

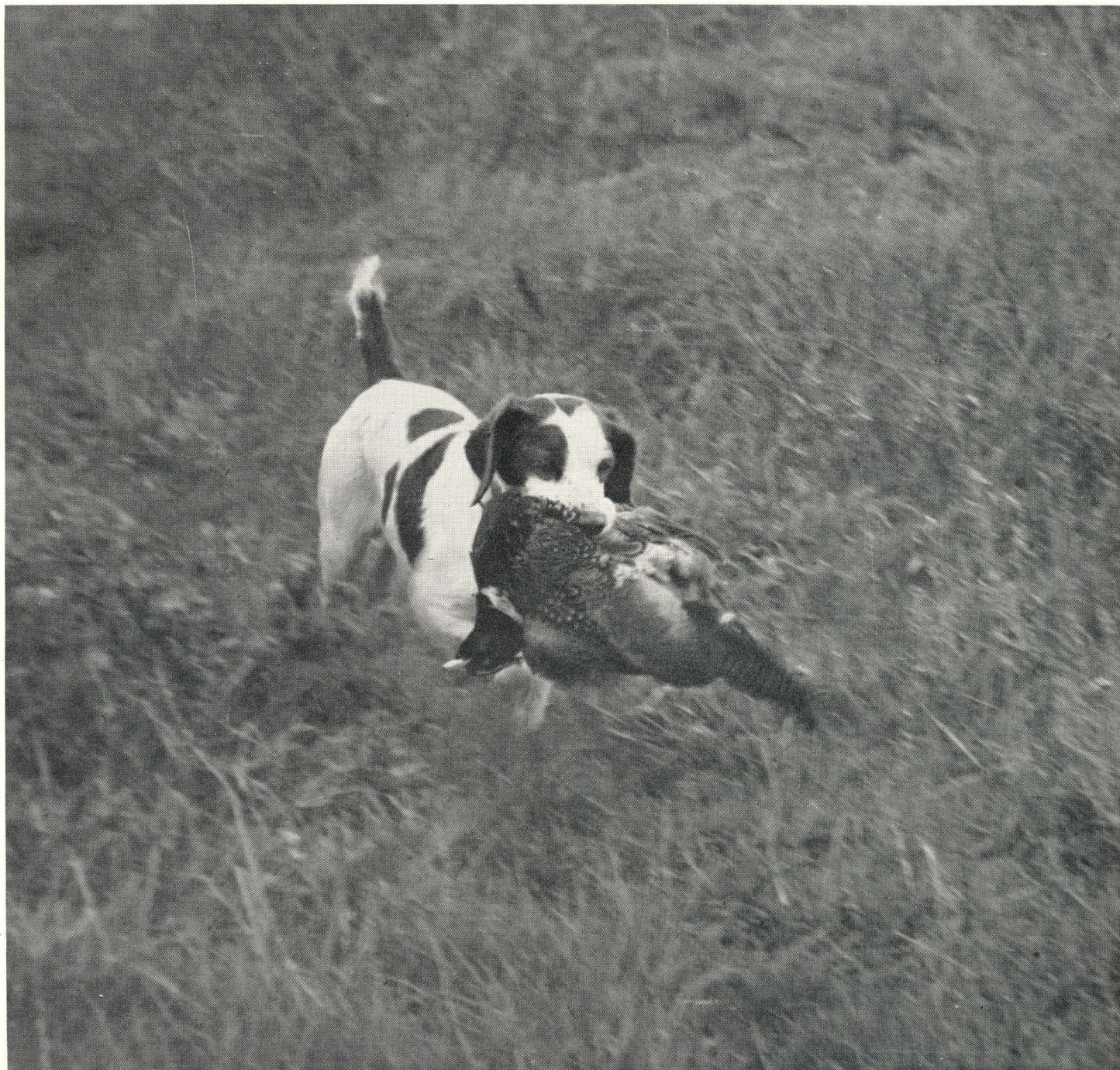
KANSAS FISH AND GAME



VOL. IX

JANUARY, 1952

No. 3



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KANSAS FISH AND GAME

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Bulletin on Kansas Farm Ponds Available Now

The new bulletin, "Construction and Management of Kansas Farm Ponds," written by Dr. Otto Tiemeier of Kansas State College with the collaboration of Seth Way, fish culturist, and Roy Schoonover, fisheries biologist of the Commission's technical staff, is ready for distribution by the Kansas Forestry, Fish and Game Commission.

The 35-page booklet will provide useful and informative reading for Kansans as it describes the uses of farm ponds, why some farm ponds have failed, construction of farm ponds, costs, choosing a site, management of farm ponds for fish production, fish stocking of ponds, control of undesirable vegetation, fertilization, and other pertinent information.

Copies may be obtained on request to the Fish and Game Commission, Pratt.

Commission's New Sound Film Available for Showing

"An Assist to Nature," the first sound moving picture on the activities of the Kansas Forestry, Fish and Game Commission operations, is now available for distribution to schools and other organizations.

Superb photography, a thrilling script, plus the natural scenic effects found in Kansas, make it an excellent medium for educating our people in wildlife lore and acquainting them with what the Kansas Commission is doing to assist nature in providing better hunting, fishing and recreation for Kansans and attracted tourists.

Photography and script are by Steve Smith and Charles Howes of Topeka. Sound recording was done by the Calvin Film Company.

The picture is 16 mm. and has a running time of twenty-two minutes. Six prints will be available and application for bookings can be made through the Fish and Game Commission's office at Pratt.

Fresh water fish and sharks do not drink water. Other fish do.

18-Year Old Kansas Youth is National Trapshooting Champion

An 18-year-old Kansas boy is the new Grand American Trapshooting champion. He is E. Michael Wayland, of Washington, Kansas, who stood on the 21-yard line at the National Trapshooting event held at Vandalia, Ohio, and fired his way to victory in the Grand American handicap by breaking 99 out of 100.

Wayland fired a great race. Hitting flying targets from the 21-yard line is no easy assignment and the competition was exceptionally keen in this year's event.

Statistics of this blue ribbon event of the shotgun world show that Wayland was the first Kansan ever to win the Grand American. Shooters from the state have scored triumphs in other races at the big tournament but not in the featured event.

Wayland is now enrolled as a freshman in Engineering at Kansas University.

Ulysses Store Held Novel Pheasant Hunters Contest

The Ulysses Hardware Store of Ulysses held a rather novel pheasant hunters contest during the recent pheasant season and, according to Jim Welsh, manager of the store, the results were not only interesting but gratifying and brought the store a lot of business during the four-day season.

The store offered a prize of a Cumberland hunting coat for the heaviest pheasant weighed in at the store during the season. They also offered a Cumberland hunting vest for the longest tail feather measured in.

Over 180 pheasants were weighed in at the store during the season. The prize-winning heaviest pheasant weighed 3 lbs. and 8 ozs., and the longest tail feather measured in during the season measured 23 $\frac{3}{4}$ inches.

The average bird weighed 2 lbs. and 7 ozs., while the average tail feather measured 19 inches.

In China, monkeys were once employed in harvesting the tea crop.

STUDIES IN STRIP-MINE LAKE IMPROVEMENT

By CHARLES BURNER, Fisheries Biologist, Kansas Forestry, Fish and Game Commission, and
CLAUDE LEIST, Associate Professor of Biology, Kansas State Teachers' College, Pittsburg

A great deal of interest has developed recently in strip-mined areas of southeast Kansas. Various experiments have been carried out on the revegetation of the spoilbanks in the past to determine agricultural and horticultural possibilities. More recently much interest has been focused on the development of fishing possibilities in the strip-mine lakes resulting from strip-mining operations, as attested by yearly fishing contests held by local sportsmen's groups who offer attractive prizes to winners. The Kansas Forestry, Fish and Game Commission, in co-operation with the Biology Department of the Kansas State Teachers' College, in line with policies of providing good fishing and hunting for the sportsmen has been doing much work toward improving fishing in the strip-mine lakes. Since work on strip-mine lakes throughout the country is still in the pioneering stage it may be several years before marked improvements in fishing is made in these lakes.

The strip-mine lakes are formed as a result of surface coal mining operations by stripping away the soil and rocks, called overburden, lying above the coal bed and piling it aside. Large shovels and draglines move along stripping the overburden aside. The coal is removed; then the shovels return taking another strip and piling the overburden into the strip just vacated, until large areas have been stripped of coal. The result is a large area of land with a series of parallel ridges with intervening depressions between. When the shovels are removed, the last cut and runways used for hauling out the coal are left open, leaving long, narrow pits as a result. Many of these pits are forty feet or more in depth. Water partially fills these abandoned pits and collects in the depressions between the parallel mounds, forming bodies of water of varying sizes known as strip-mine lakes or "strip-pits." There are many thousands of acres of strip-mined land in eastern Kansas extending from the south-eastern counties, where they are most extensive, northward almost to Kansas City.

In this strip-mined area there are several thousands of lakes which vary in size from a fraction of an acre to ten or more. Of the lakes observed those which are suitable for fish have been found to have fish in them. However, some of these lakes are acid and therefore no fish are present. Although conditions vary widely in those lakes which are suitable for fish life they have become stocked with fish by some means. A large number of these pits have been stocked with fish from

the hatchery at Pratt, while others have been stocked by fishermen with fish caught by hook and line from other pits and from streams.

In general, productivity of the strip-mine lakes is lower than in natural waters of the state. Fishing in some strip-mine lakes has been reported to be getting gradually poorer. The Commission is interested in finding what is causing the fishing to become poorer and, if possible, to correct it; in re-establishing good fishing; and in developing productivity to as high a point as possible.

A survey is being made to find what lakes are suitable for fish. Then the conditions which exist in these suitable lakes will be determined and used in evaluating the strip-mine lakes in regard to their fishing possibilities. Those which need improvement can then be improved if possible.

In studying the strip-mine lakes information must be collected concerning the following conditions: such physical conditions as size and fertility of the drainage area, area of the lake, depth of the water, bottom contours (shape of the lake basin), water temperatures and turbidity; such chemical conditions as dissolved oxygen, free carbon dioxide, pH reaction, carbonates and sulphates; and certain biological conditions pertaining to the tiny plant and animal life in the water, larger plants growing along the water's edge and in the water, and the kinds of fish present in the water as well as their rate of growth. It is upon these conditions that angling success is largely dependent. These factors must be known and wisely evaluated in order that proper management techniques can be applied in making improvements in the lakes which will be reflected in a more attractive creel.

Size and fertility of the drainage area are limiting factors in most of the strip-mine lakes. Many of the lakes receive runoff only from the spoilbanks on either side. The spoilbanks, consisting of upturned earth, have not had time to build up fertile soil rich in humus, and a good growth of vegetation. Some strip-mine lakes do, however, receive drainage from fertilized and cultivated fields and native prairie. These lakes have a more natural color and are better suited for good fish growth. Just as corn or cattle do better on fertile soil, so do the fish grow better and reach catching size quicker in more fertile water.

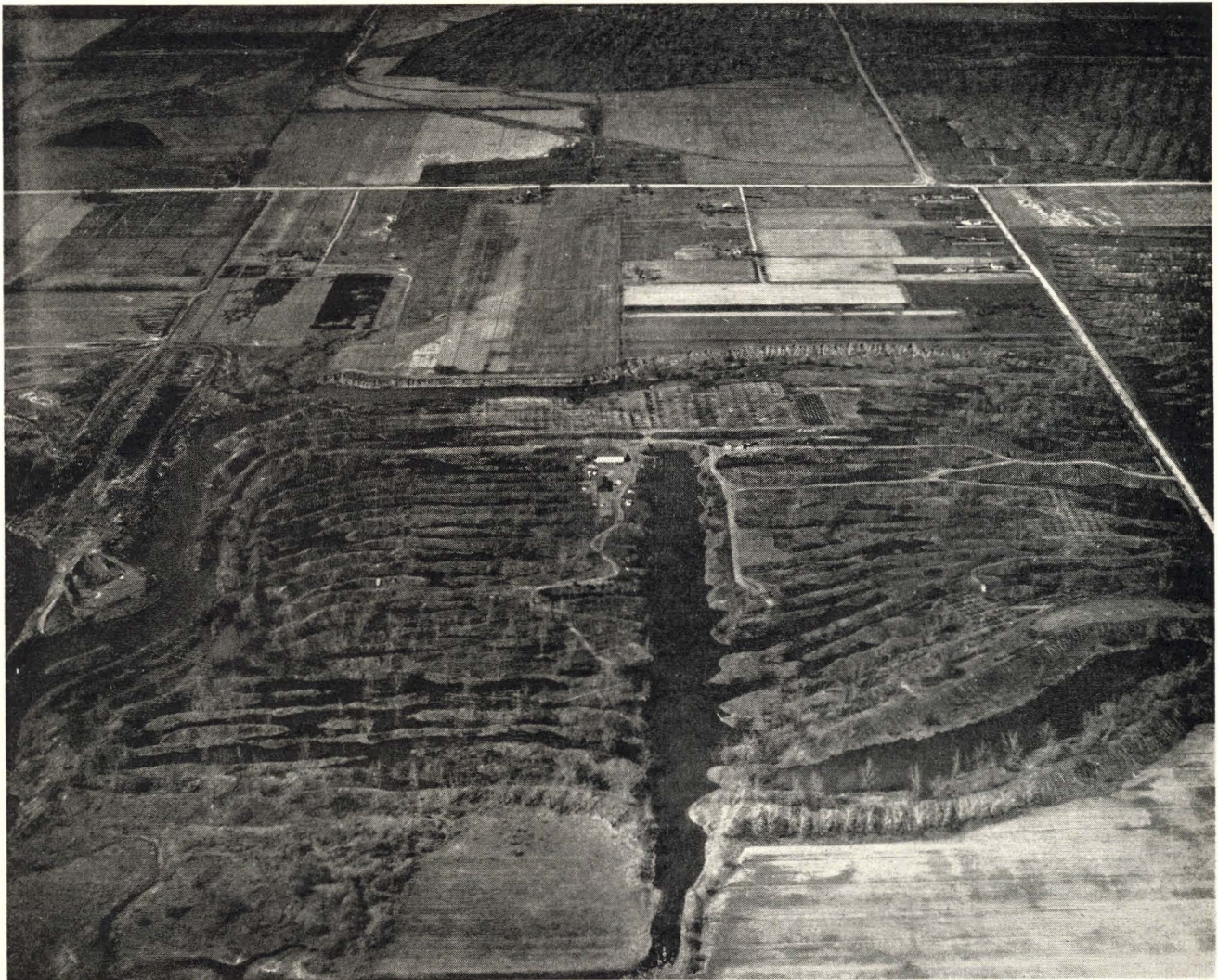
The acreage or surface area and depth of the water in the lakes are also quite important. Many are less than one-fourth of an acre in area and are only a few feet deep. Some of these small bodies of water sup-

port a good growth of cat-tails and muskrats, but they are of little value as producers of fish because they become quickly overpopulated with fish and stunting results. The typical strip-pit has little shallow water. The sides drop off abruptly from the shore to near maximum depth which is usually from twelve to twenty feet. In such strip-mine lakes those which have suitable spawning areas for bass usually have better fishing than lakes which are choked with vegetation.

The temperatures are well within the limits of tolerance for warm water fishes such as the largemouth bass, crappie, bluegill and channel catfish. Observations on temperatures are being made on all waters studied, since several sportsmen's groups and organizations are interested in the possibilities of introducing rainbow trout and a few other typically cold water fishes in the strip-pits. Rainbow trout, brown trout,

and walleye pike have been introduced into a few selected lakes. The results of these experimental stocking operations are being carefully watched. Indications are that these fish may tolerate the conditions present in a few of these lakes, but that they will not reproduce. The temperatures in combination with dissolved oxygen in the spring and summer are near the limits tolerated by these species. It is therefore with much interest that we are watching for the results of these experiments to see whether these fish will become adjusted. If the walleye does well, it may be the answer to the problem of too many small bluegill and not enough large fish. The walleye is typically more fierce and carnivorous than the largemouth bass and would be expected to do a better job of keeping the sunfish thinned down, thereby greatly aiding in keeping a balanced population.

The turbidity of the water in strip-mine lakes is



An aerial view showing typical strip-mined land in southeast Kansas. It is in these strip-mined areas that biologists of the Kansas Forestry, Fish and Game Commission, with the co-operation of the Biology Department of Kansas State Teachers College at Pittsburg, are doing much work to improve fishing possibilities of the lakes.—Photo courtesy of L. H. Caldwell, K. S. T. C., Pittsburg.

typically low. This indicates a scarcity of tiny plant and animal life which serve as food for small fish which are fed upon by larger fish which in turn, along with immature water insects and other animals, serve as food for the bass. This chain of events leading up to the bass is called the "food chain." When the tiny plants representing the bottom of the food chain are abundant, then there will be an abundance of tiny animals and insects which form the next link in the food chain. The series will then be continued on up and is normally reflected as good growth of the bass. When the tiny plants and animals are present in abundance they give a cloudy greenish coloring to the water which is called a "bloom." They shade out the sunlight which checks the growth of aquatic vegetation on the bottom, which if allowed to grow unimpeded will usually soon choke up the water as far out as it can grow. Such abundant growth obstructs good angling. In some of these lakes *Chara* or "skunk moss" has been found in water up to twelve feet deep and some of the other water weeds have been found in water almost this deep.

Among the chemical conditions mentioned, the pH reaction has been found to be unfavorable for fish life in many of the strip-mine lakes. Such strip-mine lakes have been found to be too acid in pH reaction for fish life. The oxygen dissolved in the water has been found to be too low to meet the requirements of fishes on the bottom of some lakes in midsummer, but there has always been found to be plenty of available oxygen near the surface, especially for game fish native to this area. The fish need only to move up and out of the unsuitable deep water.

The importance of knowing something about the abundance of tiny plant and animal life has been pointed out. The tiny plants in the water can be likened to the grass in the pasture. The plants in both cases utilize the sunlight in manufacturing food which is in turn used by the higher animals, the fish of the water or the cow in the pasture. The plants in both cases grow better if grown in a fertile media, and a more healthy plant growth produces a healthier and faster growing animal. The strip-mine lakes have a much poorer growth of these tiny plants and animals than natural lakes in the state. This reflects the lack of fertility and is reflected in a smaller number of fish of good size for an acre of water. Plantings upon the spoilbanks of lespedeza and sweet clover and other suitable plants help in building up the fertility of the soil and contribute directly to the fertility of the water.

Studies are being carried out on the kinds of fish present and their growth rate. It is too early to draw conclusions from these individual studies as yet. However, it can be said that there seems to be a trend

toward overpopulation and stunting in the strip-mine lakes of southeast Kansas. This is characterized by a large number of fish which are below keeping size with very few which are larger. The low turbidity of the water allows sunlight to penetrate to great depths which encourages the growth of water weeds in deeper waters than they ordinarily would grow. These matted plants serve as a haven of retreat for the small fish, thus preventing the bass from feeding on them enough to thin down their numbers. The small fish grow up to a size which is not extensively eaten by the bass, then they can move out into deeper, less protected waters and compete directly with the bass for immature insects and other animals which compose a small part of the diet of the bass. In this way a lake can become overpopulated in a short time. The fisherman will catch only small sunfish which are returned to "grow some more," but these fish are as big as they will ever grow unless their numbers are greatly reduced so that more food will be available per fish.

The outlook for the fisherman in southeast Kansas is getting much brighter as more information is gathered and as studies of the conditions in these strip-mine lakes is developed further.

Small Story

The opossum is not very well developed when born. Some idea of their size at this stage is indicated by the fact that an ordinary teaspoon will accommodate a litter of eighteen newborn babies with a little room to spare. Those who may doubt the authenticity of this statement may refer to a picture in the August, 1930, issue of *Nature Magazine* wherein there appeared a picture showing a teaspoon containing eighteen tiny opossums.



Farm ponds provide good fishing opportunities in Kansas. Shown above is H. M. Ricketts and daughter, Sarah, of Nortonville, with a string of nice catfish taken from a pond on his farm. The five fish weighed 10½ pounds.

Cover Picture

The familiar scene on the front cover shows the value of a good dog in retrieving dead or crippled birds. During the past hunting season, because of the heavy vegetative cover, those hunters with good dogs were generally the ones to bring home the fuller bag limits. A hunter loses very few birds shooting behind a good dog. The Brittany Spaniel shown retrieving the pheasant in the picture is owned by Clarence Goering of Newton.

The jumping shrew of South Africa sometimes curls up and rolls itself along instead of leaping kangaroo fashion.

Midwest Brittany Club Holds Third Annual Field Trials

The Midwest Regional Brittany Club held their annual licensed field trial October 13 and 14 at Humboldt, Kan.

A total of 53 Brittany Spaniels were entered in the trials. Judges for the event were T. A. Prier of Butterfield, Mo., and Mr. Charles E. Everitt of Girard. Quail, which were furnished by the Kansas Forestry, Fish and Game Commission, were released in fine cover for the Brittanys to work on.

The Puppy Stake was taken over by four litter mates bred by Clarence Springfield of Wichita. First prize went to Royal Flash Skipper and second place to Happy-Go-Lucky. This was the first time, so far as we know, that all four winners were litter mates from the same kennel.

The Derby Stake was won by Penelope de Evanson, owned and handled by Louis F. Oltman of North Kansas City, Mo. This was the dog's second win in six weeks—having won the first place in the Derby at the sanction trials at Edgerton, over Labor Day. Second place went to Roscoe's Dingo de Humboldt, owned by Roscoe Kimerling of Humboldt.

The Amateur Handler's first place winner was Tex of Richmond, owned and handled by R. Busted of Canyon, Texas. Second place was won by Jeffrey Mac Eochaidh, owned by Roscoe Kimerling of Humboldt.

The Open All-Age Stake was won by Happy Duke Kaer, handled by S. D. Campbell. Second place went to Duke Avono Happy, owned by R. Mannen of Chanute.

A fine crowd of club members and spectators witnessed the trials under almost perfect weather conditions and some excellent field work was turned in by the Brittanys.

J. J. Boling Named President Of Leavenworth Sportsmen

Mr. J. J. "Jerry" Boling is the new president of the Leavenworth County Fish and Game Development Association. Other officers elected at the annual meeting of the club were: John "Shan" Bradley, vice-president; Biring Miller, treasurer; and J. R. "Jim" Kelsey, secretary. Those named to the board of directors were: Frank Uhlrich, Everett Payne, Herb Nye, Herman Forge, Floyd Honeycutt and Prosper Wilson.

The largest attendance of the year was reported at the annual meeting. Following the election of officers those in attendance enjoyed a "feed" and refreshments. Movies were also a part of the program.

Later, the organization filed papers in the office of the secretary of state to incorporate the association on a nonprofit basis. The group plans to operate a lake for association members and to protect wildlife in the Leavenworth area.

Old MacDonald had a farm—and many years ago a decision to make. Mac had plenty of gumption and would work but had no ambition to clean out his fence rows, chop down the trees that lined the creek or graze his woodlot. Useless work, he said. His neighbors did, though, and accused him of lacking in ambition and being unprogressive. But today most of Mac's topsoil is still right there producing good crops while the value of the neighbors' land has eroded away. And, he's always had plenty of quail, rabbits, squirrels and the like while they haven't. Mac says he reckons he's glad he didn't become too progressive back there several years ago.—*Outdoors In Tennessee.*



Three of the first-place winners at the Brittany Field Trials held in October at Humboldt. The puppy on the left is Royal Flash Skipper, owned by Clarence Springfield of Wichita, which placed first in the Puppy Class. The one in the center is Roscoe's Dingo de Humboldt, owned by Roscoe Kimerling of Humboldt, and the winner of the Derby Stakes. The dog on the right is Jeffrey Mac Eochaidh, also owned by Mr. Kimerling, and the winner of the Amateur Handler's Stake.

Hunting Luck What's That?

Who has the most luck in hunting? According to Henry F. Davis, public relations manager, Remington Arms Company, Inc., "hunting luck" is a minus quantity and the fellow who has the most success in hunting is the fellow who works the hardest at it.

"Hunting is pretty much like anything else," says Davis. "We get just about what we put into it. If we're out to enjoy an outing and get the fullest benefit of the many, many facets of the outdoors in its varied moods, we can let the game bag become incidental and take our chances with "Hunters luck." This is probably the only way we can really get the full measure of pleasure from a trip afield, for there is a lot more to be found in hunting and fishing than just getting game or catching fish.

"But if we're out after 'meat in the pot,' trusting to 'hunter's luck' will seldom grease the skillet. To bag game or catch fish we must not only have a certain amount of know-how but we must also put out a considerable amount of effort in making that know-how work. I used to hunt quail with an older friend who seemed to be just in the right shooting position every time a Bob White flushed. If game was walked up, he was invariably the one who flushed it. I called him 'lucky' until observation taught me that he was working at the job of hunting every minute in the field. He was a keen student of wild life habits, knew what kind of cover to hunt at what time of day, watched the shifting of the wind, etc. His remarkable 'luck' was merely an energetic application of knowledge gained through hunting experience.

"Of course, hard work afield will not alone fill the game bag. A supply of game has to be there first. But the interested and energetic hunter will generally do something about seeing that proper habitat



A truly fine bird dog on point in a quail field in eastern Kansas, is Yankee Village Ganster (Fritz), owned by G. F. Christman of Wichita. —Photo courtesy Ben F. Main, Gateway Sporting Goods Co., Wichita.

conditions prevail on the hunting grounds he uses regularly.

"A recent creel census on the fresh waters of the state of Maryland, conducted co-operatively by the Department of Game and Fish and the Department of Research and Education, shows that in that state ten percent of the fisherman catch forty-six percent of the fish. And fifty-three percent of the fisherman catch the remaining fifty-four percent of the fish. What happens to the other thirty-seven percent of the fishermen, you might ask. Well, according to the census, they simply catch no fish. And that is what is generally known as 'fishermen's luck.'

"I don't know how closely these figures come to covering the game harvesting situation, but I do not think they would be far off the beam if so applied.

"In explaining the figures of the census, Harold J. Elser, biologist, Department of Research and Education, said: 'In the world of economics, a few people have large incomes, a lot of people have moderate incomes and many more are in the low income bracket. In the world of fishing, a few of the anglers catch a lot of fish, a much larger percentage catches a moderate amount of fish and another large group catches nothing. Although the fisheries manager would like to spread the catch more evenly, there is little he can do about it. The people in the "catch-nothing" group are either not interested in anything but the hard-to-catch fish or are those people who do not have a sufficient amount of know-how, luck or patience.'"

Kansas Rod and Gun Club Gains New Members as Result of Friendly "Feud"

Sportsmen's clubs seeking ways to increase their membership lists might read with interest how a friendly "feud" between two active members of the Kansas Rod and Gun Club at Kansas City, brought in 105 new members to that club. According to Elmer Wilhelm, secretary-treasurer of the Kansas City organization, A. E. Dyche of 1314 Westport Road in Kansas City, Mo., challenged H. H. "Gabby" Folkens, another active member of the club, that he could get more new members in two weeks than could "Gabby." The "feud" was on at once and "Gabby" came up with seventy new members to thirty-five for Dyche. The club presented each with a Phantom Glass Rod in return for a lot of hard work and a bunch of new members.

As Wilhelm put it, "Wish we could have a feud more often."

Cheyenne Bottoms an Excellent Nesting Area for Migratory Birds

The Cheyenne Bottoms in Barton county, which the Kansas Fish and Game Commission is developing into one of the nation's outstanding waterfowl refuges and public shooting grounds, serves as an excellent nesting area for migratory birds, some of which are rare for this part of the country.

This was proven in a survey made in the Bottoms late last summer by Dr. Otto Tiemeier of Kansas State college.

In commenting on the survey, Doctor Tiemeier wrote as follows:

"At the time of the survey in August, it was estimated that there were approximately 5,000 ducks on the Bottoms and of this number at least 3,000 were young birds

which could not fly. They would skim over the water with the aid of their wings and feet until they could hide in the vegetation or get out of sight of the boat. More than ninety percent of the young birds were pintails and the remainder blue-winged teal. One female teal was observed with four downy young. Other ducks observed were gadwalls and mallards.

"A number of interesting and unusual water-inhabiting birds were observed during the survey. A pied-billed grebe with five downy young was seen. These young could not have been more than three or four days old. When first discovered, the young were "hitch-hiking" on the back of the old bird. As soon as they saw the boat the little ones dived into the water and started for the weeds. One of them headed for open water and after some maneuvering, we were able to reach down into the water and catch the youngster.



An unusual sight for this part of the United States is this young Glossy Ibis, shown in its nest at the Cheyenne Bottoms in Barton county. The picture was made by Mr. L. O. Nossaman of Great Bend, who derives more pleasure out of "shooting" birds with a camera than with a gun and spends most of his spare time pursuing his bird photography from his motor boat on the Bottoms. Surveys show that the Cheyenne Bottoms serves as an excellent nesting area for migratory birds, many of which rarely nest in this part of the country.

It was content to rest in the palm of the hand until released. We could see it swim and noted that it used the scissor stroke instead of paddling.

"About fifteen or twenty white pelicans were seen in the area. Another species of immature birds observed and one which we believe is a new nesting record for the state was that of two downy young of the double-crested cormorant. Eight or ten other nests just above the water were present in the same area. Six or seven incubated eggs were observed in the water near the nests. The two young cormorants remained in the nest as we approached in the boat and regurgitated several sunfish two-and-one-half to three inches long when we were within several feet of them. The old birds flew away as we approached the nest.

"A number of species of the heron family were also present in the Bottoms. Twenty to thirty great blue herons were seen and between eighty to one hundred white birds of about the same size of the great blue heron were seen and identified as American egrets. Several hundred immature and mature black-crowned night herons flew out of a row of willows as we approached in the boat. No evidence of nests was noted in the willows. The other representative of the heron family found was several American bitterns.

"Several dark birds with decurved bills were observed and identified as the white-faced glossy ibis. The other bird with the turned-down bill was lighter in color and identified as a curlew. It was not determined whether it was a long-billed curlew or the Hudsonian curlew.

"Several king rails posed for us. Two greater yellow-legs were also observed on the mud flats. We were almost always within sight of some Franklin's gulls and the mature and immature black terns flew in front and behind us the entire day. We also observed another tern which we determined to be the Forster's or common tern, but no specimens were collected so the determination could not be positive.

"It was also interesting to see several dozen yellow-headed blackbirds. Both mature and immature birds were observed but again it was impossible to find any nests."

In concluding his report, Doctor Tiemeier said, "This is ample proof that the Cheyenne Bottoms will be used as a nesting area by ducks and other waterfowl and shore birds. The more ducks we can produce in Kansas the less we will have to depend on the other states and Canada and the surveys shows that ducks and other birds will nest here if the habitat is suitable."

History shows that disaster to insectivorous birds invariably precedes insect plagues.

The Pheasant's Standpoint.

The following article appeared in the Fish and Game Editor's column in the Davenport, Iowa, *Times Tribune* and is borrowed from the Iowa Conservationist:

"In order to bring an unbiased view of the hunting season to the general public, it seems that both sides should have their say. At this time, we discuss hunting as looked at from the viewpoint of the Chinese pheasant rooster.

"This year I'm not kicking about hunting season, especially since they've set reasonable hours. I don't mind dodging hunters from 8 a. m. to 5 p. m. It was that sunrise to sunset stuff that got tiresome.

"Most of the time I don't bother flying up when a hunter blunders my way. I just get in a clump of bushes and wait for him to walk past. Other times I fly up just for the sport of it. I take a running start, bank sharply to the right, do a couple of snap rolls, then fly off on my back. By this time the hunter is too confused to shoot.

"You've got to know your hunters, though. If the guy is wearing a red hat, smooth looking hunting jacket, highly polished boots and carrying a hand carved automatic shotgun, chances are he can't hit a thing. It's these fellows that go out in a pair of overalls with a rusty single barrel of whom you've got to be careful.

"Other times I'll spot a hunter, then start running down a fence row. Just as the guy starts to shoot I duck behind a fence post. If he has a double barrel I duck while he shoots twice or if it's a three-shotter, I get behind three posts, and then walk leisurely away. One son-of-a-gun fooled me. He didn't have his gun plugged and almost got me with that fourth shot.

"Hunting dogs are a problem. Pooch will seek you out every time. I mastered this problem too. Every night I go to some farmer's cow barn and sort of putter around there for an hour or so. The next morning dogs don't bother me. A city trained Fido isn't interested in anything that smells like a Holstein cow.

"I'd like to compliment the state game department for just having open season on male pheasants. All my competitors have been killed off, and I never have trouble getting a date any more.

"It's getting towards the end of the hunting season now, and the whole thing bores me. Guess I'll head for the nearest game preserve and get a little rest."

When a snowy owl kills a small bird it tears it to pieces before eating it. It will, however swallow a whole mouse.

Channel Catfish in Farm Ponds

By ROY SCHOONOVER,
Biologist, Forestry, Fish and Game Commission

Channel catfish are being used extensively in stocking combinations for farm ponds in Kansas. Because fishing for channel catfish is highly popular, the demand for stocking of this species equals that for bass.

The channel catfish is typically a stream species and is widely distributed in such waters where a marked current is present. The earlier belief that it will reproduce only in running water does not seem valid; since we know of numerous instances of reproduction in lakes and ponds. However, we do believe that the success of spawning and survival of young fish is influenced greatly by the habitat characteristics of the lake or pond in question.

The habits of channel catfish will necessarily differ somewhat in lakes and ponds from what they are in running streams. Besides the presence of a current, streams are characterized by a variety of habitat types such as deep channel water, shallow riffles, pools, steep undercut banks, rocky ledges, fallen trees and other types of drift material. These are all used by channel catfish in their normal feeding, hiding or spawning activities. Habitat in impoundments, especially in stock ponds, is much less diversified than in streams. The majority of such stock ponds have sloping mud bottoms over which the water varies in depth from very shallow to a maximum ranging from five to twenty feet. These ponds have relatively smooth bottoms and lack the abundance of rocky ledges, fallen trees, stumps, and undercut banks which seem particularly well adapted to channel catfish production.

The water in these ponds is often of much higher transparency than that of our streams, a factor which is believed limiting to the success of channel catfish reproduction and survival of young to maturity.

Under normal weather conditions, channel catfish spawn in June in Kansas when water temperatures ascend to around 75° F. Spring flood waters have generally subsided and streams have returned to near-normal levels, although turbidity is often rather high. The male fish seeks out a spawning site for the nest, often a hole along the river bank, a rocky crevice, or a hollow stump or log. He prepares the nest and when a ripe female appears, spawning takes place. The nest is guarded by the male who lies over the eggs, fanning them by movements of the fins. If the water temperature is normal for the season, the young fry appear in seven to nine days. After a few days, the yolk-sac has been absorbed, and the fry begin drifting apart and eventually leave the nest. Within a few weeks, large numbers of the young fish can be

found in the riffle areas, where they apparently spend much of the time. The riffle areas of Kansas' streams provide the fry and fingerlings with food, as well as protection from predation. As the young fish increase in size and become more capable of eluding their enemies, they range more widely in search of food.

In ponds and some larger impoundments, suitable spawning sites are much less abundant and may even be absent. However, it is our opinion that a low rate of survival for fry through the fingerling stage is the factor most responsible for the failure of channel catfish to maintain its numbers naturally in many impoundments in Kansas. Predation can be a much more serious problem because of greater water transparency and an often lack of sufficient protective shelter. Bass, crappies and other predator fish generally make up a higher percentage of pond populations than of stream populations. Spawning fish in streams are not only able to find nesting sites affording good protection, but predation on young is probably less serious. In streams, predation can be attributed to gars, and the larger catfish of such species as channel, blue, and flathead, which are believed less efficient predators in turbid waters, and perhaps occupy different areas of the stream habitat than the fry and fingerlings of channel catfish. Since channel catfish spawn rather late in the season in comparison with most species (bluegill and other small sunfishes excepted), the young-of-the-year bass have had sufficient time to grow large enough to take their toll of the newly-hatched channel catfish fry during the summer.

The over-all effects of these conditions appear to constitute the best explanation for the failure of channel catfish to propagate in many ponds. In nearly all instances, it was observed that murky water and the presence of suitable spawning sites such as hollow stumps, rocky outcrops, or abandoned muskrat dens



Bill Gugelman and Delmas Nusbaum, members of the Bern Sportsman Club, with a one day's catch of channel cats taken from the Nemaha river.

were characteristic of ponds in which channel catfish were multiplying successfully.

The rate of growth of channel catfish, like all other species, has great variation, for which a number of factors are responsible. Food supply and population density of the pond and the interrelationships between them are undoubtedly the most important conditions. In recently stocked ponds and others in "proper balance" where fertility and food production are average or above, channel catfish growth is rapid.

By the end of the first summer of growth, such fish will range from 3-5 inches in length. Growth is more rapid during the succeeding years, and by the end of the second summer individuals could easily be 10-16 inches in length. Fish at the end of third year of life have been known to weigh as much as six pounds in ponds which the Fish and Game Commission has stocked. Reports from other states indicate additional instances of even faster growth in farm ponds. Channel catfish reared in streams are generally more slender in body form and do not make such rapid growth.

Many of the channels probably reach maturity in the third year of life in ponds having satisfactory fish populations for which there is adequate food.

Because of the large number of ponds where natural reproduction is insufficient to maintain the channel cat population, this species is stocked rather heavily at the rate of 100 fingerlings to the surface-acre at the original stocking. This rate of stocking provides adequate numbers of fish to allow good fishing for a period of several years even though they are not reproducing successfully.

The gibbon, smallest of the man-like apes, always drinks by dipping his hand in water.



All over Kansas, kids fish. Children's fishing rodeos, designed to interest children in the healthful and absorbing pastime of fishing, were held in many cities and towns last summer and more will be held next summer. The above photo shows how much attention the fish in the city lake at Wamego received during the rodeo held there. Court officials say that children who hunt and fish are seldom involved in juvenile delinquency.—Photo courtesy E. J. Hecker, Chief of Police, Wamego.

Beaver Trapping Permitted This Year for First Time

Kansans can trap beaver this year for the first time since game laws were established in the state.

The Fish and Game Commission, at a meeting held early in November, voted to allow trapping of the beaver this year during the regular trapping season which runs from December 1 through January 31, 1952, both dates inclusive. The decision was reached after the Commission had received so many complaints and reports of excessive damage caused by the animals.

Through protection, the beaver have increased from near extinction to an abundance in many sections of the state. Last year, trappers for the Commission took approximately 700 beaver from areas where the animals were damaging property and still the Commission could not cope with the problem of trapping the animals in areas where there were damage complaints.

The latest game census indicates a beaver population of between 9,000 and 12,000, so the Commission felt there was an ample supply of these animals to justify allowing trappers and landowners to harvest the surplus.

Those who trap beaver are urged to take proper care in pelting and caring for the skin. Beaver pelts properly cared for may bring as much as \$25 each on the market.

Central U. S. Fox and Wolf Hunters' Association Held Annual Field Trials

The Central United States Fox and Wolf Hunters' Association held their annual bench show and field trials on October 24-27, near Sedan. A total of 325 hounds from several states were entered in the show and trials. C. E. Meeks, of Dyersburg, Tenn., judged the bench division of the show, and Cecil Green of Granby, Mo., assisted by Fred Woolard, Anderson, Mo., served as master of hounds. Fourteen hard riding judges followed the hounds.

Bench Show Results

Best hound in show: Wise Saga, owned by W. J. and Jim Elliott, Hominy, Okla. Best opposite sex: King Winnestoy, John Ogle of Michigan Valley, Kansas.

All age males: First, King Winnestoy. Second, Mr. Music, owned by Joe Casmaer of Burlington.

All age females: Midge, owned by John Ogle. Second, Muse, by John Ogle.

Derby male: Busses Speck, owned by Clarence Pinkston, Quenemo.

Derby female: Wise Saga, owned by Elliotts, Hominy, Okla. Second, Rocket, owned by Russell Harris, Tonkawa, Okla.

Six months to one year males: Spooky, owned by Fred Lauber, Toronto. Second, Buzzard Boy, owned by Lee Maloney, Iola.

Six months to one year females: Fly Buzzard, owned by Lee Maloney. Second, Daisy May, owned by Oscar Danning, Howard.

Best pack: Ace, Deuce, Buck and Freckles, owned by Bill Shanks, Newkirk, Okla. Second, Shy Girl, John Duncan, and Wise Saga, owned by Elliotts.

Combination trophy: King Winnestoy, by John Ogle.

Field trial results:

1. June, owned by John Brownlee, Lane.
2. Talker, owned by Roland Jones, Elk Falls.
3. Jim Crowe, owned by Charles Stark, Elk City.

Derby placings:

1. Tonnie, owned by Orville Umbarger, Thayer.
2. Conniebeth, owned by George Fuller, Elk Falls.
3. Cyclone, owned by Clarence Pinkston, Quenemo.

At the annual election of officers held in connection with the field trials, Mr. Maynard Barnes, of Howard,

was re-elected president of the association. Fred Freeman of Longton, was re-elected first vice-president; George Fuller, of Elk Falls, was elected second vice-president; Carl Jordan, Severy, was re-elected secretary-treasurer; Jack Hunter, Howard, and Roland Jones, Elk Falls, were elected assistant secretaries.

Aliceville Sportsmen Organize

Sportsmen in and around Aliceville have organized an Aliceville Sportsmen's Association and an active organization it is. At last reports they had a membership of 72, in a town of 73 population.

At the September meeting, the Association held their annual squirrel feed. Over 100 squirrel, fried chicken and all the trimmings were consumed by the large crowd present.

Carl Wuerfele, County Commissioner, is president of the organization.

The sense of sight is the seal's chief guide. Consequently, his eyes are fully and peculiarly developed. He keeps his nostrils closed when swimming under water and his small ears are also contracted at that time.



Two winners at the Central United States Fox and Wolf Hunters' bench show and field trials held near Sedan in October. On the left is the Best Hound In Show, Wise Saga, owned by W. J. and Jim Elliott of Hominy, Okla. On the right is Best Opposite Sex, King Winnestoy, owned by John Ogle of Michigan Valley.—Photo courtesy Fred Freeman, Longton.

Why Cover Restoration

By RICHARD EGGEN

Horticulturist, Kansas Forestry, Fish and Game Commission

As many hunters are cleaning up their hunting equipment before putting it away for another year, reflections of the past hunting season run through their mind. Thoughts of bag limit kills and the abundant supply of game offering the best in sport stand foremost in their memory. Unfortunately, however, not many seem to remember the time a few years ago when after a full day in the field they made their way back to the car to head for home with only a small portion of their limit or perhaps with an empty game bag. No, the hunter's thoughts remain on the more pleasant side of the picture, as he thinks to himself—I'll know just where to go. So, with his guns and equipment, he also puts his thoughts away, not to be disturbed until hunting season rolls around next year.

Unfortunately the questions of how, where or why, concerning his hunting success never entered his mind, and even more unfortunate was the lack of consideration given to the future (next year I'll know just where to go). To be sure most of us take our hunting for granted and let the birds take care of themselves. Until! That time when we again experience a season in the field with little success. Then comes the question, WHY? What happened to all the birds we had a few years ago? Many will say the predators are taking them; others will say that hunting pressure has been too great; still others say that severe winter weather conditions are responsible. However, even though these factors might have some effect, especially in local areas, an even more significant factor would be the condition of the habitat.

Game management people have studied these problems for years and have concluded that even though all these factors must be considered to have some importance, by far the most influential factor is that of the condition of the habitat. By the condition of the habitat is meant the amount of available food and cover present for use by the game inhabiting that area. This factor, important as it is, probably is the one most often overlooked or ignored by those who go forth each year to hunt.

Many hunters overlook the fact that their hunting success is in direct proportion to the number of birds present to be hunted and that the game present to be hunted is entirely dependent on the condition of the habitat. As has been stated many times before by writers on the subject, the intensive farming practices developed over a period of years in this country have resulted in a serious deterioration of the natural habitat of our game. Therefore, it is imperative that if we

wish to carry on the age old custom of hunting, something must be done to forestall the destruction of the necessities of life of our game. It was with this in mind that many state game and fish commissions over the country began to search for a method to replace some of the destroyed habitat. Today, most of these agencies are actively engaged in programs of habitat development or cover restoration designed to utilize all possible methods to re-establish and improve the remaining game habitat to enable it to support the maximum number of game birds and game animals.

These programs are designed in the most part not only from the standpoint of wildlife but also for their adaptability to modern farming practices. Every effort is being made to fit them into some phase of farming operations and thereby enable every farm to produce in addition to the principal crops a secondary harvestable crop of wildlife.

The cover restoration program in Kansas was designed to replenish the deteriorated cover of our state in such a manner and by such methods as to make it as compatible as possible with modern farming methods. By doing this, the Fish and Game Commission hopes to make permanent by virtue of its practicability, the cover which they are able to replace on the land under the cover restoration program. An analysis of cover needs over Kansas shows that, for the most part, all types of cover is needed in some degree in almost all sections of the state. This fact may seem to some to be exaggerated when they think of the dense cover with which they were confronted while out hunting these last two seasons. However, the type of cover with which most hunters had to contend was that of annual weeds or crops. This is not, as is obvious, a permanent but rather a temporary type cover which will be lost to the game birds and game animals when they need it most in the dead of winter or early in the spring. The only type cover that can appreciably aid in increasing our game populations is that of a permanent character that is available at all times of the year. This permanent cover must also provide nesting sites, sufficient food, protection from winter storms, roosting sites, protection from predators, and sites in which the birds can loaf, dust and sun themselves. In many areas the natural cover is sufficient to supply most of these needs for a limited number of wildlife. However, there are very few instances in which there is not a scarcity of one or more types of cover which as a result of that scarcity holds down any substantial increase in wildlife populations.

In an effort to establish this permanent cover, the Kansas Forestry, Fish and Game Commission has for

the past three years distributed free to interested land-owners and operators, seed and seedlings of many varieties of trees, shrubs, and herbaceous perennials for use in cover plantings. These plants are used in many different ways to provide cover for the wildlife and also to be of some value to the farm on which it is placed. Windbreaks, shelterbelts, and fences make up a large part of the plantings. However, there are numerous plantings on terraces and in odd corners. Waste areas and gullies often become planting sites, and in some cases, the more interested farmers may set aside a plot of from one to three acres for a planting to be devoted entirely to wildlife.

The plants distributed were chosen for their value as wildlife plants as well as for uses they might have for the landowner. Such plants include Red cedar, Russian olive, chokecherry, Multiflora rose, all of which are not only of considerable use in all types of farm plantings but also of great value as food and cover for wildlife. Sericea lespedeza and sweet clover is being used for herbaceous strips planted for nesting and other types of cover in addition to their food value. Other trees and shrubs will be made available as soon as they can be produced in the nursery.

Now is the time for those interested in pursuing the great sport of hunting to worry about the supply of wild game that will be available in the future. Now is the time to insure yourself that the time will never come when you have no more hunting. This can only be done by insuring our wildlife a place to live and reproduce. A great responsibility then is placed upon everyone of us interested in wildlife—the job of protecting and restoring the habitat so necessary to its survival!



A three-year-old Multiflora Rose planting in Seward county. Such a planting provides homes for wildlife, nesting sites in spring and summer and protection and food in the winter.

Want Better Hunting? Then Plant it!

If you want to have better hunting next fall, get in on the farmer's spring planting program. This is the advice of Henry P. Davis, public relations manager, Remington Arms Company, Inc., who says the best way to have good hunting in the fall is to plant it in the spring.

"With the spring planting season soon to get under way, the sportsman has the best opportunity of the year to insure better hunting through food and cover planting. The best approach is to talk to the farmer himself, tell him you'd like to help him increase his game supply and ask him if he will allow you to do so without interfering with his normal agricultural practices.

"Once the farmer is convinced that you're serious about HELPING it's a pretty sure thing that you have got yourself a partner in your enterprise. For the farmer likes to see game on his own land and he likes the friendship of the sportsmen. The next step is to walk over the land with the farmer to get an over-all picture of the land use. Locate the grazing lands, the woodlots, the orchard, slopes, gullies, stream banks, patches of overgrown cover, etc. All of these make good areas in which, or near which, to plant food patches. These unproductive areas can be made veritable havens for game."

When you have an area sized up, don't go off half-cocked and start a food and cover planting program without thinking the matter through. Write the Kansas Forestry, Fish and Game Commission at Pratt, Kan. They have several game management technicians who have had training in this sort of activity and to help you is a part of their job. The Commission will also furnish free plants and seed just for this purpose. These plants and seed have proved highly beneficial to wildlife in localities in which they have been planted.

Many food plants also provide splendid protective cover. A number of small food patches scattered in the proper places over a farm are generally better than two or three large plantings. However, conditions vary on each farm, so let the game management technicians or your soil conservation man help you plan the type of planting best suited to the individual farm.

Once you have your feed patches staked out and have procured the seed or plants, a couple of weekends of actual planting on the farm will do the trick. Not only are you planting good hunting, but you are also sowing the seeds of friendship with the farmer that will bear fruit in many ways for years to come.

In Winter, a Fisherman Should Look to Spring

In those states where the old man with the frosty, white beard chases anglers indoors for winter, this is the time of year to start thinking about next year.

A fisherman is no better than the tackle he uses, so if you would start next season at your best, set aside an evening in December for the worthwhile purpose of getting your rods, reels and lures in apple-pie shape for spring, advises Heddon's Research Department. Here are their timely tips. . . .

First, retrieve your fishing outfit from the corner where you laid it aside for that hunting outfit. If your reel is corroded to the rod, leave it there, you're a few years too late for this advice. If not, separate them and work on the reel first.

Carefully take it apart on a table where you have plenty of room. Place the parts in front of you in the same order they come off the reel. With a small paint brush, wash all parts clean in kerosene or carbon tetrachloride, both are safe to use indoors.

Use light oil on the end bearings, level wind gear, handle shaft and grasps. Use just enough light grease to cover drive and pinion gear teeth—don't over-lubricate. Too much grease will set up a cohesive drag that will prevent your reel from operating properly.

Adjust the end bearing caps until the spool has just a hint of end play. Check your line—if it is strong and unfrayed, leave it alone. If it appears weak or rotten, try reversing it; if still weak, replace it with a new one.

Your casting or fly rod should be carefully examined for any nicks in the finish. The outside is your rod's only protection from the elements and therefore must be preserved.

First, clean any spot where the finish has been marred by rubbing it lightly with fine steel wool. Then touch it up with a soft, small brush and clear varnish.

Do the same with your lures, particularly those made of wood. On those that are badly scarred, and did not take many fish, try painting your own horrible designs, the fish might like them. On those that are badly scarred but caught plenty of fish, just coat them with clear varnish, don't attempt to change the color—or, they might stop taking plenty of fish!

Go through your tackle box and throw away—or trade for somebody else's throwaways—all plugs in which you have no confidence. Remove all dead timber, you're going to need those spaces for hot, new killers next spring.

If you aren't mechanically inclined, return your rods and reels to home base—the manufacturer that made them. Pack them carefully, insure them ade-

quately, and write the service department the day you ship them. Then, says Heddon, you can let winter blow, you're ready for spring!

Are You a Sportsman?

Someone estimated once that only about five percent of the so-called "sportsmen" of this nation are deserving of the term in its true meaning. What would *you* have done in a situation similar to the following:

State Game Ranger L. E. Crawford, while checking dove hunting areas near Lawton, Oklahoma, recently came upon Attorney Charles Bledsoe and his 16-year-old son, Charles, Jr., of Lawton, repairing a damaged farm fence through which they had seen other hunters driving their automobile a few moments before.

Crawford learned that the attorney and his son had permission of the farmer to hunt on his land, while the other hunters did not. The ranger also learned that Bledsoe always carries hammer, pliers, and staples to repair fences when he finds them damaged.

"I didn't want the farmer to think we cut his fence," Bledsoe said, "and thereby probably gain his condemnation of all hunters. Besides, I want my son to learn good sportsmanship and courtesy in the field."

"That act of good sportsmanship cost them their hunting that evening," Crawford commented, "because it took them an hour to repair the damage the other hunters had done. But the Bledsoes will probably be welcome on that farm, and anywhere else they ask permission to hunt in the future."

Are you a real sportsman?

* The only two poisonous lizards in America are the gila monster of New Mexico and Arizona, and the bearded lizard of Mexico and Central America.

The Fisherman

Who's the stranger, Mother dear?
 Look: he knows us; ain't he queer?
 Hush, my own, don't talk so wild;
 He's your father, dearest child.
 He's my father? No such thing!
 Father died, 'way last spring.
 Father didn't die, you dub!
 Father joined the fishing club.
 Now the season's nearly over, so he
 Has no place to go, you see;
 No place left for him to roam,
 That is why that he's come home.
 Kiss him—he won't bite you, child,
 All those fishing guys look wild!

—Tennessee Conservationist.

ARRESTS—JULY, 1951

Name	Address	Offense	Fine
John Allen	Pittsburg	No fishing license	\$10.00
Jack Armstrong	Wichita	No hunting license—No quail stamp	20.00
John F. Bishop	Wichita	No hunting license—Possess wild game bird in closed season	50.00
Bobby Carson	Great Bend	No fishing license	5.00
Marvin Crandall	Ringwood, Ill.	Take bullfrogs without fishing license	10.00
James T. Dyson	Hutchinson	No fishing license	5.00
Harold Easter	Pittsburg	No fishing license	10.00
David Frazier	Indianapolis, Ind.	Take fullfrogs without fishing license	10.00
George M. Goure	Oklahoma City, Okla.	Setting throw lines within 150 yards of dam at Drury, Kan.	10.00
Calvin Hayden	Yuma, Arizona	No fishing license	None
E. C. Hubbard	Garden City	More than 8 bank lines in state lake	10.00
Henry Huklenbruk	Girard	Possess bass less than 10 inches	10.00
E. H. Lenheim	Burlingame	Pleasure riding with outboard motor on state lake	5.00
Bob McGill	Pawhuska, Okla.	No fishing license	5.00
R. B. Montroy	Oklahoma City, Okla.	Setting throw lines within 150 yards of dam at Drury, Kan.	10.00
William K. Moots	Hutchinson	No fishing license	5.00
John M. Newport	Kansas City	Swimming in restricted area in state lake; operate motorboat in state lake for other than fishing purposes	10.00
Delbert Rhynes	Great Bend	No fishing license	5.00
Luther A. Smith	Wichita	No fishing license	10.00
Russell Squires	Wichita	No fishing license	10.00

ARRESTS—AUGUST, 1951

Name	Address	Offense	Fine
Charles Beach	Kansas City	No fishing license	\$5.00
Robert Booth	Wichita	Taking channel cat less than 12 inches	10.00
Loyd Casteel	St. Paul, Minn.	No fishing license	10.00
Morgan Conway	Wichita	Taking channel cat less than 12 inches	10.00
Ora Melvin Cox	Pittsburg	Setting trotline in mouth of creek	15.00
E. F. Craighead	Parsons	No fishing license	5.00
Kenneth R. Douglas	Yates Center	Take dove in closed season	25.00
Arthur W. English	Leavenworth	Operate more than 2 pole lines	10.00
R. E. Garrett	Bethel	No fishing license	5.00
Emile Gerard	Carthage, Mo.	No fishing license	10.00
Joe Gerard	Carthage, Mo.	No fishing license	10.00
Claude L. Grindrod	Wichita	No fishing license	10.00
Charles Graham	Wichita	Operate trotline less than 150 yards from Fall River dam	10.00
Herb Greenstreet	Hays	No fishing license	10.00
Dan Hamer	Hutchinson	No fishing license	7.00
Joseph F. Hodina	Chicago, Ill.	No fishing license	3.00
C. H. Hornbeck	Great Bend	Operate too many trotlines and hooks	10.00
Thomas King	Baxter Springs	No fishing license	5.00
Eugene May	Topeka	No fishing license	5.00
Ralph May	Ozawkie	No fishing license	5.00
George F. Mulhorn	Tuscon, Arizona	No fishing license	5.00
Robert Munoz	Tennis	No hunting license	15.00
Terry Neal	Coffeyville	No fishing license	5.00
C. O. Peterson	Wichita	No fishing license	5.00
Leslie Peterson	Wichita	No fishing license	25.00
Carl Pfeifer	Minneapolis	No fishing license	5.00
Elmer J. Pfeifer	Hays	No fishing license	10.00
R. L. Pierson	Emporia	No fishing license	5.00
James E. Pulley	Lowry City, Mo.	No fishing license	5.00
Donald L. Reeves	Great Bend	No fishing license	5.00
Richard Roger	Luray	No fishing license	10.00
William Senior	Wichita	Taking channel cat less than 12 inches	10.00
Lawrence L. Shultz	Sycamore	No fishing license	5.00
Donald Slaton	Coffeyville	No fishing license	5.00

ARRESTS—SEPTEMBER, 1951

Name	Address	Offense	Fine
Eston Barber	Garden City	Shooting fish	\$10.00
W. G. Berry	Chicago, Ill.	No fishing license	10.00
E. A. Berschaner	Wichita	Take doves with unplugged gun	25.00
Eldon Brumbaugh	Topeka	Take doves with unplugged gun	25.00
Walter Bryant	Leavenworth	No hunting license	5.00
Harry Caskey	Topeka	Take doves with unplugged gun	25.00
Sherman J. Couch	Wichita	No hunting license	10.00
Ed. E. Davis	Jamestown	No fishing license	10.00
Clifford M. Dorsey	Wichita	Take doves with unplugged gun	25.00
Marlin R. Dunbar	Great Bend	No fishing license	10.00

Name	Address	Offense	Fine
B. B. Earley	Concordia	No fishing license	10 00
Carl Fiddler	Independence	No hunting license	10 00
Clifford Fisher	Concordia	No fishing license	10 00
Merle J. Furney	Kansas City	Operating trot line in state lake	10 00
Gene Gauger	Leavenworth	Possess Raccoon during closed season	10 00
Ralph Handkins	Kansas City	Shooting from highway; possession of quail; excess legal limit of doves	50 00
Westley Harris	Topeka	Take doves with unplugged gun	25 00
Leo Hagle	Jamestown	No fishing license	10 00
Frank Hodges	Topeka	No fishing license	5 00
Willie H. Jackson	Topeka	No fishing license	5 00
Paul Johnson	Chanute	No hunting license; shoot birds not on wing	15 00
Solomon Johnson	Kansas City	No fishing license	10 00
Emmett E. Kessler	Wichita	No hunting license	10 00
J. R. Kueffer	Great Bend	No fishing license	10 00
Joe M. Kyle	Topeka	Shoot doves in closed season; shoot doves from auto; shoot doves with rifle	50 00
Kenneth R. Leasure	Dodge City	No hunting license	5 00
D. T. Lyons	Dodge City	No trapping license	25 00
Bob Maden	Norton	Take pheasants in closed season; no hunting license	30 00
Donald E. Miller	Wichita	Take doves with unplugged gun	25 00
Olaf Mobley	Wichita	No fishing license	10 00
L. J. Morgan	Kansas City, Mo.	No fishing license	5 00
Peter Pruitt	Fells, Pa.	No fishing license	10 00
Dale Reed	Plainville	No hunting license	10 00
Walker Ritich	Kansas City, Mo.	No fishing license	20 00
J. A. Roy	Brewster	No hunting license	10 00
Herman Rummel	Atwood	Shoot pheasants in closed season	50 00
Percy Rummel	Atwood	Shoot pheasants in closed season	50 00
Stanley Rummel	Atwood	Shoot pheasants in closed season	50 00
Victor Rummel	Atwood	Shoot pheasants in closed season	50 00
Harley Sanders	Gypsum	No fishing license	5 00
Robert W. Sanders	Great Bend	No fishing license	10 00
Paul L. Sayre	Great Bend	No fishing license	5 00
Donald Shockley	Wichita	No hunting license	10 00
William Snook	Topeka	Shoot doves with unplugged gun	25 00
E. R. Snow	Arkansas City	No fishing license	5 00
Bill Spratling	Norton	Hunting pheasants in closed season; no hunting license	30 00
William Stevens	Augusta	No fishing license	10 00
R. E. Stewart	Chanute	Shoot birds not on wing	10 00
Howard Thompson	Topeka	No fishing license	5 00
Robert H. Walker	Wichita	Take doves with unplugged gun	25 00
Floyd Wash	Topeka	No fishing license	5 00
Edward Webber	Topeka	Shoot doves with unplugged gun	25 00
Frank Wedel	Larned	Shoot doves not on wing with .22 rifle	10 00
Eligah White	Topeka	No fishing license	5 00
Richard L. Winebrenner	Independence	Possession of two unlawful seines	50 00
Leonard Woodall	Topeka	Shoot doves with unplugged gun	25 00
Donavon L. Young	Parsons	No fishing license	5 00
Amos B. Zimmerman	Wichita	Shoot birds from auto; shoot birds not in flight	20 00

Barbecued Duck

Some of you boys have wild duck still in the deep-freeze. For something right out of this world, try the following for four servings.

Cut breasts from two large wild ducks. Broil under flame until brown. Baste frequently with following barbecue sauce:

- 4 teaspoons lemon juice.
- 1 teaspoon Worcestershire sauce.
- 1 teaspoon tomato catsup.
- 1 tablespoon butter.

After duck has begun to brown, sprinkle with salt and paprika, and continue to broil until it has reached the desired degree of doneness.

There are more than 800 kinds of earthworms in the world; ninety different kinds in North America.

Believe in Big Families

White bass are so prolific that they spawn as many as 500,000 eggs. In comparison, black bass and many other species of game fish spawn as few as 20,000 eggs.

Dinosaurs and kindred forms of life appeared on earth as early as 200 million years ago and dominated the world for some 140 million years. Hundreds of bones and skeletons of these prehistoric animals have been discovered in Dinosaur National Monument, Utah-Colorado, and many more await excavation.

Legend has it that the kangaroo's name comes from a native phrase meaning "I don't know," given in reply to the white man who inquired the name of this strange animal.

Are You Getting Your Money's Worth?

Reprint, Pennsylvania Game News

Are you getting as much as you think you should in return for the hunter's license you buy? Maybe you aren't if you measure your return **only** in your game bag. But don't forget that the size of your game bag is governed by your hunting know-how, where you hunt and your ability to shoot straight. But even if you bag only a couple rabbits or a pheasant during a season you will be getting the cash equivalent of your license fee.

And you certainly should take into consideration the healthful outdoor recreation you derive from your days afield. You couldn't purchase that for any amount of money anywhere. And how about the companionship you enjoy with old buddies, and the happy recollections you have in later years when you fondly look over your various trophies or recall unusual incidents?

Did you ever stop to think how many times, as a member or guest of a sportsmen's club, you enjoy the wildlife motion pictures and other educational programs which your license fee helped to provide, or the many other groups, including the Scouts and school kiddies who were encouraged to protect and preserve wild creatures because of those same pictures, or lecturers, or exhibits—all financed by money you paid for a license?

Don't you ever think how much your contribution helps gladden the hearts and pacify the minds of the thousands of people who thrill just at the sight of a wild bird or animal and who seek solace and comfort in simple communion with Mother Nature and her wilderness children?

Aren't you happy knowing that you are helping safeguard a great natural heritage for **your** children and **their** children? Don't forget that a portion of your license fee helps protect and feed wildlife and to control the enemies of the creatures you like to hunt, and enjoy to see.

Do you realize that you are actually a stockholder in nearly 1,000,000 acres of game lands, in four state game farms, in a conservation school used for training the officers who protect your sport, and our wildlife, as well as in numerous other tangible, dividend-paying enterprises **all** made possible by your license fee.

Surely if you take all these pleasures and benefits into consideration you will have to admit that you are on the **receiving** rather than the **giving** side of a stupendous project which will make it more successful by adding your co-operation and good will to the efforts that are necessary to achieve them.

**The future of our wildlife depends upon understanding—goodwill
—co-operation—hard work—and sufficient funds to pay the bill**



Conservation Pledge

I GIVE MY
PLEDGE AS AN AMERICAN
TO SAVE AND FAITHFULLY TO
DEFEND FROM WASTE THE
NATURAL RESOURCES OF
MY COUNTRY - ITS SOIL
AND MINERALS, ITS
FORESTS, WATERS,
AND WILDLIFE

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