of the summer's breeding pairs finally bring off broods.

In Kansas, the peak of hatching comes in mid-June. By the first of July, about sixty percent of the year's broods have hatched. Quail are about the size of a bumblebee when they come out of the egg. The female lets them dry and fluff out, then leads them away from the nest to join the male. The young quail chill easily in their first week. If the temperature drops or it rains, the brood takes shelter under the wings of the two adults. The mortality rate among chicks is high during their first four weeks, but, by the time they're six weeks old, they can take care of themselves, relying on their parents mainly for warning of danger. If the female is lost at any time during incubation or brood rearing, the male takes over household duties.

The chicks begin searching and scratching for food almost as soon as they hatch. They may weigh half as much as their parents by the time they're eight weeks old. To support this meteoric growth, they require a diet of almost thirty percent protein and feed almost exclusively on insects to get it. The adults often lead their broods into vegetation that is just recovering from burning; the rapid growth of green vegetation supports a myriad of plant-eating insects, and the ground is clear of accumulated dead vegetation that can hide the bugs from hungry chicks. Fields of row crops are favored brood rearing habitat if there is a little smartweed and foxtail mixed in with the corn or milo.

As early fall approaches, the immature quail wander from the family group and eventually come into contact with other birds. As a result of this shuffle, fall coveys are composed of birds from different broods which helps reduce inbreeding the following spring. The coveys, usually fifteen birds or so, establish a home range and settle in to fatten up and wait for winter. The population at this time of year is almost eighty percent young of the year.

The covey generally feeds during early morning and late afternoon, except in severe weather when the birds are more likely to stay on the roost drawn up in a tight circle, tails in, heads out, to conserve heat. Low tem-



peratures alone aren't usually a threat to quail as long as they have a good food source to supply the calories they need to generate body heat. A combination of low temperature and snow or ice, however, can be disastrous. Quail aren't big enough to dig through to buried food and don't carry enough food reserves to support themselves for more than a few days in extreme cold.

When the first blizzard of January descends, it occurs to many people that the quail need help, and the first thing that comes to mind is putting out feed. Quail use such handouts, but after the feeding program starts, it has to continue regularly through the winter since the birds quickly come to depend on charity. It's probably a good idea to furnish some grit along with the grain. It's also important to realize that predators are always willing to take advantage of a concentration of any prey animals, including quail; don't be surprised if the coveys around a feeding station thin out as the weeks pass, no matter how well-nourished they are.

Winter is a critical time for the bobwhite, but, with the right food and cover, a solid breeding nucleus will survive nearly any winter. The key to the survival of a covey is a few brushy coverts with a weather-resistant canopy and plenty of vegetation near the ground. A nearby grain field or source of wild seeds will probably do as much to pull the birds through as the most

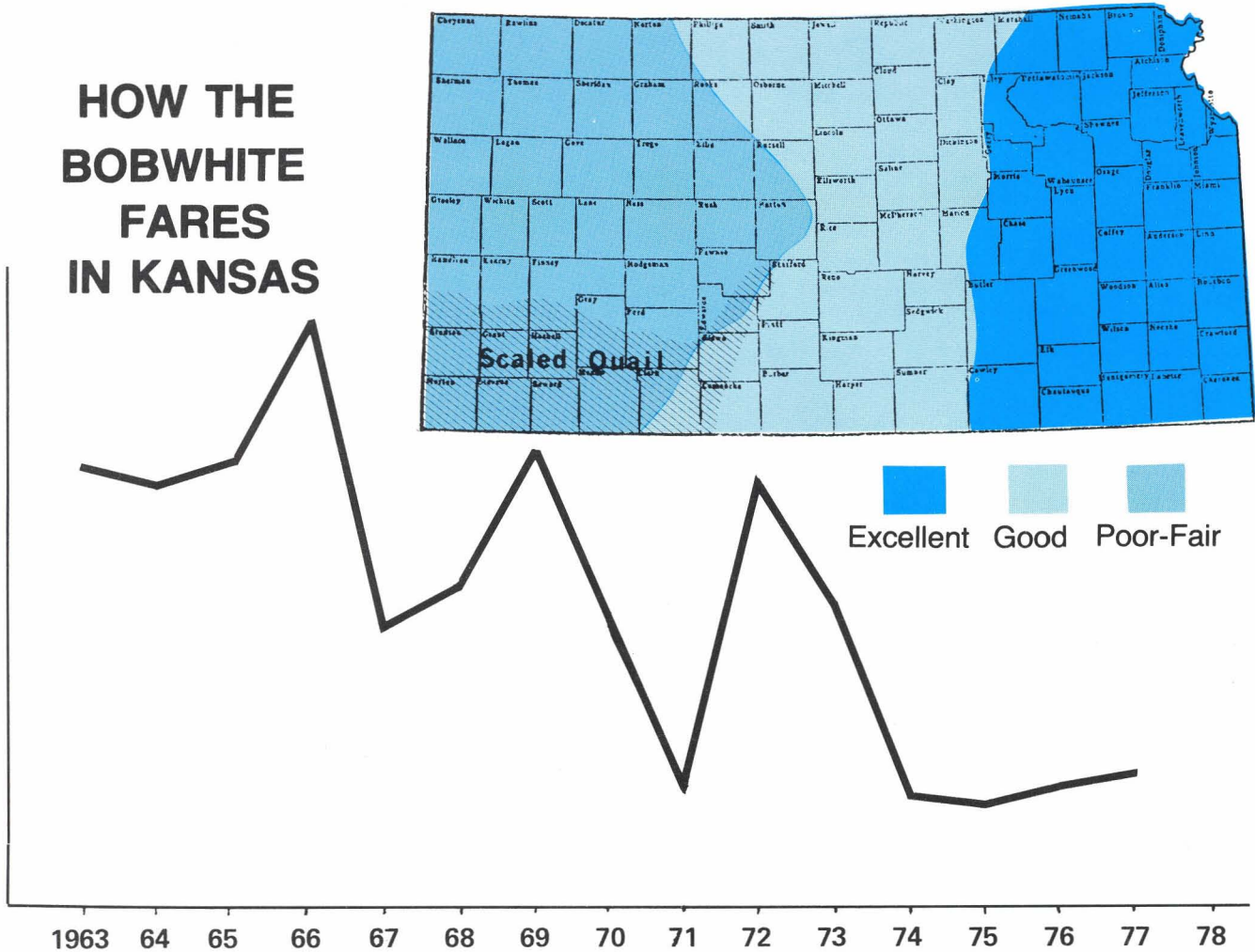
extensive winter feeding program.

With each fall comes the anticipation of hunting seasons, and for nearly three-fourths of all Kansas hunters, that means quail. Over the last fifteen years, an average of 146,000 Kansas hunters have taken 2,500,000 bobwhite a year. In 1966, nearly 4,000,000 quail found their way to the table. Bobwhite hunting is best in eastern Kansas; about two-thirds of the harvest comes from the eastern third of the state, and most of the rest comes from the central third. Kansas bobwhite populations and hunting success fluctuate drastically from year to year. In 1958, for example, the typical hunter averaged nearly five birds a day while, two years later, the average was a little more than two birds a day. A few small birds always show up in the bag during the season. Labeled "Mexican quail" by many hunters, these are actually birds of the year that come from late clutches or renests and haven't yet reached adult size or coloration.

Commission biologists follow quail populations with counts made around the state by rural mail carriers, brood counts in July and August, and surveys of hunters after the season. Bobwhite numbers seem to follow the long-term cycle of wet and dry years across the state. There was a general increase in bobwhite population from 1962 to 1966 followed by a long



HOW THE BOBWHITE FARES IN KANSAS



decline that has shown signs of turning up again since 1974. Within these long term increases and declines, smaller population fluctuations may occur due to less extreme local weather changes. The size of Kansas' fall bobwhite population depends mainly on the weather during the spring production period. A fairly small number of breeders can come back after a good nesting year while a large, healthy breeding population may have trouble maintaining itself after a cold, wet spring.

When population declines occur, there is always a cry for shortened hunting seasons or even a closure. The current Kansas season length doesn't hurt bobwhite populations; the hunter is harvesting birds that would eventually be lost to other natural causes. The real threat to the continued well-being of the Kansas bobwhite is loss of top-notch habitat.

The basic components of good bobwhite habitat are grass, cropland, brush, and woodland. Large tracts of any of these types alone, however, will not support many quail; it takes a mixture of all four with a lot of edge where two types meet to produce highest bobwhite densities. Interspersions of these habitat types are disappearing from the modern agricultural landscape. Large tracts of land are committed to monocultures of grass or grain. Overgrazing on many pastures has reduced their value as quail nesting cover, and the

waste grain in many fields goes unused because there are no shelterbelts, brushy fencelines or weedy rows of stubble to protect a covey while it eats. A couple of rows of standing corn or milo next to a patch of woody cover can bring a covey or two through a long winter when other food is covered with snow and ice. If the field is fall-plowed, a narrow strip of unplowed ground next to the native cover will help, too.

Woody quail cover has also taken a beating in the last decade. Hedgerows get in the way of large equipment and irrigation machinery and are rapidly disappearing. Woodlots are grazed or converted to cropland, and brush in pastures and along roadsides and power-line rights-of-way is being sprayed to tidy up the landscape. Urban expansion is converting thousands of acres of cover to asphalt plains.

Restricted bag limits, predator control, shorter seasons, and limits on hunting and hunters won't protect the bobwhite from these threats. Unless we provide the necessary food and cover, we can expect to see Kansas quail slowly evaporate. All of us who enjoy pursuing the bobwhite with a good pointing dog or just like the way he sounds in a spring backyard must take a hand in providing for him or accept our part of the responsibility for his decline.

Scaled Quail



Steve Cappel

A close relative of the bobwhite, the scaled or blue quail, is also found in Kansas. The scaled quail is most common in New Mexico, Texas, and Mexico, but the northern edge of its range stretches to the southwest corner of Kansas where the bird has settled in the sandsage prairie along the Arkansas and Cimarron rivers west and south of Pawnee County.

Somewhat larger than the bobwhite, the scaled quail is bluish gray with black markings (“scales”) on its breast, back, and abdomen. A bushy crest on the head varies in color from buff in the female to a cotton white in the male. The species has a distinctive vocabulary. Unmated males challenge each other with a single nasal whistle which has been described as a “whock”, “squawk”, “kwook”. When a covey or two mated birds are separated, they use a nasal monotone “pey-cos” call to find each other again.

Scaled quail mate while their winter coveys are still intact. The covey, usually thirty birds or so, breaks up in March or early April as mated pairs set up house-keeping and males become more antagonistic toward each other. The female builds her nest in early May, scratching out a shallow depression in the shade of a shrub and lining it with dry grass. She lays an average

of twelve to fourteen eggs, and incubates them for twenty-one to twenty-three days, mostly on her own. The males do help rear the chicks who move out of the nest as soon as they are dry, like young bobwhite, and like the bobwhite chicks, scaled quail feed mainly on insects for the first eight weeks of their lives.

Scaled quail are strong fliers but share the pheasant’s taste for running. They hang out in thick clumps of soapweed or sage that provides some overhead protection along with an open understory to stretch their legs in. During the winter, coveys will often take up residence around abandoned windmills, old car bodies, or other unused man-made structures.

The birds may move out of the heavy cover as the weather warms up toward spring, but they return to rest and lay their eggs. Overhead cover protects them from hawks and provides a little shade, especially important through the searing heat of mid-summer in the southwest.

As with other wildlife species, the most critical threat to the well being of the scaled quail is destruction of its primary habitat, the sandsage prairie by irrigation projects, and row crop agriculture.

Retriever Trials

Higher education for dogs—with paintings by Robert Abbett.

William A. Anderson, Jr.



John Rhodus

A well-trained retriever is special. Unlike a house dog who often submits to his training out of habit without ever really understanding why he does what he does, a good retriever eventually welds all the fragments of his training into a skill his owner comes to depend on. He knows the job he's been trained for and takes pride in his ability to handle it. The discipline involved takes on a machine-like precision, but the best dogs are more than machines; when the time is right, they'll make their own decisions about the problem at hand and set about solving it with a flair.

It's hard to fully appreciate the enthusiasm of a fine retrieving dog until you've seen one shivering in a duck blind, dusted with frost from his last swim but still watching the sky intently for the next flight. And it's just as hard to appreciate his steadiness and intelligence until you've seen him competing head-to-head in a field trial.

The sport of field trialing retrieving dogs in the United States is a relatively new avocation—the first trials were held well after the turn of the century. In recent years, retriever field trials have grown increasingly popular in Kansas, producing many excellent retrievers and quite a few accomplished trainers.

There are many reasons for the growth in popularity of retriever field trials. No doubt the increased availability of leisure time is one major factor, but for many, the sport is an extension of first love. For the avid waterfowler or upland game hunter, retriever field trailing allows the enthusiast year-around activity outdoors whether or not the hunting season is open.

Kansas has three clubs sponsoring American Kennel

Club licensed field trials: the Jayhawk Retriever Club, the Topeka Retriever Club, and the Kansas City Retriever Club. The Jayhawk Club centers its activities in the Wichita-Hutchinson area and holds its field trials at the Quivira Federal Wildlife Refuge. The Topeka Club draws many of its members from northeast counties and holds its licensed field trials at Melvern Reservoir near Emporia. The Kansas City Club, now more than twenty-five years old, draws its membership from eastern Kansas and western Missouri.

The American Kennel Club, in its rules and standard procedures, states:

“The function of a Retriever is to seek and retrieve ‘fallen’ game when ordered to do so. He should sit quietly on line or in the blind, walk at heel, or assume any station designated by his handler until sent to retrieve. When ordered, a dog should retrieve quickly and briskly without unduly disturbing too much ground, and should

deliver tenderly to hand. He should then await further orders.

Accurate marking is of primary importance. A dog which marks the fall of a bird, uses the wind, follows a strong cripple, and will take direction from his handler is of great value.”

To expand on this statement, it is realistic to say that each club in the state of Kansas, offers any person interested in retriever dogs an opportunity to improve the ability of his dog and furnishes a broad spectrum of competition designed to test that ability.

Licensed field trials generally offer four levels of competition. These areas are divided into “stakes.” The open all-age stake is for retrievers more than six months old and is the ultimate test of dog and handler. The winners of these stakes are credited with points that count towards the coveted title, Field Trial Champion.

John Rhodus



These all-age dogs must be able to mark well and retrieve up to four shot birds, one after the other. They must be steady as a rock to shot and flush and must not drop a bird they are retrieving to pick up another shot in front of them. These dogs must be able to find game they have not seen by taking hand and whistle signals from the handler.

The description of the requirements, however, doesn't really reflect the difficulty of the tests. A usual retrieving problem at this level is a multiple water retrieve. The dog sits next to his handler and watches an assistant throw two dummies into the lake from a point of land. The third dummy is thrown out of sight over the point of land. The dog then charges into the water and fetches the two dummies in sight one at a time. The handler "gives him a line" on the third retrieve, showing him the exact direction of the last dummy. The dog will stick to this line until he's told to go right or left. The handler can stop him with a single blast of the whistle, bring him back, move him out, or send him right or left with hand signals. It's not unusual to see dogs in this class working on retrieves 300

"If your interest is a sound hunting companion, a field trial club will help you develop such a dog."

yards or more from the handler—almost beyond the reach of the whistle.

Obviously, any dog that can complete the test in this stake would make a superb hunting dog.

The amateur all-age stake is for any retriever more than six months old handled by an amateur. (An amateur is considered to be a person who does not receive any fees or remuneration for handling or training retrievers). The winners in this stake are credited with points towards an Amateur Field Trial championship. The competition in this state is keen and often requires the same level of ability necessary in the open all-age.

The derby stake is open to retrievers which are not over two years of age on the first day of a trial at which they are being run.

On the water, they should be accustomed to work out of a blind and going through decoys. They should be able to make long retrieves on singles or doubles up to a hundred yards or so. They should be able to go in any direction upon a signal given by a handler. These pups should sit steadily on the line until ordered to retrieve although a controlled break is sometimes dismissed by penalizing the dog's point total if he is quickly brought under control by the handler. The derby is the starting point for both dog and handler.

The qualifying stake is open to retrievers who have never won first, second, third or fourth place in an

open all-age, limited all-age, or amateur stake or won a first place in a qualifying stake at a licensed trial. This stake includes dogs of all ages from hot pups on the way up to full grown dogs who have never been quite able to lead the field.

The requirements of a qualifying dog are not nearly as stringent as that of an open all-age. The stake is often considered the testing ground to determine just how good a dog's abilities are and whether or not he can progress to compete for a Field Trial Championship. The stake is also an excellent place to keep a fine hunting dog in tune.

Each of the field trial clubs host "club trials" which are much more informal than the ones requiring rigid AKC rules adherence. They offer handler and dog a broad spectrum of competition levels and a informal atmosphere for improving both the skill of a dog and handler. One of the more important functions of the retriever clubs is to give handlers a chance to learn more about training a retriever properly. A person joining a club does not have to assume that his ultimate goal should be training and owning a field trial champion. The rewards of developing a good dog are tremendous at any level. If your only interest is to have a sound hunting companion, a field trial club will help you develop such a dog.

The cost of retriever field trialing varies enormously. In order to compete in a licensed field trial, your dog must be a registered retriever breed—Labrador, Golden, Chesapeake, or Irish Water Spaniel. Because of the popularity of retriever field trials in Kansas, there is now a good supply of well-bred retrievers in the state. Cost of a good pup will range anywhere from \$100 on up. On the other hand, trained field trial retrievers have sold for \$10,000, and the cost of campaigning these dogs on the field trial circuit can exceed \$1,000 a month when professional training or handling is used.

The important thing about the cost is that you can choose your own level in any of the retriever clubs. You don't have to spend a lot of money to reap great rewards and much satisfaction.

If you have an interest in getting started with a retriever pup for hunting or field trialing, one of the clubs can steer you to training and competition activities not too far from your home.

Jayhawk Retriever Club
Dr. Joe McMullen
1800 E. 56th
Hutchinson, KS 67501

Topeka Retriever Club
Jay Stine
Route 3, Box 19
Emporia, KS 66801

Kansas City Retriever Club
Bill Anderson
5733 Reinhardt Drive
Fairway, KS 66205



Golden

Probably the best house dog of the well-known retrievers, the golden dotes on his family, loves children, and doesn't get overly rambunctious in the living room. The golden's coat is longer and less dense than the Chesapeake's or Lab's; as a result, he chills down faster in really cold water. He does work well on ducks in temperate marshes, however, and is an excellent upland retriever with better running gear than either of the other breeds. He's also a handsomer dog than the muscle-bound water specialists.



The Lab

Although the name implies otherwise, the Labrador retriever traces his roots to the island of Newfoundland where he was kept by fishermen mainly to fetch ropes from shore to boat. Eager to please, affectionate, and with a built-in drive to fetch, the Lab is the most popular of the retrievers. Although they were developed as duck dogs, Labs are now used extensively by pheasant hunters. A good Lab will hunt close across an open corn field, has an adequate nose, and will stick with a wounded ringneck for as long as it takes to run him down. Most Labs have sweet dispositions and make good pets in houses that have been stripped of all china, antique glass, brittle furniture, and other breakables. By the way, don't insult the owner of a light-colored Labrador by calling the dog "golden"—that's a *yellow* Lab you're looking at.



About the artist:

Robert K. Abbett, who has his home and studio in Bridgewater, Conn., first gained national fame for his paintings of sporting dogs. He also is widely respected for his paintings of game birds, horses, cowboys, and portraits of great men. Following his education at Purdue and the University of Missouri, and a successful career as an illustrator, he turned his full attention to fine art in 1973.

“It is my job as an artist to summon up feelings from the viewer’s own experiences, and without this interplay between us my pictures would be empty,” Abbett says. “The simplest subjects seem to make the best pictures, like a batch of pups or a brace of mallards. These are things which are all around us and which most of us enjoy. Put into painting form they help people take a minute off and relax a bit.”

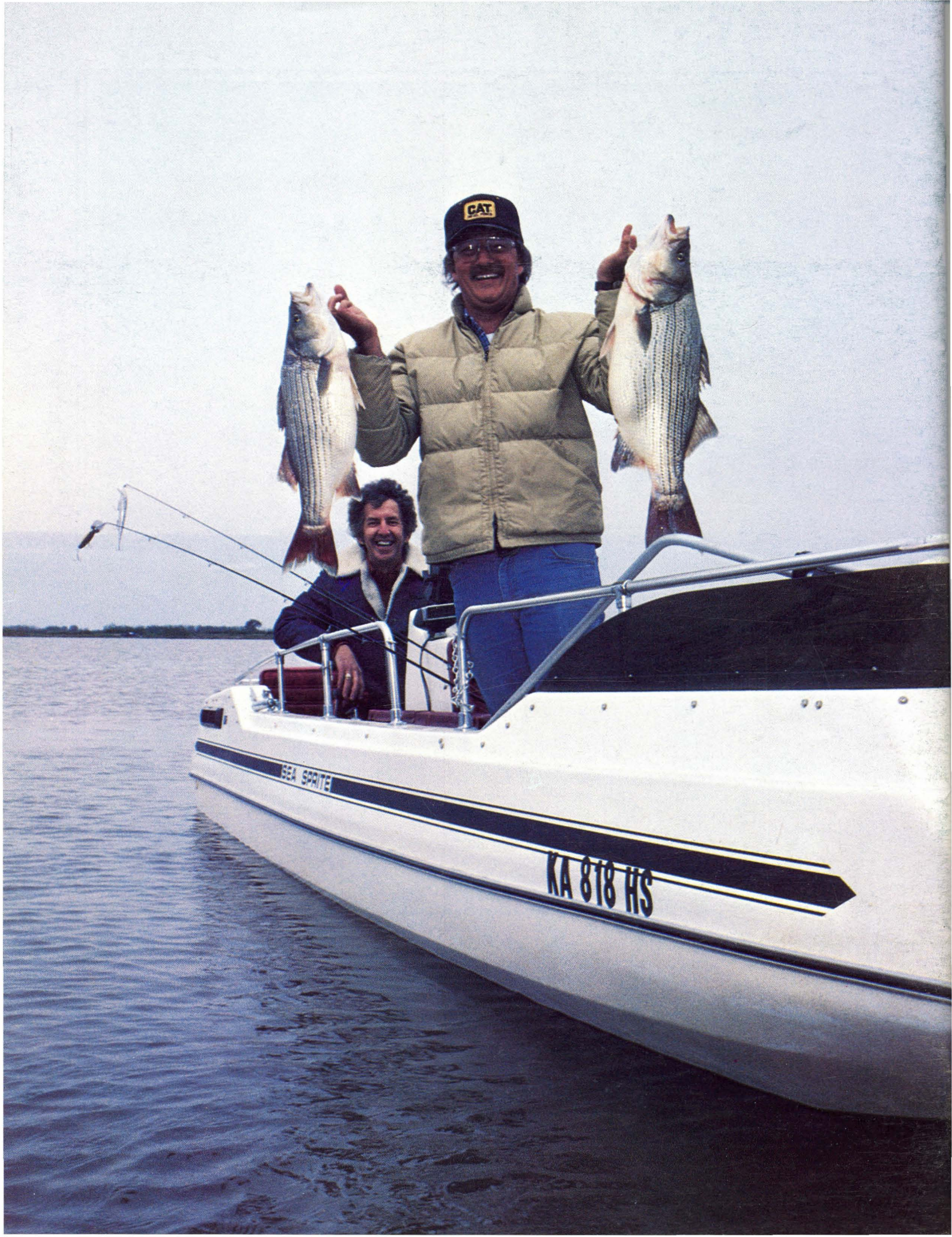




Chesapeake

The Chesapeake Bay retriever was bred in America to absorb the almost unbelievable punishment of nineteenth century duck hunts along the Atlantic tidewater, Mississippi valley, and northern lake country. Chessies are strong swimmers and seem to be almost immune to cold, but they're a rarity today in spite of their obvious qualifications as waterfowl dogs. They have a tendency to be one-man dogs, intolerant of strangers, and their thick coats are impregnated with a water-repellent oil that may be offensive to a housewife's nose. But, for all their disadvantages, they are a sturdy working retriever that commands the respect of all knowledgeable duck hunters.





SEA SPRITE

KA 818 HS