

IOWA CONSERVATIONIST

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THE OLD ORDER CHANGES

THEY'RE DEAD BEFORE YOU FIRE A SHOT

By Wilford L. Miller

Reprinted from *Outdoorsman*

"Cut down the bag limit this year." "Shorten the hunting season five days and restrict shooting hours." "Birds are getting scarce—we must save them!"

Hunters and conservationists across the nation discuss these problems year after year. And unless some catastrophe occurs—such as a blizzard which kills most of the game birds—most sportsmen will not look much farther ahead than the next hunting season. When the subject of conservation comes up, the hunting regulations seem to be the all-important thing.

Sportsmen are convinced that their guns determine the increase or decrease of bird populations. Second might be the foxes and those predators that supposedly are taking all the birds.

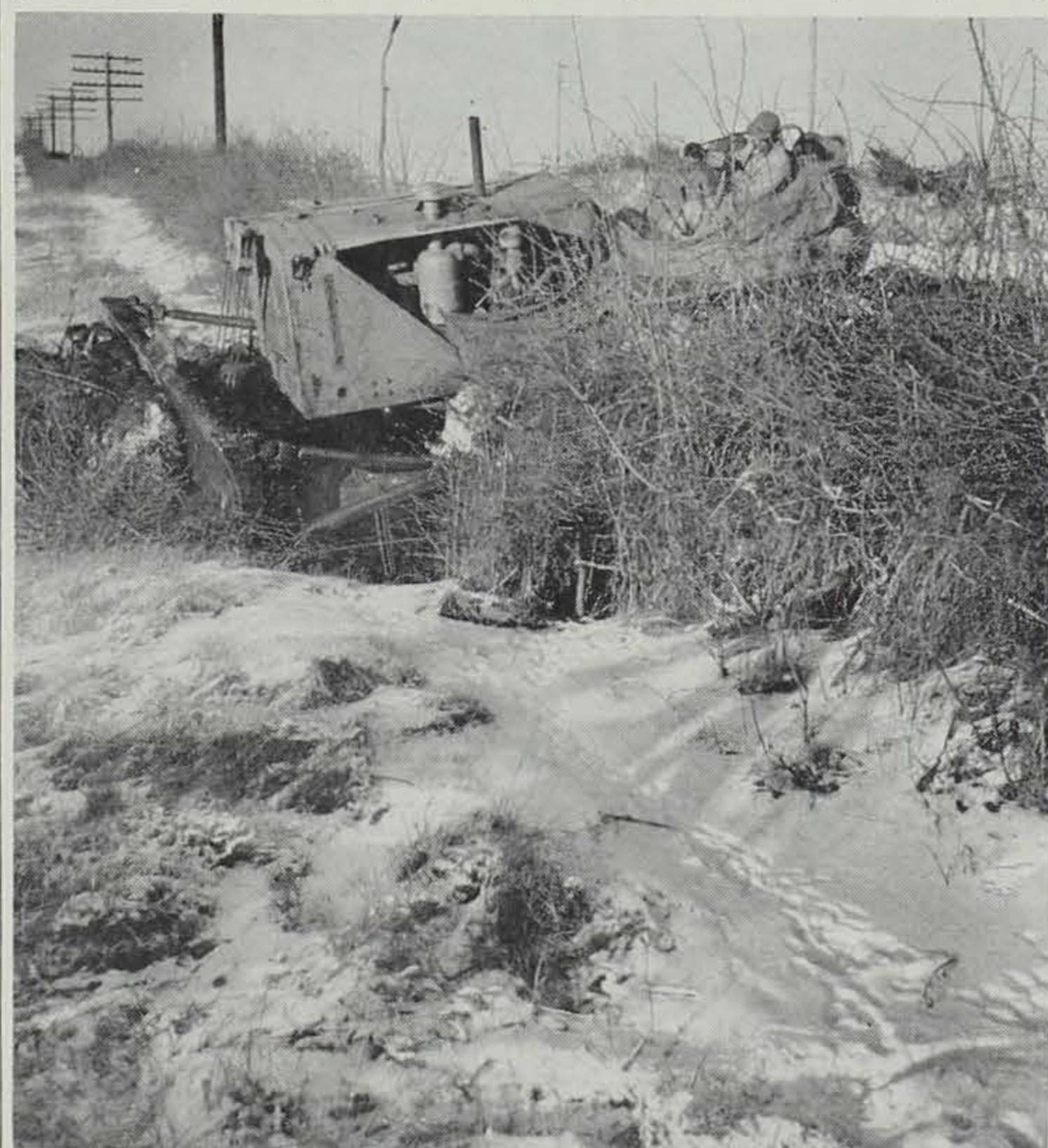
Do you hunters want to know how important you are in affecting the ups and downs of some of our game species? Let's look at a few facts about the pheasant for example. For several years North Dakota has gathered mass data from nesting studies, roadside surveys, hunter kill records, winter mortality investigations, and other sources to find out how pheasants live and die.

Graphically the picture looks like this—with the circle representing total eggs laid. (See circle graph page 7.)

Half of all eggs laid will never hatch! Half of all young birds that do come out of the eggs will be dead before fall. Winter will add its toll to the natural mortality—roughly 5 to 10 per cent. The spring breeding stock must be maintained. The surplus in normal years the hunter can take. His share may be 5 to 10 per cent, approximately equal to the natural winter kill. Rather a

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OSAGE ORANGE HEDGES FOLLOWING PASSENGER PIGEON, DODO



The modern bulldozer has sounded the death knell for Osage orange hedges.
Jim Sherman Photo

By James R. Harlan
Assistant Director

Many quail hunters, returning from trips to southern Iowa quail territory the past season, were alarmed and surprised at the number of Osage orange hedges being uprooted and burned. There is reason for their concern over the loss of this fine quail cover. There is general opinion among hunters that "find an Osage orange hedge-row and there you will find quail."

All wildlife must have suitable homes, and Osage orange is admirably suited to many needs of the bobwhite. There is little question but that the introduction of Osage played an important part in increasing the bobwhite from limited populations when the state was first being settled to almost unbelievable numbers by 1900.

More Osage hedge is being removed than at any time for many years, and in the foreseeable future it will not be an important quail cover plant in our quail territory. A substitute must be found if quail are to continue as an important game bird.

The story of the Osage orange hedge is an interesting one. When Iowa became a state in 1846, it was not known whether hedge would make a fence in the Middle West. A Delaware contributor, writing in the *Western Ohio Register* in 1839, said, "I will merely tell you for your own information that all kinds of thorn used here (Delaware) for fences are fast going to decay. I have seen no new fences for the last three or four years."

Henry W. Briggs, writing in the *Davis County (Iowa) Agricultural Society Report* 18 years later in 1857: "Hedging is attracting a large share of attention. We have now in the county about 11 miles of hedge from four years old down. I believe the general opinion amongst hedge-growers here is that it will do; however, not one

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CHICKADEE, TITMOUSE, NUTHATCH

By Roberts Mann

Forest Preserve District of Cook
County, Illinois

Of the songbirds which remain in the northern portions of the central and eastern states all winter, there are three very closely related yet entirely different in appearance: the chickadee, the titmouse and the nuthatch. Elsewhere the species may be different, but in the Chicago area we have the black-capped chickadee, the

tufted titmouse and the white-breasted nuthatch.

People who roam the woodlands in wintertime, and particularly those who live near a wooded area and maintain a bird-feeding board at home—whether in the country, in the suburbs, or near a park or cemetery in the city—soon come to know these three. They are primarily insect eaters, valuable because they search for and consume great quantities of the eggs, lar-

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"CONSERVATIONIST" INDEX

Two years have passed since an index has been compiled for the "Iowa Conservationist". We are working on one now covering 1948-49 and expect to have it completed about March 1. Many of our readers are planning to bind their "Conservationists", and an index will be valuable. If you will mail us a card requesting the new index, it will be sent to you without cost when completed.

SPORTSMEN NEED NOT WORRY

At the end of each hunting season rumors begin to fly to the effect that all the pheasants have been shot out of a certain area. The same rumor can be heard this year but needless to say it isn't true.

Reports come in from sportsmen that they have driven through a given area of the state and haven't seen a pheasant since the hunting season ended, thus giving rise to "no pheasants" rumors.

After the snows begin to fall, however, and they drive through the same territory, they will find there are plenty of birds left and go happily through the year with the thought that prospects for next year should be pretty good. Yet, at the end of the 1950 season, the same old rumor, "all the birds were shot out," will rear its head.

There isn't much the Game and Fish Department can do to counteract these rumors unless hunters take the word of men who have made lifelong studies of the pheasant.—North Dakota Outdoor News.



Farm ponds are finding a multitude of recreational uses, including swimming, skating, fishing, and trapping. Hundreds of new farm ponds are being constructed in Iowa each year. Iowa City Daily Iowan Photo.

FARM FISH PONDS GROWING IN IMPORTANCE

Farm fish ponds provide increased opportunity for recreational fishing, according to the U. S. Fish and Wildlife Service. Thousands of farm fish ponds are being established throughout the various states, but they barely keep ahead of the demands made upon our fishing resources by the increased activity of sport fishermen.

Conservative estimates are that fishing attracts more than 20 million individuals—or more than any other single sport. Besides the \$28,000,000 a year spent for fishing licenses, the sport is a billion dollar a year business in the way of fishing equipment and related expenses.

In spite of the importance of hook and line fishing, the amount of available waters suitable for fishing has gradually decreased. The pressure of civilization has progressively destroyed habitat—due to silt in the water resulting from deforestation and unwise farm practices, and to such factors as industrial pollution of waters. With the gradual introduction of artificial impoundments to provide adequate water for cattle—and for other purposes—new habitat was created for fish. Now farm fish ponds have become of great importance from the point of view of anglers.

In the last few years farmers in Texas have built 200,000 farm fish ponds. Missouri ponds have increased by 50,000 in ten years, and Mississippi reports 22,000 fish ponds in the last five years. Oklahoma is another state where ponds are now gaining in popularity, and the FWS reports 7,000 to 8,000 new ponds a year in that state.

Southern states have led in the introduction of farm fish ponds, and Western states have trailed. But a great deal of new interest in ponds is developing in the West as water tables fall and artificial impoundments are looked to with greater frequency for water supplies.

Farm fish ponds can be of almost any size for stocking purposes—from one acre to over five acres. Ponds as small as ¼ acre can produce fish if carefully managed and treated with commercial fertilizers to keep up the level of plant and small animal life that the fish use for food. Ponds that small, however, do not stay in natural balance as well as the larger ponds.

Ponds are stocked with species of fish that will maintain a natural balance between prey and predator species. Bluegills, which utilize the insect and small animal life of ponds, are the prey species, and largemouth black bass are the predator species.

If the proper balance in weight and number of these two species is maintained, maximum production of fish may be expected. In fact, this means that the ponds must be heavily fished by anglers to prevent overpopulation and stunted growth of fish.

"Fish farmers" can expect returns of 50 to 100 pounds of fish per acre in a natural pond, and up to 300 pounds in a well managed, fertilized pond. This is a greater production of food per acre than could be realized from beef on adjacent land—which could come to about 150 pounds per acre. The production of a pound of fish in a fertilized pond might cost six to eight cents, but in terms of food and recreation, this is considered small.

Not every farm pond can be a fish pond, however. Ponds must be planned or built specifically for fish. They cannot be on dammed streams where flood waters might wash away the fish stock or where there is too great a flow of water for the small plant and animal life to flourish. Silt from erosion can make a pond uninhabitable for fish, also. Ponds may be as shallow as three feet in the south, but must be from six to 15 feet deep in the north to prevent winter killing of fish.

GAME VIOLATORS PAY \$24,000 IN NOVEMBER

Seven hundred fourteen arrests for hunting, fishing, and trapping violations during the month of November resulted in fines and sentences totaling \$24,188.50 in fines and 875 days in jail.

Seventy cases resulting in fines of \$100 or 30 days or more in jail were heard in the courts, with illegal fur being responsible for the bulk of heavier fines. During the period 12 hen pheasant shooters were assessed fines of \$100 or more.

Four illegal trappers or fur buyers were assessed fines of \$1,000, three \$500, one \$400, with other fines for fur infractions ranging up to \$375 in penalties.

In addition to illegal trapping and hen shooting, maximum fines were assessed for shooting protected species, exceeding bag limits, impersonating an officer, illegal sale of fish, and hunting during closed seasons.

Both number of violations and total of fines reached an all-time record. The highest previous month was November, 1948, with 494 arrests, \$13,000 in fines. In November, 1947, 336 arrests were made and \$9,000 in fines assessed.

Commission officials attribute the increase to greater cooperation with conservation officers on the part of the non-violating hunting and fishing fraternity and farmers, plus the fact that licensed hunters and fishermen have reached an all-time high. "County attorneys, sheriffs, and judges have been especially cooperative in repeat cases and in the prosecution of major violations."

All fines collected for infractions of the fish and game laws are turned over to the treasurer of the county in which the prosecution is made and earmarked for use as county school funds.

VOGT TO DEVOTE FULL TIME TO WRITING

William Vogt, chief of the conservation section of the Pan-American Union since 1943, has submitted his resignation to devote full time to writing and lecturing on conservation issues, the Wildlife Management Institute reports.

Internationally recognized as one of America's leading conservationists, he is the author of the best-selling "Road to Survival," which has been acclaimed by critics as one of the most important books of recent years. Mr. Vogt has displayed a prominent role in recent wildlife conferences and will serve as summarizer of the 15th North American Wildlife Conference, which will be held in San Francisco next March.

Prospective "fish farmers" should seek help from their conservation agencies for help in planning fish ponds, and the state or the FWS will provide the fish stock when the pond is constructed.



A pair of magnificent white-tail bucks with horns locked, down on the ice of a small stream. This pair were separated and released unharmed by conservation officers.

GAME WARDEN SEES BUCKS BATTLE TO DEATH

Infuriated Animals Lock Horns and Drown in Big Sioux River

Judging by all the deer stories this fall, Plymouth County and other counties northward along the Big Sioux River are reliving the pioneer days.

The latest is the story of a battle to the death between two big buck deer. These two bucks were weighed and their meat distributed among various charitable institutions in Lyon County. Thus it is known definitely that one of the bucks weighed 305 pounds and the other an even 300 pounds. They were white-tailed Virginia deer.

The fight, on a sandbar in the Big Sioux River, was actually witnessed by Conservation Officer Harold Brucklacher, who is in charge of Lyon and Osceola counties. The fight was in progress when Mr. Brucklacher arrived.

They were battling on a sandbar that stretched out to deep water. The infuriated animals continued their battle without paying any attention to the conservation officer, snorting and trampling on their little spit of solid ground, the only sound being their breathing and the clashing of their antlers.

As Mr. Brucklacher approached, the bucks got their horns locked together, and before his very eyes a tragedy took place that has happened thousands of times before when deer battled. The tired animals struggled with renewed frenzy, and in their desperation both fell into the water. They tried to swim, but of course their efforts opposed one another and so, in panic, they drowned.

The conservation officer tried to drag the animals out of the water, but he couldn't manage their combined and awkward 605 pounds in time to save their lives.

Battles to the death between buck deer have been only very rarely witnessed. More often, hunters find the skeletons of two bucks somewhere in the woods, their horns interlocked, in mute testimony of what happened—a

furious fight, and then death by slow starvation. Death by drowning is even more rare, and for someone actually to see it happen has never been reported before.

This incident occurred near the village of Klondike, in the wilderness along the Big Sioux. Klondike is about eight miles north of the Big Sioux bridge which connects Canton, S. D., and Inwood, in Lyon County.—LeMars Globe Post.

WATER SHORTAGE

By Ted Lorenzen

Water shortages, to those of us who reside along the banks of the big Mississippi, are somewhat difficult of comprehension. It is only when one gets away from the big river that the importance of water to the people is brought home. At the moment, New York City's water shortage captures the headlines, but in a thousand other towns in the United States the water supply is a matter of concern.

Since coming events usually cast their shadows before them, a peek into the history books will reveal that as far back as 30 years ago the eminent students of conservation were forecasting water shortages for the United States. How right these men were is only now being disclosed. That the people of the United States have been profligate in the use of water resources now becomes a fact instead of a conclusion.

The abuse of our water resources probably began back in the days of our timber barons. A growing nation demanded lumber, lots of it, and on the theory that timber resources were inexhaustible, no effort at reforestation was made by the timber owners or lumber companies. Even worse, huge piles of slashings left in the forests made splendid tinder which fed the

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Wardens Tales

Shop Talk From the Field

Warren Wilson, conservation officer for Boone and Story counties, writes:

"I sometimes feel guilty that my contributions to 'Wardens' Tales' are few and far between. But nothing exciting ever happens to me—my life as a conservation officer is actually quite commonplace. After all, would you consider very unusual the night that Officer Goeders and myself were on the spring pike run at Spirit Lake, and two fish spearkers in a car tried to knock us off the north grade? What's exciting about dodging a car coming at you 60 or 70 miles an hour with its lights off?

"A week or so later, though, something did happen which I'll admit gave me a little chill. I was making a trip down the Skunk River in Story County, and getting along very nicely, too, when directly above me on a high bluff I heard a terrific explosion. I looked up in time to see the sky above me full of rocks. The boat and I parted company, but fast, and I headed for a low-hanging bank. For what seemed like hours I watched rocks crashing down on the river and my boat. That Ames rock quarry really does a job, believe me. I'll bet they're still loading rock from that blast.

"The next week I thought I had a story, but decided it lacked news appeal. Officers Garrett, Pike and myself were checking a stretch of river north of Fraser on the Des Moines River. We were test riding my new three-day-old Ford. Coming up to a bluff along the river, we parked the car and got out. Over the bank I went, but before reaching the bottom I heard Garrett yell, 'Jump, Warren!' I leaped to one side just in time to avoid being run over by my new Ford, which was following me like a dog to the river. I now own the only amphibious Ford on the force.

"Maybe I missed a story when I helped recover a body from the river or when our boat turned over in the swift waters of the 'Little Eddy.' I don't think so, though. If anything exciting happens in my territory, I'll let you know—but gosh, it's sure dull!"

Conservation Officer Harold Brucklacher, in charge of Lyon and Osceola counties, writes:

"Upon receiving two complaints of beaver damage from the Osceola County board of supervisors recently, I proceeded to investigate. The first landowner's complaint was well founded, and after the necessary investigation I drove on to the site of the second reported beaver damage, which was supposed to be at the bulkhead of a drainage ditch.

"I found the landowner at home

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POEMS SELL CONSERVATION

A stranger was dashing along State Highway No. 3 in Whitman County, southeastern Washington, when a series of roadside signs caught his eye. He jammed on the brakes to get a better look. Here's what was said, on different boards, spaced like shaving cream ads, along the fence:

*Trees on hilltop
Trap the snow
Hold the moisture
Make crops grow.*

A few miles up the road, the tourist got a chuckle out of more signs and began to realize that here was a new sort of promotion for better farming. Here's what he read:

*Winter wheat
On clover land
Grows and yields
To beat the band!*

and again:

*Pastures grassy,
Cattle sleek;
Mortgage clear,
So's the creek.*

Supervisors of the North Palouse district thought up the idea. They decided to sponsor a jingle contest among kids in the grades and the high schools at both Garfield and Palouse.

They enlisted the cooperation of the county superintendent of schools. Then they had a field trip for students, who were transported in school buses to see examples of different soil and crop practices.

Bankers of the two towns donated \$25 in cash for prizes for the best jingles. The district gave appropriate books as prizes. In all, 421 jingles about conservation were submitted. The best ones were put onto boards and were posted along the roads.

A local minister became so interested he based the service in his church on soil conservation one Sunday.—*The Northwest, Published by Northern Pacific R. R.*

The chuckwalla, a species of lizard, can increase its lung capacity, consequently its thorax size, 300 per cent to prevent extraction from its burrow by enemies.

Some shrimplike animals live on the edges of the ice near the North Pole; others are found in the boiling waters of hot springs.

"A nation deprived of liberty may win it; a nation divided may reunite, but a nation whose natural resources are destroyed must inevitably pay the penalty of poverty, degradation, and decay."—Gifford Pinchot.



One of the rarest birds in existence, the whooping crane is fighting a grim battle against extinction. Formerly common on Iowa's prairies, it has been extinct in this state for many years. Jack Musgrove Photo.

WHOOPING CRANE INCREASE

Four young whooping cranes have returned with 29 adults to their wintering grounds in Texas, giving the big white birds new headway in their race against extinction, according to John H. Baker, president of the National Audubon Society.

The continental whooping crane population now stands at 36, including two captive birds at the Aransas National Wildlife Refuge on the east coast of Texas and one in Louisiana. Efforts to save the remnant of America's tallest bird are being jointly sponsored by the U. S. Fish and Wildlife Service and the National Audubon Society.

Last winter two captive birds, one loaned by the Audubon Park Commission in New Orleans, and the other given to the Audubon Society by the Gothenburg (Nebr.) Rod and Gun Club, mated and built a nest in a specially constructed enclosure at the Aransas refuge. Two eggs were laid which later proved to be infertile. Another pairing is being encouraged with a different male bird, and it is hoped that they may lay fertile eggs next spring and successfully raise young.

In 1942 the whooping crane population was down to 22 birds. The slow rise in numbers is attributed by the National Audubon Society to increased protection on their wintering grounds and lessened shooting of the cranes, owing to widespread publicity along their migration route.—Audubon News Letter.

Europe's first knowledge of the muskrat dates back to 1638 when the rat musque was referred to by the Jesuit fathers in their correspondence from Quebec.

Probably the longest beaver dam ever recorded was one on the Jefferson River near Three Forks, Nebraska, which measured 2,140 feet.

BIG TRUMPETERS INCREASING

Trumpeter swans, which numbered a scant 73 in 1935, chalked up another gain last year, and there now are 451 of these big birds in the United States, the Wildlife Management Institute reports.

While the threat of extermination has not yet been dissipated completely, it has been growing less intense each year, and the long battle of the U. S. Fish and Wildlife Service to preserve the trumpeters appears to be nearing victory. Most of the birds are on the Red Rock Lakes Refuge of Montana, which was established in 1935. Since then, the birds have increased in numbers, and cygnets have been transplanted to Yellowstone National Park and to the National Elk Refuge. Oregon and Nevada refuges held about 27 birds when the breeding ground survey was completed in August.

The trumpeter swan has several inherent characteristics that made its preservation difficult even after destructive market hunting had been obliterated from the American scene. It is extremely sensitive to changes of habitat caused by civilization, and its tremendous size makes it an easy target for the poacher and a prize of the pot hunter. Swans seldom breed until three years of age, and their breeding places now are few, a factor which tends to concentrate breeding birds in a few spots, making them vulnerable to climatic disasters. Transplanting programs of the Fish and Wildlife Service are aimed at minimizing effects of local drought or abnormally cold weather coinciding with nesting periods.—Wildlife Management Institute.

There are 147 known species of fish in the Iowa waters but only 36 of these are considered important edible species.

BANDED PIGEONS

By Milo Gerry

Mrs. Jack Carter, 420 Chestnut Street, Waterloo, found a homing pigeon this fall that had identification bands on its legs. Conservation Officer William Ellerbrock referred her to an item which appeared in this column in September which mentioned George C. Bailey, Huntington, N. Y. Known as "radio's tracer of lost pigeons," Bailey makes a hobby of raising pigeons and also traces the ownership of birds for people who find them.

The bird Mrs. Carter found was taken from a cat which had captured it in its exhausted condition. The pigeon was fed and cared for by the Carters for a couple of days, but did not recover.

Bailey subsequently traced its ownership to Robert Metesch of Joliet, Illinois.

A local sportsman was shooting barnyard pigeons near the city this week and killed a homing pigeon which was feeding with the farm variety. The leg bands bear the code numbers of the American Racing Pigeon Union, Jersey City, New Jersey. The metal band bears the letters AU 49, Chicago, and the number 810. Two rubber leg bands were also recovered which were stamped with the letters W 431 and W 416. Bailey will

trace this bird and report on it later.

Carrier or homing pigeon fanciers have clubs in the United States and Canada and stage competitive races with their birds.

The racers are shipped to some other city by air or express and released. The first bird to arrive and enter its cote is declared the winner.

Clubs are located in New Jersey, Massachusetts, Kansas, Maryland, and Hamilton, Ontario. The legend of numbers and bands identify the association which issued the band and the individual clubs are identified by other letters. Serial numbers are placed on the bands for the owner's identification.

The longest recorded flight of a homer was from Arras, France, to Saigon, Indo-China. The distance is about 7,200 miles over seas, mountains and deserts. An army bird traveled 2,100 miles from Vanceboro, Maine, to San Antonio, Texas. Another bird flew from Venezuela to Brooklyn, a distance of 2,200 miles.

The fastest recorded flight of a homing pigeon was one which started at East Moline, Illinois, and flew 250 miles with an average speed of 71.7 miles per hour.

The homing instinct is drilled into these feathered travelers by special training and preliminary flights until the desire to get back

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Pigeon shooting is the most excellent practice for gunners who wish to become good field shots. Occasionally racing pigeons bearing leg bands are accidentally killed. Jim Sherman Photo.



Dinosaur eggs? No, Osage orange fruit, which may become as rare as prehistoric reptile eggs if present trends continue. Jim Sherman Photo

The Old Order . . .

(Continued from page 1)

man in five will succeed with hedge. They will fail from sheer carelessness. The hedge must be cultivated and cut back thoroughly or it is worthless."

In the *Society Report* for Henry County the same year, "There are but few of our prairie farmers that have not had more or less experience in hedging, and their opinions in regard to it are as contradictory as there are cases of success or failure. Osage orange is a native of more southern climes, indigenous to Texas, Arkansas, and portions of Louisiana, growing to the height of 12 or 15 feet, armed with multitudes of long, sharp thorns, its branches entwining and interlacing with each other, forming a barrier as impenetrable as the Mexican chaparral to man or beast. There are many cases of signal success in the acclimation of this plant to our northern climate in this county, and long lines of living fence, beautiful in their summer dress, shining with colors of crimson and gold when the early autumnal frost tinges its foliage with a more somber hue, stands a living monument of the energy and enterprise of its thrifty proprietor."

In the 1857 report from Jasper County, "Wherever proper attention has been bestowed, success has been the result. We have no hedges older than three years in this county."

In 1863, Sewell Foster, president of the board of Iowa State Agricultural College, wrote, "Timber is scarce in this prairie country. We must devise some other plan than rail and board fence. Much fence has been built in the eastern part of our state with pine lumber rafted down the Mississippi. Some board fence has been built through the interior of the state of native lumber. These sources of timber and lumber will soon be exhausted."

"The Osage orange has been tried so often and proved successful that it can no longer be called an untried thing. What an advantage it would be if our farms

were divided by hedges into 10 or 20-acre lots (the modern game manager's dream come true), to feed the cornstalks, to turn into meadows, to break the winds from knocking our corn and grain down, to protect our winter wheat. How much it would break the wind from our premises."

And so by the end of the Civil War the Osage fence had become a part of our farm economy. Because barbed wire was yet unknown, each farmer of necessity learned to prepare the seed, plant the seedlings, and care for the hedge so that it became stock-tight fence.

Osage orange reached its peak of abundance and popularity about 1875, and shortly after that time began to lose its popularity.

E. F. Pittman, of the State Department of History and Archives, recalls the Osage hedge of his boyhood with mixed emotions:

"We had 40 acres in Van Buren County, mostly enclosed with Osage. By doggies, how those thorns did stick in a boy's foot! We boys didn't like it. My father didn't like it either, his principal objection being that its long roots sapped the soil and it took up too much farming space. The only good thing about Osage orange was that when it needed to be trimmed, it would always wait."

"We had lots of quail in 1874. Ten coveys, anyway, fed on our 40-acre farm. They did not live in the hedge so much those days. There was plenty of hazelbrush next to our farm, and the quail coveyed up there. They used the hedgerows to get from the hazelbrush to our fields. I used to trap them with a lath trap and get five cents apiece in town."

Osage hedge got more and more in the doghouse with Iowa farmers as the barbed wire fence was developed and became available. By 1885 barbed wire fence was coming into widespread use, and by 1895 hedge fence removal had begun.

In the early days removal of the hedge fence was a difficult and dis-

agreeable task performed by hand. With the advent of steam threshing machines, some farmers found off-season use for the new behemoths, hooking the engine onto the hedge plants and pulling them out.

Then came the pneumatic-tired tractor, and the war between Osage and tractor began in earnest. The Osage thorns made holes in air-filled tires. The tractor in turn with a block and tackle was the guillotine by which thousands of hedge fences were executed.

Now the bulldozer has become available, and sportsmen are witnessing the last phase of the destruction of Osage, begun at the turn of the century. Quickly and easily the giant bulldozers engulf half-mile rows of hedge.

It is probably not too dogmatic to say that the abundance of bobwhite quail in Iowa has followed the abundance of Osage orange hedge. The trend is too nearly parallel to ignore, and the adage remains, "Find an Osage orange hedge and you'll find a covey of quail."

Is the picture all black? For Osage hedge, yes—for quail, not necessarily. Many wildlife students believe that a new plant, multiflora rose, may well parallel the introduction and establishment of Osage orange in the south half of the state almost a hundred years ago and be of great value to quail.

Multiflora rose is a thick, beautiful rose native to Japan and Korea. It carries dense masses of pink-white blossoms in spring and bright red seed clusters in winter. It grows to a maximum height and width of eight feet, reaching maturity in four to six years.

Planted as a living fence, it will turn livestock in from three to five years and may be established at much less cost than woven wire. It needs no maintenance except cultivation the first two years.



Osage hedge rows provide thorny protection for quail from enemies in the air and on the ground. Jim Sherman Photo

COLD WEATHER HALTS DARLING LAKE BUILDING

Construction work on the new Darling lake near Brighton has been halted until spring. The earth embankment, cut-off walls, steel diaphragm, slope riprapping, and outlet have been completed, with the exception of installation of the control valve. There is some spillway work to be completed in the spring. The dam will be completed in sufficient time to begin water impoundment with the spring rains. The lake is expected to be filled by the end of the year and will contain 300 water acres when filled to spillway crest.

The pocket gopher excavates an amazing labyrinth with nothing except its muscles and hands. Sometimes in sandy soil it makes a two to three hundred foot tunnel in a single night.

Multiflora rose is valuable for soil erosion because of its deep root system and is ideal as a wind erosion control plant. It conserves moisture, increases pollination of farm crops because of its attractiveness to pollinating insects. It harbors insect-eating birds, eliminates undesirable weeds along the fencerows, and does not sap the ground as other hedges do. It is especially adapted to fencing around gullies, ponds, waste areas, on contours, and along drainage ditch banks. In short, it means cash in the landowner's pocket, and that, say the realists, is the reason multiflora rose will become a part of our Iowa landscape.

A minority believe establishment of multiflora rose will come because of a basic human hunger for beauty on the land. Whatever the cause of its establishment on Iowa's farm lands, its blossom-laden amphitheaters will reflect the happy call "Bobwhite!"

THE MOTION PICTURE'S PRAYER

I am film, not steel; oh, user, have mercy. I front dangers whenever I travel the whirring wheels of mechanism. Over the sprocket wheels, held tight by the idlers, I am forced by the motor's magic might. If a careless hand mis-threads me, I have no alternative but to go to my death. If the pull on the takeup reel is too violent, I am torn to shreds. If dirt collects in the aperture, my film of beauty is streaked and marred, and I must face my beholders—a thing ashamed and bespoiled. Please, if I break, never fasten me with pins which lacerate the fingers of my inspector. Don't rewind me—my owner wants that privilege, so that he may examine me, heal my wounds, and send me rejuvenated upon a fresh mission.

I travel many miles in tin cans. I am tossed on heavy trucks, sideways and upside down. Please see that my first few coils do not slip loose in my shipping case, and become bruised and wounded beyond the power to heal. Put me in my

own can. Scrape off all old labels on my shipping case so I will not go astray.

Speed me on my way. Others are waiting to see me. The next day is the last day I should be held. Have a heart for the other fellow who is waiting, and for my owner, who will get the blame.

I am a delicate ribbon of film—misuse me and I disappoint thousands; cherish me, and I delight and instruct the world.

"CHALLENGE TO SPORTSMEN"

Game law violators are thieves... treat them accordingly.

Teach beginners their obligations as well as pleasures afield.

Devote as much effort to improving habitat as you do harvesting the fish and game.

Actively work to improve farmer-sportsman cooperation.

Become an active and constructive member of a sportsmen's club.

Demand sound conservation legislation.

Let maximum sport, rather than kill, be your guide.—Captain Eddie Rickenbacker.

TRAPPING SCHOOL FOR FOX AND COYOTE SUCCESSFUL

The fox and coyote trapping schools conducted by the State Conservation Commission in cooperation with county extension directors and the Iowa State Sheep Association in September and October, 1949, were an outstanding success in the opinion of those attending.

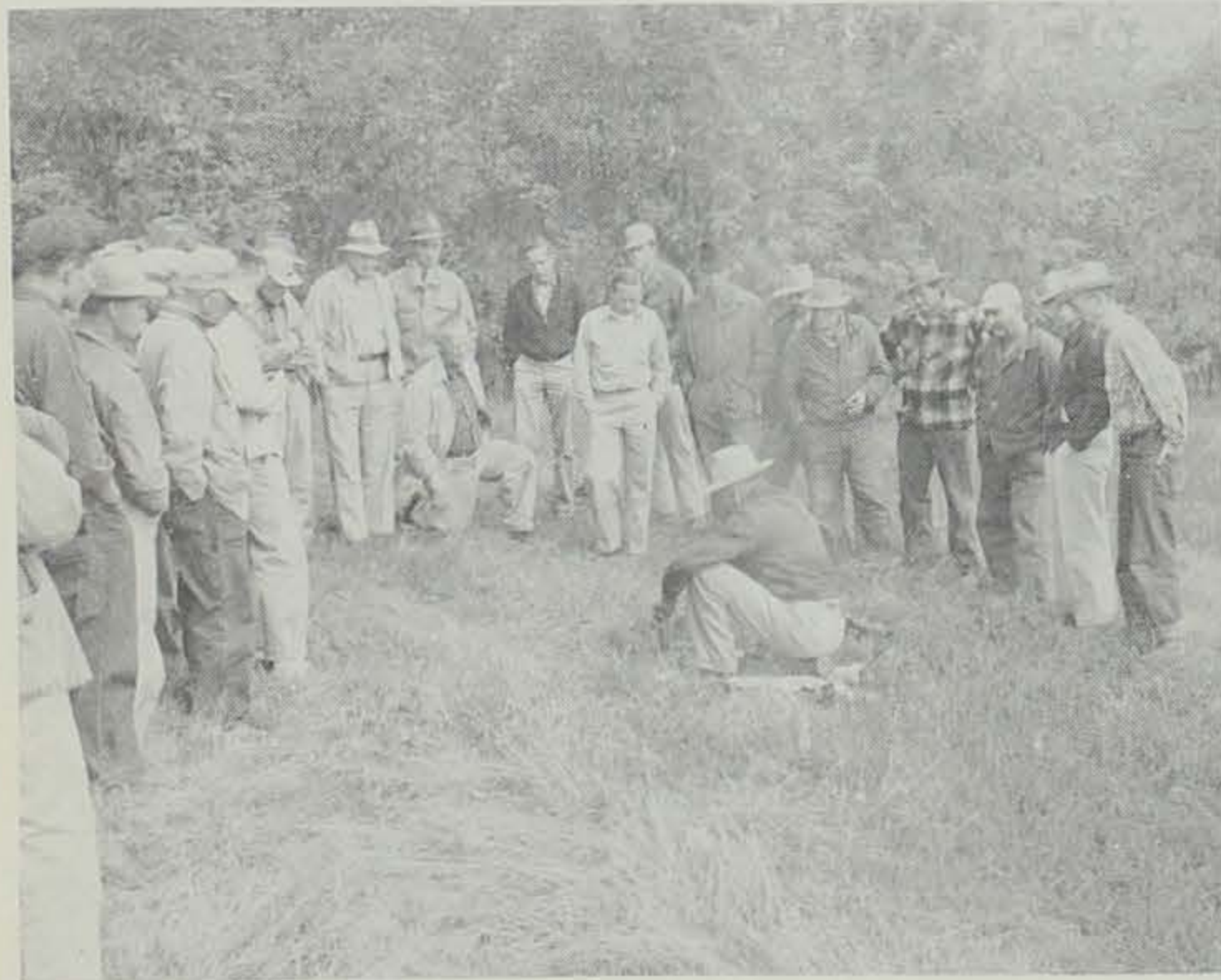
The schools were held in 21 southern Iowa counties and 664 students attended.

The first two weeks of the school were conducted by L. J. MacIntosh of the U. S. Fish and Wildlife Service, and thereafter by Game Area Manager Tom Berkley.

Only a single set was taught, a double trap, scent set. In con-

ducting the school Berkley made four or five sets the day prior to the class. The class would then follow the trap line and each set was explained, with particular emphasis on exactly why the sets were made where they were. During the field work a detailed explanation was made of equipment used, scents, habits of the animals, interpretation of signs, and how to find and identify tracks.

Many of the trapping students have successfully trapped fox and coyote as a result of the cooperative instruction. Tentative plans for additional schools are being made for this fall.



Fox and coyote trapping students receive the lowdown from an instructor professional at one of the cooperative trapping schools. Jim Sherman Photo.



The smallest and most trustful of the "wee three" is the smart, saucy chickadee. Sidney Horn drawing.

Chickadee . . .

(Continued from page 1)

vae, pupae and adults of insects harmful to shade trees, orchards and forest trees. Therefore, they are particularly fond of sunflower and other fatty seeds, suet and a doughball mixture of cornmeal, oatmeal, a little white flour and melted fat. These three and the cardinal, the bluejay, the downy woodpecker, the junco, the starling and the English sparrow, comprise our most common winter songbirds.

Smallest of the three and most trustful—first to investigate a feeding board set on your window sill—is the round, fluffy little chickadee; very saucy, very spruce and smart in its livery of black, gray and white. It is the only bird, smaller than a sparrow, with a black cap, white cheeks and a black bib under its chin. It has a very short bill and its eye, surrounded by the edge of the black cap, is almost invisible. It is the most vividly cheerful and active citizen of the winter woods, blithely hustling about in snowstorms and bitter cold, occasionally calling a cheery "Chicka-dee-dee, day-day-day." It is quite an acrobat and as it flits through the woods you may see it turn a somersault to alight on the underside of a branch which it proceeds to investigate, out to the twigs and buds, for in-

sects. It also likes small berries such as those of poison ivy.

The tufted titmouse, or tomtit, or sugar bird, is more wary and is apt to appear suddenly on your feeding board, seize a morsel and dart away. When it becomes tamer it will, like the chickadee, jab away at a chunk of suet or seize a seed between its feet and crack it with rapid hammer-strokes of its bill. The titmouse has a pointed crest, long slender tail, large dark eyes and a strong cone-shaped bill. Its upper plumage is mousy gray, tinged with olive on the back. The lower parts are whitish, washed with rusty color on the flanks.

Like the chickadee, it works along the upper branches and twigs of trees searching for insects, but it is not so fond of queer positions. Its song is a loud, clear whistle: "Peter, peter, peter." Both of these birds, and the nuthatch, nest in old woodpecker holes, tree cavities, or cavities they excavate in punky wood, but the titmouse nearly always includes an old snakeskin in its nesting material, and a lot of hair. It has been seen plucking hairs from a squirrel's tail, and from the back of a woodchuck.

The nuthatch, or upside-down-bird, is much different—more deliberate, and fond of creeping jerkily up and down the trunks and larger branches of trees, usually head downward, silently probing for insects. Occasionally it will utter a nasal "Yank, yank." Bluish-gray above, it has a black cap, beady black eyes set in white cheeks, but no black bib below its chin. It has a stubby tail and a long bill, perkily pointed slightly upward. Unlike the chickadee and titmouse, it will place a seed in a crevice of bark and then hammer at it. They also store food in such cracks. No other tree climber habitually goes down tree trunks headfirst.

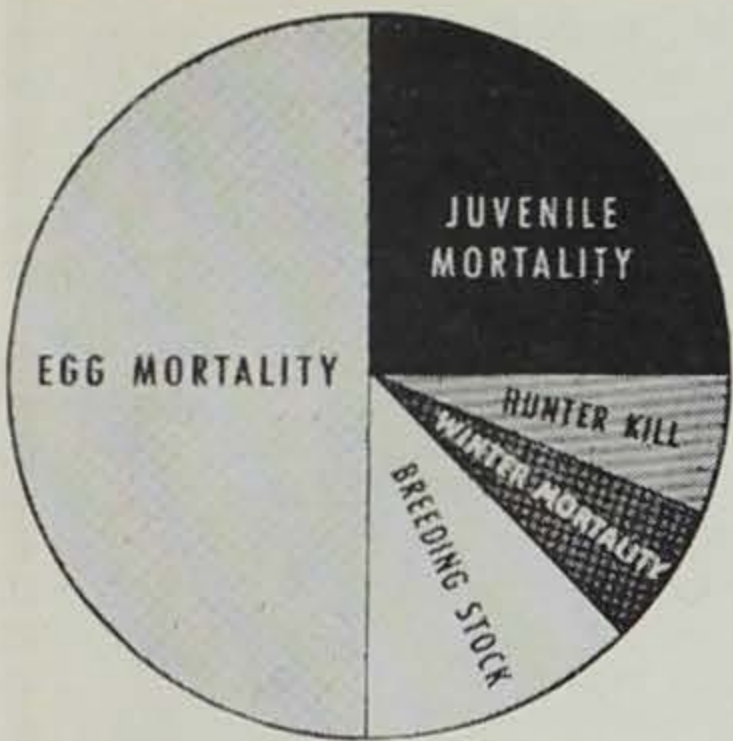
Take a winter walk and get acquainted with our feathered friends.

Banded Pigeons . . .

(Continued from page 4)

to the home loft is so great that the birds sometimes continue until exhausted. When found, a banded bird should be fed and watered and allowed to leave when it wishes. If the bird is kept confined the desire to return diminishes.

Section 109.59 of the Iowa conservation law prohibits the killing or injuring of any homing or carrier pigeon.—Waterloo Courier.



What happens to a hundred pheasant eggs.

They're Dead . . .

(Continued from page 1)

small slice of the potential bird population, isn't it?

What happens to all the eggs and young birds? A complete list of all the factors of mortality would make you wonder how any birds survived. Here are a few of the destroyers: adverse weather during critical hatching periods; hail, rain, floods, drought, blizzards; plowing, seeding, mowing, and other agricultural operations; accidents from traffic, collision with wires, and numerous other causes; bacterial, fungus, and parasitic diseases, periodic food shortages; predators including the fox, coyote, skunk, badger, mink, raccoon, dog, house cat, owl, hawk, eagle, crow, and many more.

Look at this partial list of destructive agents and you will not be amazed at the results revealed by some of our nest studies. During the past two years only 14 per cent of all pheasant nests under observation were successful! Fortunately the pheasant is a persistent renester, so a larger percentage of hens finally brought out broods. Incidentally, these nesting studies were carried on in a part of the state (North Dakota) where there are no red foxes.

What is the biggest factor in egg

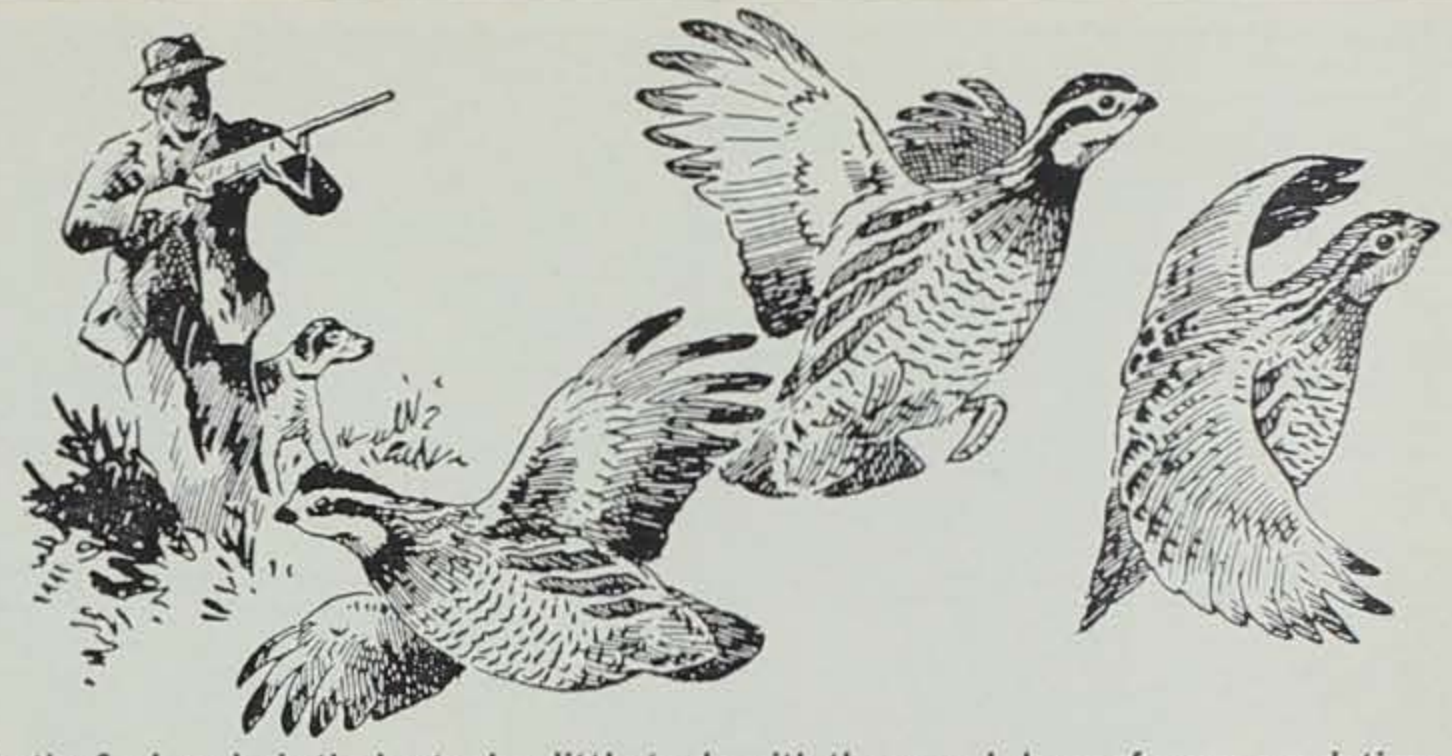
losses? No, it's not the predator! In most states agricultural operations account for the biggest loss—up to 75 per cent of all nests destroyed. Skunks, house cats, badgers, and other predators take a share. Early in the season when cover is sparse, the crow may be enemy number one.

Most game managers agree that weather is the determining factor of juvenile mortality. Favorable weather in May and June is one of the most vital factors affecting the survival of young upland game birds. Cold, wet hatching periods usually result in fewer young birds in the hunters' bags in the fall. Since the normal life span of most upland birds is about three years, a succession of two or three unsuccessful hatching seasons will be disastrous.

Even after the broods are fully grown, natural mortality continues every day. If the surplus is to be harvested by the hunters, the sooner the season can be opened the more birds will be available for the gun.

The next period of high natural kill occurs during the winter months. Starvation is not the chief cause of winter loss as is popularly believed. In fact, starvation is a rarity even in the northern states during years of heavy snowfall. Where winters are severe the availability of adequate cover during blizzards is the limiting factor. On the prairies where all the low growing vegetation becomes covered with snow the woodlots and brushy growths remain the only choice. Grouse will burrow into the snow for protection, but pheasants remain on the surface and suffocate from wind-driven snow if not near shelter. Winter losses normally are not heavy, but a series of blizzards may seriously deplete an area of its pheasant brood stock.

Add up the losses of eggs, juveniles, and adult birds through the



In the final analysis the hunter has little to do with the up and down of game populations—they're dead before you fire a shot. Cut courtesy Oklahoma Game and Fish News.



The fox takes a small portion of game and a large portion of abuse. Cut courtesy Oklahoma Game and Fish News.

greatest possibilities for increased bird populations. Successful nesting is largely a matter of undisturbed cover. Uncontrolled burning and "clean farming" are enemies of the birds. Unused fencerows, corners protected from grazing, roadsides, woodlots, and similar places should be suitable for nesting. Hundreds of small places would be more productive than one or two large areas in a community.

Man is directly and indirectly responsible for the greatest losses in eggs. Agricultural operations destroy most of them each nest season in the habitat that is left for game birds. Through the years agriculture and other industries have taken away most of the suitable environment. Some years nature gives the birds a break by providing extra nesting cover. Again economic conditions may counteract nature's helpfulness. Here is an illustration: During the five recent years when grain prices were high, 7,000,000 additional acres went under the plow in North Dakota alone. That's taking a lot of cover from the pheasants. Imagine what the loss to upland game birds and waterfowl has been on a national scale during the same years.

Survival of the young birds is affected mostly by the weather. You may say that we cannot control the weather so nothing can be done about the loss. Remember, though, that good cover is a protection against the elements any season of the year. Poor survival rates may occur regardless of cover if rain and cold weather persist during the hatching season. But when favorable years do come,

(Continued on page 8)



Early in the nesting season when cover is sparse crows hunt for, find and destroy many nests. Cut courtesy Oklahoma Game and Fish News.



Half of all pheasant eggs laid are destroyed before hatching. Here spring marsh burning has destroyed 19 potential pheasants.



For the first time one of the Conservation Commission's 120-ton hydraulic dredges has been moved to a new lake without dismantling. Art Barrett, Jr., Photo.

DREDGING COMPLETED AT BROWN'S LAKE

Some 60 acres of 300-acre Brown's Lake in Woodbury County have been dredged with approximately 750,000 cubic yards of silt having been removed. The giant hydraulic dredge, weighing more than 120 tons, has been transferred to Blue Lake in Monona County west of Onawa, which will be dredged during 1950. The dredge was moved on two heavy duty trailers pulled by motor tractor, as an experiment that proved highly successful.

In the past when dredges have been moved from one area to another, they have been completely dismantled and reassembled at the site of the next dredging project. Usually the time needed in transporting and setting up in the new site was from 60 to 90 days. The Blue Lake move was made in three days. In moving the dredge the cutter and gantry frames and two front pontoons were removed, and the main section was then loaded onto the trailers.

Water Shortage . . .

(Continued from page 3)

fires that scorched millions of acres in the northern section of the country. The importance of trees in relation to water resources was not recognized at the turn of the century, in fact, the relationship is obscure in the minds of many in this enlightened day.

Following closely on the relentless process of timber cutting came an intensive agriculture, and along with it the cry for more farm land, especially in the fertile section of the nation. Enter now the era of drainage, with the destruction of countless marshes, ponds and lakes, those priceless storage reservoirs provided by nature to catch the raindrops and hold them, re-

leasing them gently and slowly to the soil, preserving underground water levels, and providing sparkling water for the multitude of wells and growing things.

The third phase of abuse probably came during the first World War, spurred on by guarantees for production of basic foodstuffs, principally wheat. No slope was too steep to feel the bite of the plow and land which nature intended be eternally left in grassland was made to produce a crop or two, perhaps three. Those slopes were not restored, except in rare instances, many being the eroded hillsides of today which permit the rainfall to gallop away rather than slowly glide through the lush grasses of a yesterday.

Naturally frantic efforts are now being made to restore the damage. Even so, there are those who would do nothing on the theory that a normal rainfall will cure everything. This is not true. A normal rainfall is no panacea because that rainfall cannot be captured. The raindrops no longer walk, they run. To slow down that runoff requires a number of things, just a few being reforestation, restoration of areas damaged by unwise drainage, sound agricultural practices, soil conservation programs, contour farming, and water conservancy districts.

When a great metropolitan area wants for water, the wasteful practices of three-quarters century are brought home. It is to be hoped that the nation will sympathize with the plight of New York City, and that out of this incident will come an awareness that the water resources of the country are not inexhaustible.—Davenport Democrat.

Tiny one-celled animals may digest food throughout their entire bodies.

They're Dead . . .

(Continued from page 7)

will you have sufficient winter and nesting cover to provide for the increase in birds? A population is definitely limited by either the winter cover or the nesting cover—whichever is the poorer. Nature will kill off the excess birds by one means or another when the carrying capacity of an area is reached—regardless of weather, predator control, or hunting restrictions.

Winter mortality may not be high in normal years even in the northern states. But the shelter provided must be sufficient for the unusually severe winters that do come. Trees alone do not guarantee adequate protection. They must be planted so that snow will not fill the grove completely. In the case of so many of the shelterbelts planted by the U. S. Forest Service in the plains states in past years the snow has drifted throughout the narrow belt, leaving little or no shelter for the birds.

The problem of the predator undoubtedly has come to your mind before this. Conservation and restoration through control of natural enemies has always been a popular subject. Volumes could be written on the role of the predator in game management, the success or failure of the expensive bounty system for control of predators, and related subjects. The point to be made here is that an all out program to destroy all that prey upon your favorite game birds is not only undesirable but may be directly harmful for the very species you are trying to protect. A program of local control is sometimes necessary and effective but should be carefully investigated before being carried out.

A prolific predator like the crow may be persecuted for years on a state-wide and national scale without much possibility of decreasing the total population noticeably. Likewise the coyote is well able to take care of the perpetuation of his race. But many of our larger birds and animals definitely should not be exterminated. The hunter must consider values to people other than himself. Balance the harmful habits of some of the condemned species—yes, even the red fox—against benefits to agriculture, trappers, and other persons, and the result may not be too one-sided. But it is hard for some sportsmen to understand or accept.

A more dangerous accompaniment of an extensive predator control program in a community is the feeling among the sportsmen that their job is done if a few hawks and coyotes have been killed or if a bounty law has been passed. The result is the postponement of the only program that will permanently benefit their game birds—a "back to the land" program of habitat restoration.

Game technicians admit that they have no cure-all for the shortage of game birds and animals.

Experimentally and by public demand they have tried artificial propagation and restocking, refuge programs, closed seasons, bounty systems for predator control—and all have been found wanting. They have offered the paths of least resistance or satisfied the demands of the sportsmen in the past.

Now the state conservation departments are working toward a basically sound program—preserving areas of suitable environment for wildlife and restoring in as far as practicable a portion of the hundreds of millions of acres of habitat destroyed in recent years. No one state or national agency can do the job alone. It will require the co-operation of the state conservation departments, the Soil Conservation Service, the U. S. Forest Service, and all existing organizations that are working with the landowners for soil and water conservation. Increased wildlife populations will accompany better farming practices and a wiser use of our nation's soil and water resources.

What can you sportsmen contribute? First get the facts on wildlife problems. See who or what is killing your game birds and animals. Then back financially, politically, and morally every program that will restore natural food and cover for wildlife. It's going to be a slow job with no spectacular, immediate results. But look back ten, twenty, or thirty years—compare your favorite hunting spots of that time with their present conditions. Then look ahead as many years—and try to imagine what they will be like if we don't get busy on a fundamental habitat restoration program.

Wardens' Tales . . .

(Continued from page 3)

and after introducing myself said, 'I understand you have reported some beaver damage on your land.'

"Well," he replied, 'I had a beaver in here last year, but I don't have any here this year—but I'm afraid I'm gonna have one in here pretty soon.'

"And for this I drove 50 miles."

Walt Harvey, conservation officer in Grundy and Marshall counties, writes:

"There are quite a variety of 'No Hunting' signs posted in my territory this year. Some of them say: 'Keep Out,' 'No Hunting,' 'No Trespassing,' 'Private Property,' 'Keep Out, This Means You,' 'Game Scarce, No Hunting,' 'No Game, No Hunting,' 'Cross Dog,' 'Bad Bull, Hunters Go Away,' 'Game Area,' 'Game Refuge,' etc. Most of the signs mean about the same thing.

"But the sign I think is the most impressive of all is one that is posted near some good squirrel timber, which is no doubt overhunted. This sign simply reads, 'Dammit No Hunting.'

"At least one will remember what the sign said."