

POSTMASTER:

If undelivered, notify Union
Printing Co., West Union, Ia.,
on form 3547, postage for
which notice is guaranteed.

U. S. POSTAGE

1c Paid

West Union, Ia.

Permit No. 21

IOWA CONSERVATIONIST

VOLUME 1

MARCH 15, 1942

NUMBER 2

Blue Goose Flight Over Iowa's Missouri River Bottoms Marks Return of Spring



(Photo by George Newman, Sioux City Tribune)

Blue geese leaving their feeding ground to roost on a Missouri River sandbar during their annual migration to Baffin Island.

Springtime Is Tree-planting Time In Iowa

By HAROLD B. BJORNSON
Assistant State Forester

Once again State Conservation Commission officials are stressing the importance of tree planting in the State of Iowa.

The great need of planting becomes self-evident upon noting that the timbered area of the state has been decreased to only one-third of its original acreage. This great decrease has led to a loss of homes and food for birds and animals, and to a much greater loss of our soil and water.

Many of our Iowa farms are
(Continued to Page 2, Column 1)

Monona County Invites You

Residents of Monona County extend an invitation to Iowans and out of state sportsmen to visit the area during the blue goose flight this spring. The peak of the flight is generally between March 15 and 25. More blue geese visit Monona County each year in this flight than anywhere else in the world. They present a sight never to be forgotten. Out of county visitors should contact business men at Blencoe, Onawa, or Whiting, or Elton Young, of Blencoe; Bogie Jones and George Hall, of Onawa; or Har-

(Continued to Page 5, Column 2)

Game Packet Available To Sportsmen

By WILBUR A. RUSH, Plantsman

The first thing to be considered in planting your game packet is the preparation of the planting plan or the adaptation of the plan sent out upon receipt of your game packet order to the site upon which you intend to make your planting.

As soon as the frost leaves the ground this spring and the soil can be worked, the area should be prepared for planting. Level areas that can be plowed should be plowed. Areas covered with

(Continued to Page 2, Column 2)

"Kungovick," Migrant of The Midwest

By BRUCE F. STILES

Just before midday on July 6, 1897, a 15-year-old Eskimo boy called Kavivau was trailing along behind his father on a caribou hunt that had taken them more than 130 miles northeast of their home at Cape Dorset. They were on the barren arctic tundra in sight of Foxe Basin on the west coast of Baffin Island. As the boy aimlessly hurled a stone, a large bird flushed from its nest of moss and tundra grass on a

(Continued to Page 3, Column 2)

IOWA CONSERVATIONIST

Published Monthly by
THE IOWA STATE CONSERVATION
COMMISSION

10th & Mulberry—Des Moines, Iowa
JAMES R. HARLAN, Editor
F. T. SCHWOB, Director
(No Rights Reserved)

MEMBERS OF THE COMMISSION

E. B. GAUNITZ, Lansing, Chairman
R. E. GARBERSON Sibley
J. D. LOWE Algona
MRS. ADDISON PARKER Des Moines
F. J. POYNEER Cedar Rapids
R. E. STEWART Ottumwa
A. S. WORKMAN Glenwood

Springtime Is Tree-planting Time In Iowa

(Continued from Page One)

not protected from the severe winter weather by wind breaks. Thousands of acres of land (including eroded areas, land made inaccessible for cropping by streams or other barriers, rocky land, and various other areas) are lying idle. This class of land is an expense to the owner, but it is not yielding any returns. It should be planted to provide for erosion control, game food and cover, and wood products, such as fuel, fence posts, mine props, rough lumber, etc.

Now is the time to determine your needs for the various plantings. The State Forest Nurseries have been limited by an action of the past session of the State Legislature to provision of trees for erosion control, game food and cover, and one demonstration windbreak per township.

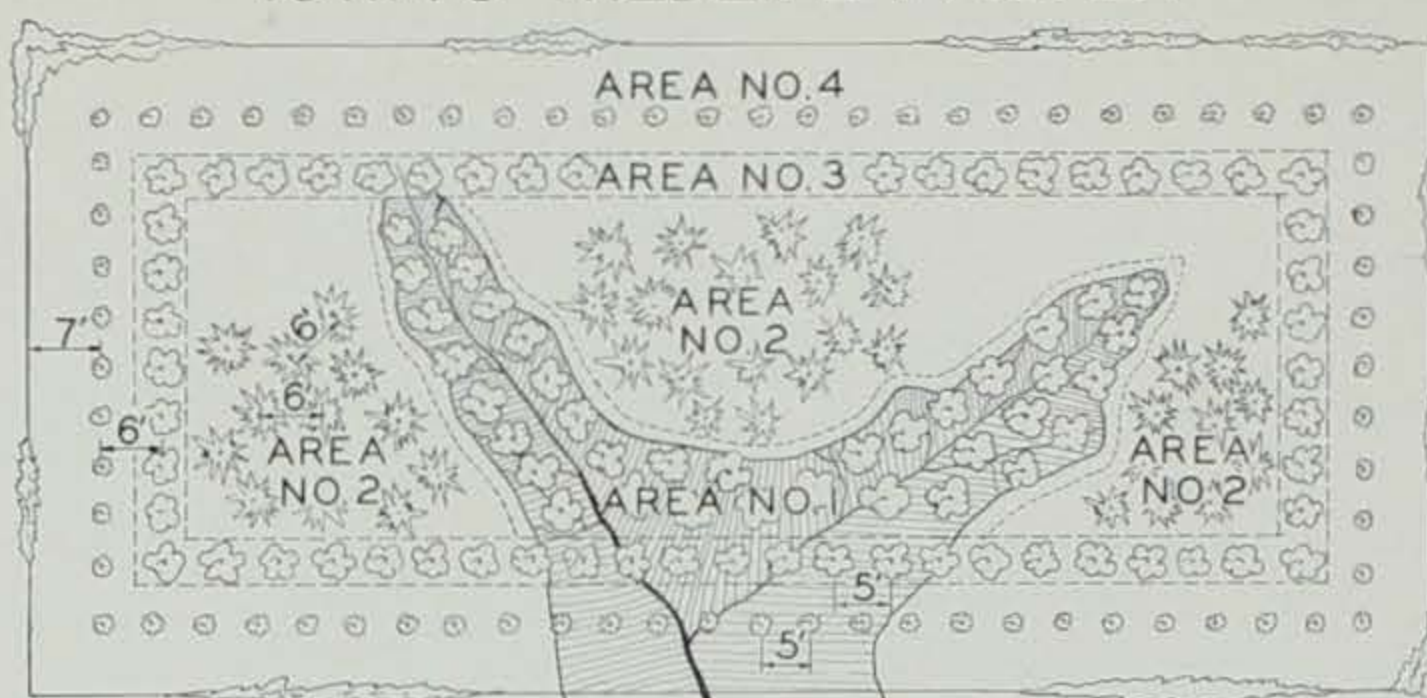
Trees for other purposes may be obtained from your local commercial nurseryman. Tree planting ought to start just as soon as the frost leaves the ground in the spring. Much better soil and moisture conditions are found early in the spring than at any other time of the year for setting out small trees.

The following trees are available from our nurseries for erosion control and game cover and food planting: black locust, green ash, black walnut, American or white elm, soft maple, red oak, burr oak, osage orange (hardy only in southern half of the state), red mulberry, black cherry, cottonwood cuttings, Western yellow pine, jack pine, white pine, Douglas fir, spruce, and red cedar. Besides these we have game packets of 250 trees, shrubs, and vines of eight different species, especially for game food and cover. Order blanks for these trees may be obtained from your County Agricultural Agent.

The Balanced Rock, Steamboat Rock, and the Devil's Punch Bowl are among the scenic attractions of Wild Cat Den State Park.

Backbone State Park, in Delaware County, contains 1,401 acres.

IOWA'S WILDLIFE PACKET



PROPOSED GULLY PLANTING

AREA NO. 1, HIGH GROWING TREES (50), PLANTED IN GULLY.

AREA NO. 2, EVERGREENS (50), THREE SCATTERED GROUPS 6'X6' SPACING.

AREA NO. 3, LOW GROWING TREES (70) 6' FROM SHRUBS, *5' SPACING.

AREA NO. 4, { VINE (10), SCATTERED ALONG FENCE
SHRUBS (70), 7' FROM FENCE *5' SPACING.

* ALL SPACINGS MAY BE VARIED TO MEET THE PARTICULAR CONDITION OF EACH AREA, HOWEVER, THE SPACING FOR THE EVERGREENS SHOULD NOT BE LESS THAN 6'X6'.

Game Packet Available To Sportsmen

(Continued from Page One)

vegetation that cannot be plowed should be "scalped" or have patches of sod or other vegetation removed where the trees are to be planted. These patches should be at least two feet wide.

When the trees arrive they should be unpacked and "heeled in" immediately near the planting site. "Heeling in" is usually done by first digging a trench big enough to hold all the plants placed close together, but not bunched.

The plants are then strung out in the trench so that they will neither heat nor mold. The roots are then covered with moist soil, which is packed firmly. On very open and exposed sites a light mulch will aid in preserving soil moisture and prevent the drying out of both soil and plants.

A hole should be dug in the middle of the scalped spot, or in the case of plowed or open ground, at the desired spacing. This hole must be deep enough and of sufficient diameter to hold the entire root system of the plant without crowding it.

The plant should be set only slightly deeper than it grew in the nursery. The roots should be spread out as much as possible and covered with good fine top soil. A space two or three inches deep should be left for water if it is available. Enough water should be used to thoroughly soak all the soil in the hole.

The remainder of the hole

should be filled with loose soil. When backfilling around a plant no lumps of sod, leaves or other foreign material should be placed in the hole because of the danger of leaving air pockets near the roots.

If water is not available the soil should be firmly packed as it is returned to the hole to give it a good, firm contact with the roots, and at the same time exclude all air pockets.

During all planting operations the greatest care must be exercised to protect the roots of the plant from drying out. This can be accomplished by use of a bucket of water, wet burlap and cloth, or moist soil or packing material.

When the planting job is completed it is advisable to either mulch the plants to preserve soil moisture and keep down weeds, or to provide for the cultivation of the trees throughout the first season at least.

WARDENS' TALES

SHOP TALK FROM THE FIELD

Conservation Officer Glen Yates received a tip of early season trapping. He found the trap locations and went out the next day before daylight and relocated them, one of which held a skunk. Yates lay down in the cover of a fence row as near the trapped

animal as he dared and waited developments, which were not long coming.

With the first streaks of morning light, a husky young trapper came up the ditch, arms swinging vigorously as he walked, whistling "Rosalie" into the frosty air. As he reached the trapped animal, he picked up a heavy stick with which to kill it. Just at this time, the officer stepped out of ambush. The trapper dropped the stick, threw up both hands, and cried, "Oh, oh, oh! I thought you was a robber!"

The officer reports the animal took a stiff pounding when he directed the violator to kill it. However, the skunk got in a number of defensive actions before the battle was over.

—WT—

Bullheads often run up inlets of lakes in the spring and lay in the warm, shallow water, piled like sardines. Occasionally night violators find these bullhead runs and "hog" great numbers of the fish. To prevent such violations, conservation officers keep close watch of fish runs, especially at night, until the fish go back into the lakes.

Under such conditions Officers Davis and Colby, the latter then a "rooky," were sitting early one night on the shoulder of a road near an inlet fish run. They heard, but could not see, a number of persons coming down the road. They stepped off the shoulder and into a dense clump of willow brush. The approaching voices proved to be those of boys, and their conversation was something like this:

"Oh, that old game warden Davis has been around!"

"If I could just see that old Davis, I'd hit him with a club."

"Boy, I'll bet old Davis is over there in those bushes right over there!"

And with this last remark a heavy road boulder came crashing through the brush, barely missing rooky officer Colby's head. The voices progressed on up the road, bragging as young voices do.

"I wish old Davis was around here so we could beat up on him."

As the officers moved back up onto the road shoulder to a more comfortable location to continue their vigil, Colby remarked to the more experienced officer, "Whew! I don't think I'll like this!"

—WT—

Officer Bruce Stiles recently had an interesting experience when he was invited to give a talk at the State School for the Deaf. An interpreter stood on the platform and translated with his hands the story of conserva-

(Continued to Page 6, Column 1)



THE FLIGHT IS ON

By FLOYD E. DAVIS
U. S. Game Mgt. Agent

Game officials, both State and Federal, numbering from 50 to 60 men from the states of Missouri, Nebraska, Iowa, North and South Dakota, are now playing



"Flick"

nursemaid to one of the largest concentrations of waterfowl in migration that is left in the United States. This concentration is the blue and snow goose spring migration along the Missouri River. These birds have been carefully watched all winter on their Southern wintering grounds in Louisiana and Texas by State and Federal officers.

When they leave the South, their first stop of any consequence is at the United States Fish and Wildlife Service, Squaw Creek Refuge, located near Mound City, Missouri, in the northwest part of that state. They remain at Squaw Creek about two weeks, feeding and resting. As soon as the Missouri river is free of ice farther north and snow starts to disappear, the geese move into Iowa and Nebraska, usually concentrating near Onawa, where they are joined by many other groups of geese of the same species.

They usually arrive in Iowa between the first and the tenth of March and stay for about 30 days. When they leave, they move into South Dakota, large groups concentrating around Aberdeen and staying for a few days, leaving then for the nesting grounds on the Foxe Basin area along the Arctic Coast.

I am sometimes asked, "What have the State and Federal game officials to worry about? The geese know where they are going, and anyway, what could a game official do if the geese were lost?"

Until a few years ago, a drive into the Onawa area or any of the concentration points would remind you of the Russian army staging a blitzkrieg. Hardware store, filling station, and general store operators tell you that they sold more shotgun shells in the spring during the goose flight than they did all the rest of the year.

A campaign was launched

against hunters who didn't have time to get their hunting in the fall and decided to take it in the spring; and to conduct that campaign State and Federal authorities decided to accompany the geese on the spring flight.

This patrol method is exceedingly successful. At the present time, arrests for spring goose shooting in the Onawa area are less than 10% of what they were only 10 years ago. There are many reasons for this lack of violations. One is that the geese are much more closely guarded than formerly. Another is that people in general are becoming more conservation-minded. This latter is demonstrated by the fact that where empty shotgun shells and shell boxes were found in days gone by, we now find hundreds of empty film cartons instead. Where we used to find a man in a blind with a shotgun, we now find a man with a camera.

Wildlife conservation-minded people, conservation organizations, and just good, honest John Q. Public realize that they have something rare in the goose flight along the Missouri River. People drive hundreds of miles each spring to witness this phenomena and return the next spring, and the next, and the next.

These same people and these same influences are now insisting that heavier penalties be assessed against spring shooters, and only ten years ago it was difficult for conservation officers to secure a conviction.

To follow the geese from their Southern wintering grounds, get them up at the crack of dawn every morning, and tuck the covers around them and put them to bed on the sandbars where they roost, is a hard and monotonous job, and at the same time very interesting. Occasionally some nimrod with "triggeritis" furnishes some excitement in the form of a good foot race through the gumbo bottoms of the Missouri River, with the finish line at the judge's bench.

"Kungovick"

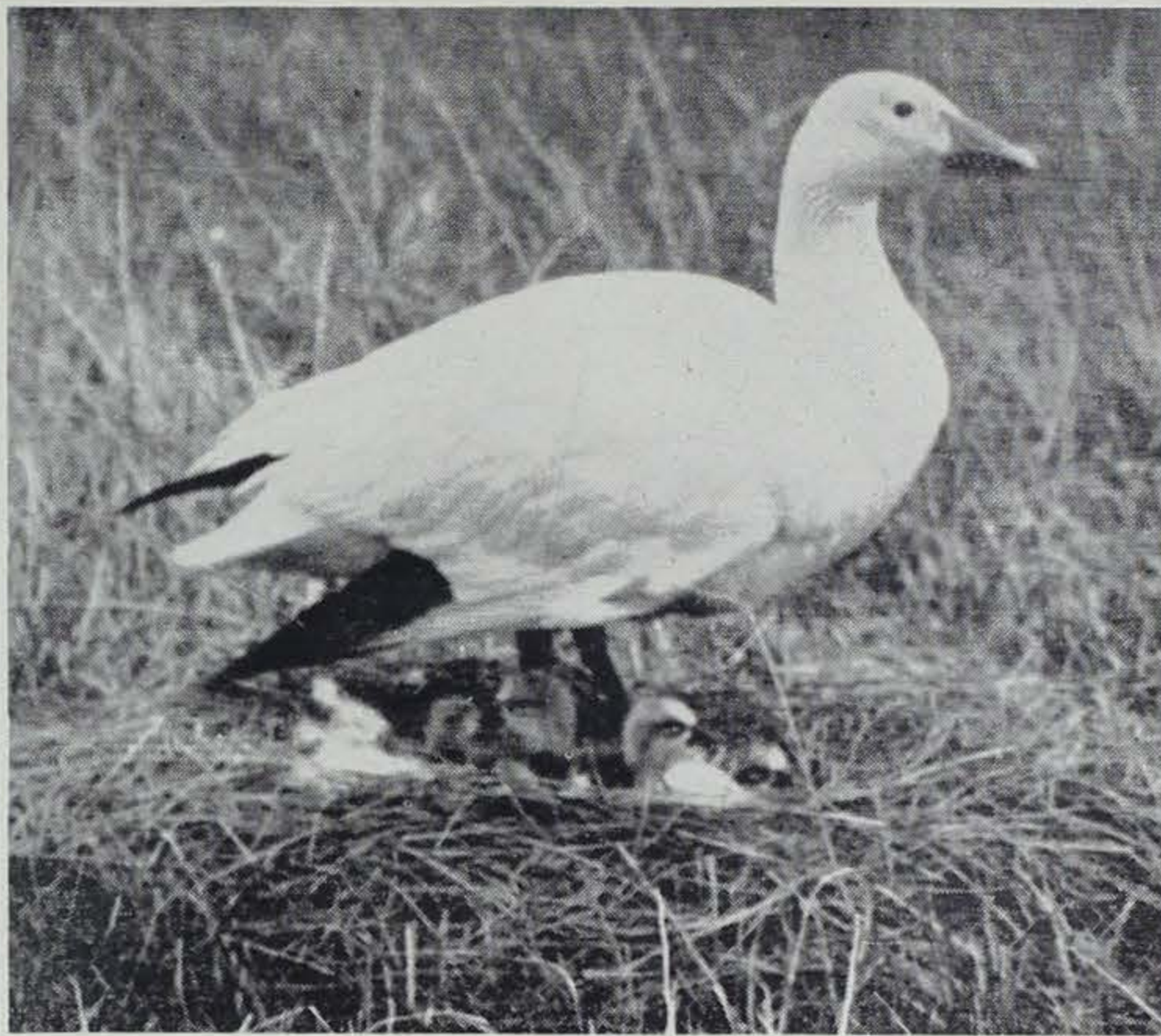
(Continued from Page One)

slight elevation of the surrounding plain.

"It is Kungovik, the Blue Goose," said the old man.

The recollection of this incident by the boy, Kavivau, at Cape Dorset more than 30 years later, marked the turning point in a long search that scientists had been carrying on to locate the nesting grounds of the Blue Goose. Since its description in 1758 by the great scientist, Linnaeus, the nesting of the Blue Goose had remained one of the unsolved mysteries of ornithology.

Since the Hudson Bay Company established its first trading



(Photo by C. E. Gillham, U. S. Fish and Wildlife Service)

A mother snow goose with her nest and young on the Arctic tundras.

post near the tip of James Bay in the latter part of the 17th century, white men had watched countless thousands of these birds pass overhead in their spring migration, only to disappear as completely as if they had been swallowed up by the vastness of the polar seas. Their summer home was a secret locked deep in the heart of the northern waters. No white man had ever found their nest. No white man knew where they nested.

It remained for J. Dewey Soper, Chief Federal Migratory Bird Officer for the Prairie Provinces of Canada, accompanied by Kavivau and another Eskimo, to fathom the mystery, when he recorded the first nest ever seen by white man on June 26, 1929, near the spot where Kavivau had hunted caribou with his father 32 years earlier.

That the Blue Goose, until recent years, has been little known is probably due to the narrow confines of its range. Except for the record of its nesting on Southampton Island, recently reported by Dr. George Miksch Sutton, it is likely that all the Blue Geese in the world nest in an area about 10 miles wide and 80 miles long near Bowman Bay on the Foxe Basin of Baffin Island's west coast. This nesting ground is a bleak and desolate tundra, where the ice pack of the polar sea constantly grinds in the chill winds of summer, and not until June does the temperature consistently rise above freezing, even at mid-day.

In the early part of September the geese start their southward journey down Hudson Bay, where they feed for a considerable time in large numbers. From this point on south, their flight is high

and almost direct to the Gulf coast.

Their fall route is more easterly than in the spring and is thought to cross Lakes Huron and Erie, then down the Ohio to the Mississippi River valley. They are quite frequently reported from the vicinity of Cape Girardeau, Mo., just above the mouth of the Ohio.

They are extremely uncommon in Western Iowa during the fall migration, and although they are reported from time to time, I have never seen one in more than 20 years of hunting on the Missouri River. The Lesser Snow Goose in its first fall plumage is dark, and I believe it is frequently mistaken for a Blue Goose.

The wintering grounds are somewhat more extensive than the nesting area, extending along the Gulf coast of Louisiana into Texas, with the greatest concentration around the Vermillion Bay region. Here they feed in the salt marshes until late February.

The spring migration of Blue Geese is much more leisurely than in the fall, usually occupying about 12 weeks. The winter wheat fields and trampled-down corn stalks of Western Iowa hold them for about five weeks, and this migration furnishes one of the grandest spectacles of nature.

They cross the Iowa line about the first of March and come into the bottom lands above Hamburg. Often they arrive during the last few days of February. I have stood in the Kellogg slough below Glenwood and watched an almost endless procession of flocks beat their way low against the wind over the high Waubesa hills to drop like falling leaves as they twist, turn and sideslip in an

(Continued to Page 4, Column 3)



As the breeding season approaches, rooster pheasants don their gaudiest plumage.

Game Farm Program to Continue in Spite of War

By TAYLOR W. HUSTON,
Superintendent of Game

The State Conservation Commission has made plans by which to be guided during the present national emergency. The following quotations are from a recently adopted Commission policy:

"All Commission employees are expected to do everything possible to aid the war program and co-operate in the war effort."

"Present and projected conservation programs are to be held to a level consistent with sound conservation practices."

"The Commission urges local conservationists and sportsmen to redouble their efforts in co-operation with the Commission to the end that gains thus far made will not be unnecessarily lost."

All organizations who co-operated in the State Conservation Commission game bird distribution and rearing program in 1941 have been supplied with the application forms on which they may apply for quail and/or pheasant chicks for the 1942 season. Co-operative groups are urged to send in their applications as soon as possible in order that the Commission may determine the aggregate number of each species that it will be necessary for the game farm to produce this year. Applicants are also cautioned not to request more chicks than their equipment will take care of, inasmuch as over-crowding will result in a high rate of mortality.

All application forms are to be approved by the local conservation officer, and before the chicks are delivered, all equipment will be inspected by a representative of the Commission. Upon receipt of applications, the Commission will supply co-operating groups with complete instructions covering equipment needed, etc.

Deliveries of 14-day-old pheasant chicks to co-operators will start about the second Monday in June. One hundred pounds of feed is supplied with each 250 pheasant chicks; additional feed needed to bring the chicks to the release age

of eight to nine weeks must be supplied by the co-operators. Quail chicks will also be 14 days old at the time of delivery, and 25 pounds of feed will be supplied with each 50 quail chicks.

The State Game Farm was established to supply seed stocks of pheasants and quail where suitable environment is present and seed stock is needed. Especial attention is directed to the fact that the stocking of pheasants or quail on range that already has sufficient seed stock is a waste of time and money, unless additional environment is provided.

In recognition of this fact, co-operators in the 1941 game bird distribution program are urged to do everything possible to improve cover conditions for upland game birds, especially on the areas where they contemplate releasing the birds which they rear. The application forms for chicks provide that the co-operating groups will seek to remedy this condition; that is, "set up an active program in co-operation with landholders directed toward the development of suitable food and cover conditions for wildlife on the land."

Aldo Leopold, in his Iowa game survey, found the game range out of balance—an excess of food and a dearth of cover.

In the past this part of the game bird distribution program has not been given enough attention. Unless cover is provided, it is useless for anyone to rear and release game birds, for without proper homes they cannot survive.

The co-operator's attention is called to the "Wildlife Packet Plan," under which 250 trees, shrubs, and vines suitable for game cover planting can be obtained from the state forest nursery at Ames, Iowa. This material, sufficient to plant one-fourth acre, together with complete instructions for planting, can be had for \$1.50.

For the past several years, the State Conservation Commission

(Continued to Page 5, Column 4)

"Kungovick"

(Continued from Page Three)

almost perpendicular descent to the marsh and grain fields 300 feet below. I have watched for hours, with no seeming interruption in the flight, as flock after flock dropped in to a congregation of geese so vast that an increase or decrease of 1,000 birds could not be noticed.

Coming down, they turn over at such an angle that the wing surface is perpendicular to the earth, and actually drop 10 or 20 feet; then catching themselves momentarily, they tilt to the other side, back and forth in rapid succession, they literally fall out of the sky. In this manner they lose altitude without gaining forward speed in exactly the same way that an aeroplane sideslips, but in a much greater extreme.

Until recently the Missouri River was made up of a maze of channels and sand or willow islands. Here the geese spent the night on the sandbars. One favorite roosting place was northwest of Percival. I have watched them come in for the night in such numbers that they formed an almost steady stream flying overhead from just before sundown to well after dark, when the cries of the incoming birds gradually mingled with the din of the resting flock, which could be heard continually as I picked my way through the inky darkness of the river bottom slaps to my car a mile or more away.

The peak of this migration reaches Kellogg's slough about March 15, and is in the Hornick bottoms 20 miles below Sioux City five days later, making about 20 miles a day as its average rate of travel. That is altered somewhat from year to year by weather and food conditions.

For the most part, these geese have pretty well established points of concentration, which seem to be loafing grounds out of which flocks continually come and go to feed. Kellogg's slough is the first of these. Then Green's slough just south of Council Bluffs. This latter point is not

used nearly as extensively as Kellogg's. The next step is longer, as there is no regular heavy loafing concentration until they reach the Onawa-Turin bottoms.

The third step is a short one, but the concentration is almost equally heavy. That is the Hornick bottoms. The concentrations around Hamburg and Percival are enormous, but they do not seem to be so well confined to specific areas, and the birds seem to feed more and loaf less.

Between these points, flocks of from 500 to 10,000 may be found scattered about the bottom. They are spoken of as "usin'" this or that field, and once they start "usin'" a certain field, each succeeding flock is likely to feed at the same point. Game wardens with long experience on the "Goose Flight" are apt to ask on arrival in a certain area, "Where are the geese 'usin'" this year?"

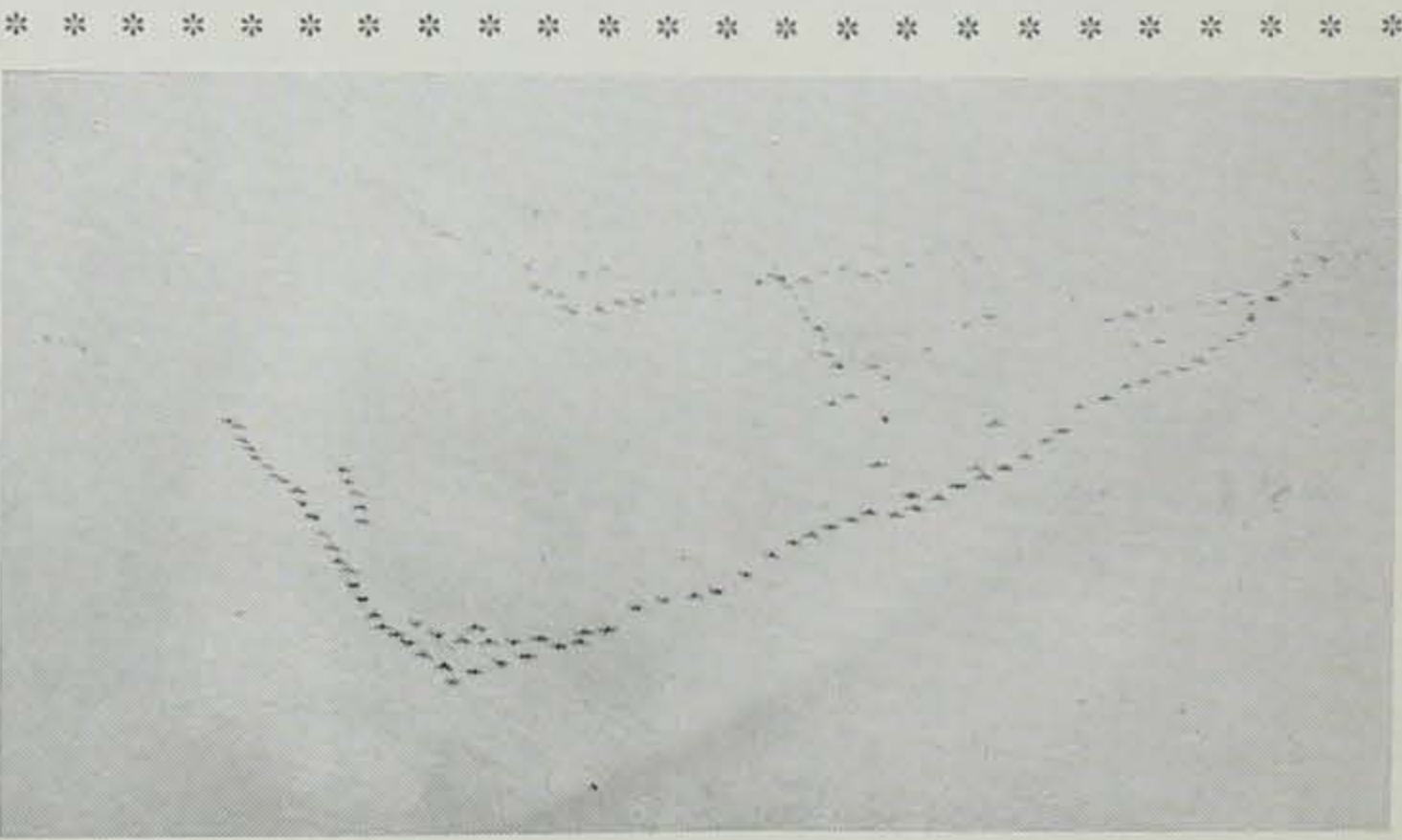
Certainly no form of wildlife could be better protected or given more attention than these geese while they are in Iowa. The game wardens that usher them up out of Missouri, and on across Iowa to the Dakota and Minnesota lines, literally sleep with them.

Large concentrations are never unguarded, and a constant patrol ranges from one feeding area to another. Forty hour weeks are unheard of, and a 14 or 15-hour day is the regular thing. Excepting one principal highway north and south, this area has no pavement and little gravel.

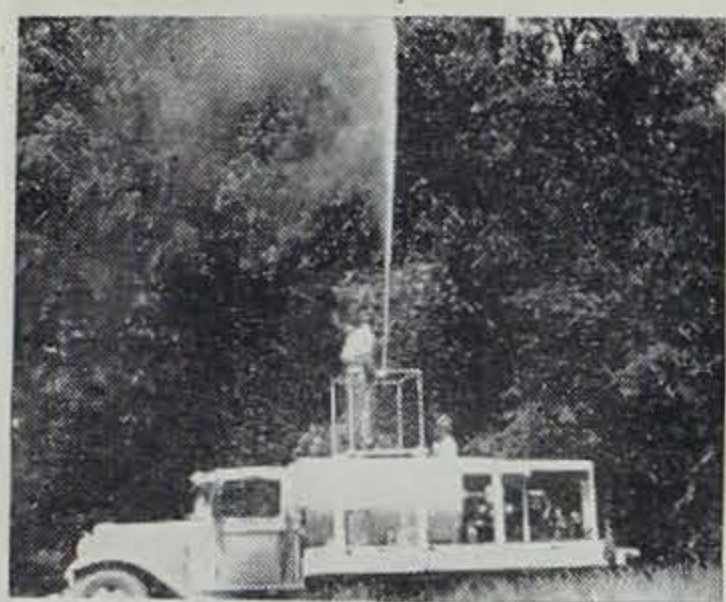
The black, alluvial soil that covers most of the bottom land is known as "gumbo" when wet, and any native will tell you that LePage's glue is no more sticky. At this time of year it is usually bad, and patrol cars grind their chains in an incessant churning of the mud roads. The men wear boots and take turns plodding through the fields or along the river, while their partners drive in circular routes to pick them up at appointed places.

If the man on foot fails to show up at the appointed time, the driver knows something has happened and, locking his car, he pulls on his boots and starts out.

(Continued to Page 6, Column 2)



Spring—and Baffin Island calls a flock of blues.



Spraying canker worm infestation in an Iowa state park.

Cankercworms Pest of Trees In the Spring

In the past several years serious injury has been inflicted on shade trees in the southeastern part of the state by the spring canker worm. This worm, more commonly called "measuring worm," "spanworm," or "looper," is the caterpillar stage of a moth and comes from an egg laid by a female moth which is wingless. The female moth winters in the ground and crawls up the tree during the first warm days of spring to lay its eggs beneath bark scales on the branches of the trees.

About May 1 these eggs hatch into caterpillars which feed on the new leaves of the tree. The caterpillars attain full growth in from four to six weeks and then descend by means of a self-spun silken thread to the ground, there pupating a few inches below the surface. From these pupae the moths emerge the following spring, completing the life cycle.

While as a rule healthy trees replace their foliage immediately, repeated defoliations will weaken a tree, subjecting it to attacks of other insects and diseases. Close observation has shown that even the healthiest elm trees will succumb to the insect or some other contributory cause after four successive seasons of defoliation.

While the apple trees, elms, and hackberry trees seem to be the favored food, the worms will attack any kind of tree or shrub. So far, the most serious infestations have occurred in that part of the state lying east of highway No. 169 and south of highway No. 30, with some serious infestations reported occasionally from other sections.

Two methods of control are recommended; banding the tree with a sticky substance, and spraying. The first method takes advantage of the fact that the female moth is wingless and must crawl up the tree trunk to deposit her eggs. By banding the tree with a sticky substance, the moth

(Continued to Page 8, Column 3)

Sorry We Can't Send You All One

Since issuance of the first copy of the "Iowa Conservationist", we have had a flood of requests for this monthly bulletin. Because of the limited number our budget allows us to print, it is impossible to fill these requests to individuals. A mailing list has been compiled and is designed to make this bulletin accessible to as many people interested in conservation as is possible.

We believe that the material contained in this publication is important to the welfare of the people of the state, and we regret exceedingly that every citizen in Iowa cannot receive it each month. However, this is an impossibility, but we hope that everyone will be able to read a copy at one of the locations named below.

An attorney general's opinion in 1938 advises us that the statutes do not permit us to charge for a departmental publication. Therefore, the cost is borne entirely by the Conservation Commission. Under the present budget, the circulation of the "Iowa Conservationist" cannot be enlarged in 1942. Following is the mailing list:

Secretaries of sportsmen's clubs, barber shops (open forums of conservation), accredited schools, newspapers, libraries, county recorders, county agents, county attorneys, county school superintendents, sheriffs, State Legislators, Iowa publications, Commission employees and officers, Department of Conservation of the Iowa Federation of Women's Clubs, other fish and game departments, secretaries of commercial clubs, vocational education departments, American Legion posts, Veterans of Foreign Wars posts, Soil Conservation Service, Boy Scoutmasters.

Beginning with the March issue, conservation officers in the various territories will have a limited number of copies available. When these are distributed, the entire supply is exhausted.

Monona County Invites You

(Continued from Page One)

old Pike, of Whiting, for information regarding the flight. Any of these people will be able and will be glad to help visitors get the best places for views, etcetera. (Signed)

Dale Vanderbur, President
Monona County Conservation Club.



Thoughtless, unnecessary late spring burning destroyed this pheasant nest and eggs.

Just Ask Yourself, Why Burn?

Each year about this time people start thinking about doing some annual spring burning. They might do well to stop and ask themselves this question — Why burn? There is a widespread lack of the realization of the damage fires do.

Fires are usually set to improve pastures and woodlots, to clean out fence rows, to kill weed seeds, to burn trash off the land, and for various other reasons.

The truth of the matter is this. Recent research proves that fire does not improve pastures. It makes the grass look green and healthy after the first few growing days in the spring, but at what a cost. Fires destroy all of the organic matter on top of the soil and the partly decomposed leaves, grass, etcetera, with which the soil is enriched.

Fires destroy young tree seedlings and the mulch floor in our woodlots, besides injuring older trees. This leaves our woodlots in a condition similar to a community of old or middle-aged people with no children. When the older people are gone, there is no one to take their place—when the old trees are gone there are no young trees to take their place. The destruction of this spongy mulch material on the ground in woodlots, plus the loss of the trees, causes soil erosion, especially if there is any slope to the land whatsoever.

In addition to the above effects, fires do thousands of dollars worth of damage each year to fence posts, fences, telephone and power line poles, and bridge trestles, and sometimes fire gets away and destroys homes. Fires do not destroy all weed seeds; in fact, some weeds are scarified and germinate better after having gone through a fire. Fires destroy the nests, the homes, and

the food of all types of wildlife. With birds and other wildlife gone from an area, scourges of insects come in and devastate the farmers' fields. Don't burn any vegetation—that is the material with which all soil is enriched and renewed.

A fire may destroy from 10 to 50 years or more of nature's work and impoverish the very thing all humanity is dependent on—the soil. Therefore, Why Burn?

Game Farm Program To Continue Spite of War

(Continued from Page Four)

has furnished Hegari cane seed for use in planting winter food patches. It will be furnished again this year. This program to date has proved to be most satisfactory, and it greatly alleviates the necessity of emergency winter feeding.

The Commission feels that it is extremely important that these arrangements be made on farms where co-operating groups are planning on releasing the birds which they rear, for unless food and cover conditions are right, the birds will not stay at the point of release.

It is further urged that the co-operating groups contact landholders and urge that they refrain from any unnecessary cutting and burning of shrubs and grasses in fence rows and waste areas.

The Commission believes that if these game management practices are closely followed, the carrying capacity of the land will be greatly increased in Iowa.

It is our hope to increase and perpetuate all species of wildlife and to increase hunting opportunities in all parts of the state with satisfactory open seasons and bag and possession limits, so that eventually we can provide annually good sport and recreation for each hunter in the particular branch of sport in which he may be especially interested.



Game Conservation Contest

Prizes were awarded to rural schools of Benton County recently in a feeder and shelter contest held in connection with the conservation program. The judges were Harry Rector, State Conservation Officer, and George Greenwood, President of the Vinton Fish and Game Club.

The program for the conservation of wildlife was introduced in the rural schools last fall through the co-operation of Rector, Greenwood, Attorney John Tobin, vice-president of the Iowa Wildlife Federation, and the Benton County Rural Teachers' Club.

At that time, a gift of \$25 was presented to the Teachers' club by the Fish and Game club to be used for prizes for the schools taking part. Rules and regulations for the prize money were drawn up by the officers of the Teachers' club and prizes were to be given for posters depicting ways of conservation, compositions, feeders and shelters.

The poster and composition contests closed March 1. Winners in the other divisions were:

Game bird feeder: \$3 first prize, Eden No. 4, Doris Lanning, teacher; \$2 second prize, Eden No. 6, Clara Stueck, teacher.

Song bird feeders: \$3 first prize, Big Grove, No. 8, Esther Belle Witt, teacher; \$2 second prize, Polk No. 4, Jean Floyd, teacher.

Shelter: \$3 first prize, Big Grove, No. 3, Wilma Boehmke, teacher; tie for second \$1 each, Jackson No. 6, Foleita McElroy, teacher, and Harrison No. 2, Ila Mae McKinley, teacher.—Vinton Times.

Wardens' Tales

(Continued from Page Two)

tion in Iowa as Bruce talked. Stiles reports that it was a novel sensation, but that the response was gratifyingly enthusiastic. As a result of the talk, the school students have made plans to plant wildlife packets for game cover this spring.

Stiles reports that he will be pleased to accept another invitation to talk to the School for the Deaf, but that he is a little leery of an invitation to speak to the Institution for the Feeble Minded at Glenwood.

"Kungovick"

(Continued from Page Four)

Sometimes there is trouble, and wardens have been shot at and threatened. Few seasons go by without some exciting experiences. I have had breakfast at 4 a. m. and supper at midnight, falling into bed dead tired, only to get up before daylight and repeat the process. In spite of this, I love it and wouldn't miss one day of the goose patrol for a box seat at the world series. There's something about it that gets under one's skin.

The Missouri River bottom in Iowa is a level flood plain averaging about 10 miles in width and skirted on both sides by high and rugged hills of quarternary wind-blown formation. This is the same formation found along the Yellow River of China. This narrow valley is the main migratory highway of the Blue Goose hordes in their spring flight.

At Sioux City the principal flight leaves the Missouri River and follows the Big Sioux above Sioux Falls. Between Sherman, South Dakota, and Jasper, Minnesota, I have seen large congregations. The flight continues north to Southern Canada and then apparently swings nearly due east to the tip of James Bay, where they again stop to feed for some time. This whole flight goes up the east coast of the bay, and Blue Geese on the west side are not common. They arrive at their nesting grounds shortly before mid-June.

Blue Geese, in common with the Lesser Snow and White-fronted Geese, are usually called Brant by the natives of the Missouri River bottoms. They are referred to as Blue Brant, White Brant, and Speckled Brant.

The average weight of a Blue Goose is five and a quarter pounds, with six and a half pounds as about the maximum. An extremely small specimen may weigh as little as four. Their voice is much higher pitched than the Canada Goose and less chattering than the White-fronted. It is indistinguishable from that of the Lesser Snow.

In Iowa the Snows and Blues invariably flock together, with about 90% of the flock being Blues. Sometimes I have thought that the percentage of Snows was slightly larger in the last flocks to go north. This, however, I have not verified. In the fall, small flocks of Snow Geese are seen with no Blues.

In flock formation the Blues do not adhere to the traditional "V" formation with anywhere near the regularity of the Canada. Bow shaped formations and angular lines are the rule with imperfect "V's" and lateral or linear lines.



Missouri River sandbars such as this one provide ideal roosting place for blues.

In large flocks the bow shape predominates.

White-fronted Geese show the least regularity in flock form of all Missouri River geese, with a fairly compact irregular bunch being quite common. Reports of the Hutchin's Goose are not uncommon on this fly-way, but I have never seen one to be sure of its identity.

Stories have been written about flock leaders, and some writers have said that a flock of Blue Geese is always led by a Snow Goose. I have checked hundreds of flocks, and the Snows lead in an exact proportion to their numbers. If there are 10 Snows and 100 Blues, the chances are 10 to one that a Blue Goose is in the lead.

It is true that a strong old bird usually leads the flock, but I am confident that this is not the result of any prearranged choice, as I have seen the lead change while in flight, probably because some stronger bird forged ahead in the formation. It is reasonable to assume that old healthy birds would be more wary and likely to take wing first in event of danger. This would naturally put them in the front of the flock.

Even such an eminent authority as Arthur Cleveland Bent has said that the old white-headed birds usually keep to flocks by themselves, separate from the young. In many years of observation, I have never noticed this.

Many scientists are of the opinion that this vast flight up the Missouri River is something new and that up to comparatively recent times the birds went by

some other route. I can say definitely that it has not changed in a quarter century, and I have no doubt that this flight has continued since time immemorial.

Mr. Morrow, who with his parents moved to a farm below Pacific Junction in 1866 at the age of three, told me that he had seen these Blue Geese in unchanging numbers every spring since he could remember. Other old settlers have told me that way back in the time when Council Bluffs was known as the village of Kanesville, their fathers had told them of enormous flocks of "Blue Wavies" that came up the river each spring.

That scientists could have overlooked such a flight at first seems incredible, but upon careful consideration it seems logical. Few men with training in ornithology were in western Iowa in the early days. Those that were here were unable to traverse the swamps of the river bottoms during the spring thaw, when the birds were here. Seen from a distance these birds were identified only as geese or waterfowl, and settlers who saw them at close range referred to them as Brant.

I moved to Cherokee with my parents in 1903, where my father was employed by the Illinois Central Railroad. A branch line ran through there from Sioux Falls to Onawa. Distinctly I remember of a trip I made with my father to Onawa around 1909 or 1910. The bottoms were alive with waterfowl that the railroad men called Brant. I am sure now that they were Blue Geese.

(Continued to Page 7, Column 1)



State Conservation Officer Bruce Stiles, author of this story of the Blue Goose, pictured with evidence seized after a mile foot-race through the gumbo river bottom.



Good Timber

The tree that never had to fight
For sun and sky and air and light,
That stood out in the open plain
And always got its share of rain,
Never became a forest king
But lived and died a scrubby thing.
The man who never had to toil
By hand or mind 'mid life's turmoil,
Who never had to win his share
Of sun and sky and light and air,
Never became a manly man
But lived and died as he began.

Good timber does not grow in ease;
The stronger wind, the tougher trees.
The farther sky, the greater length;
The rougher storms, the greater strength.
By sun and cold, by rains and snows,
In tree or man good timber grows.
Where thickest stands the forest growth,
We find the patriarchs of both.
And they hold converse with the stars
Whose broken branches show the scars
Of many winds and much of strife—
This is the common law of life.

—Author Unknown.

"Kungovick"

(Continued from Page Six)

In 1920 I traveled through this country for Armour & Company. Even at that late date, the main road west from the hills across the bottom to Whiting was corduroyed through the swamp and utterly impassable in wet weather. People who were there saw Blue Geese. Others saw only large flocks of waterfowl from the distant hills.

Such early explorers and writers as Lewis, Audubon, and Bradbury came up the river in May—too late for the flight.

The principal food of the Blue and Snow Geese in Iowa is waste corn left in the field through the winter and the tender shoots of winter wheat which come up under the snow. Geese are grazers like cattle, and their sharply serrated mandibles cut the stems like scissors. Instead of damaging the wheat, this causes it to stool out and grow in greater profusion. Claims for damage from

these geese are almost invariably unfounded.

I have personally investigated many cases where farmers have claimed damage from the geese, and I have never found a single instance where the claim was justified. When the ground is frozen, it is common practice for farmers to turn their stock into the fields of new winter wheat, and all agree that this grazing is beneficial.

Space here limits description of this valley through which the geese migrate. It is interesting beyond compare, and from the valley floor below, the rugged beauty of the high loess hills of age old aeolian dust stands out against the early spring sky like mountains of some prehistoric time.

From these hills old Waubesa looked down to the plain below, as his ancestors had done for ages past, and saw "Kungovick", the Blue Goose, the harbinger of spring, the sign of life and growth, and with his people he rejoiced to know that winter with its

hunger and death was gone, and soon the Yucca and Pentstemon would blossom on the ridge and the prairie would be resplendent with Blazing Star and Gay Feather.

To those of you who, as nature-lovers and sportsmen, look on this migration as a heritage of wildlife to be perpetuated for generations yet unborn, and have some misgivings as to its security, rest you assured that Iowa has accepted the responsibility, and whatever else may come, this countless horde of waterfowl that advances across the Hawkeye State with the coming of spring, is as safe in this state as the means and ingenuity of Iowa can make it.

War Stops Shark Fishing

During the first week in December, 1941, 26 tons of sharks were landed in San Francisco. Shark fishing was stopped completely at the beginning of the war, and the shark boats were all tied up. However, fishing has since been resumed under strict naval regulations. Shark fishing is high-ranking because of the demand for shark liver oil, which is rich in Vitamin A.

Hunters Hit Jackpot

Larry Kerston and E. H. McGee, veteran coon hunters in the McGregor vicinity, hit the jackpot when they got six raccoons, one of which weighed 30 pounds, out of one tree.

Rabbits constitute almost exactly a third of the food taken by coyotes.

Don't Kill the Goose and Save the Egg

World War I should have taught us a very bitter lesson in regard to wasting our material resource of timber in an effort to glean a few extra dollars immediately.

Great areas of timber land were cleared and put to corn and other crops during the years of 1914 to 1918. Some of the clearing was economically justified, but a short trip through Iowa today readily demonstrates that much of this clearing was done without thought as to whether or not such land would produce lasting returns.

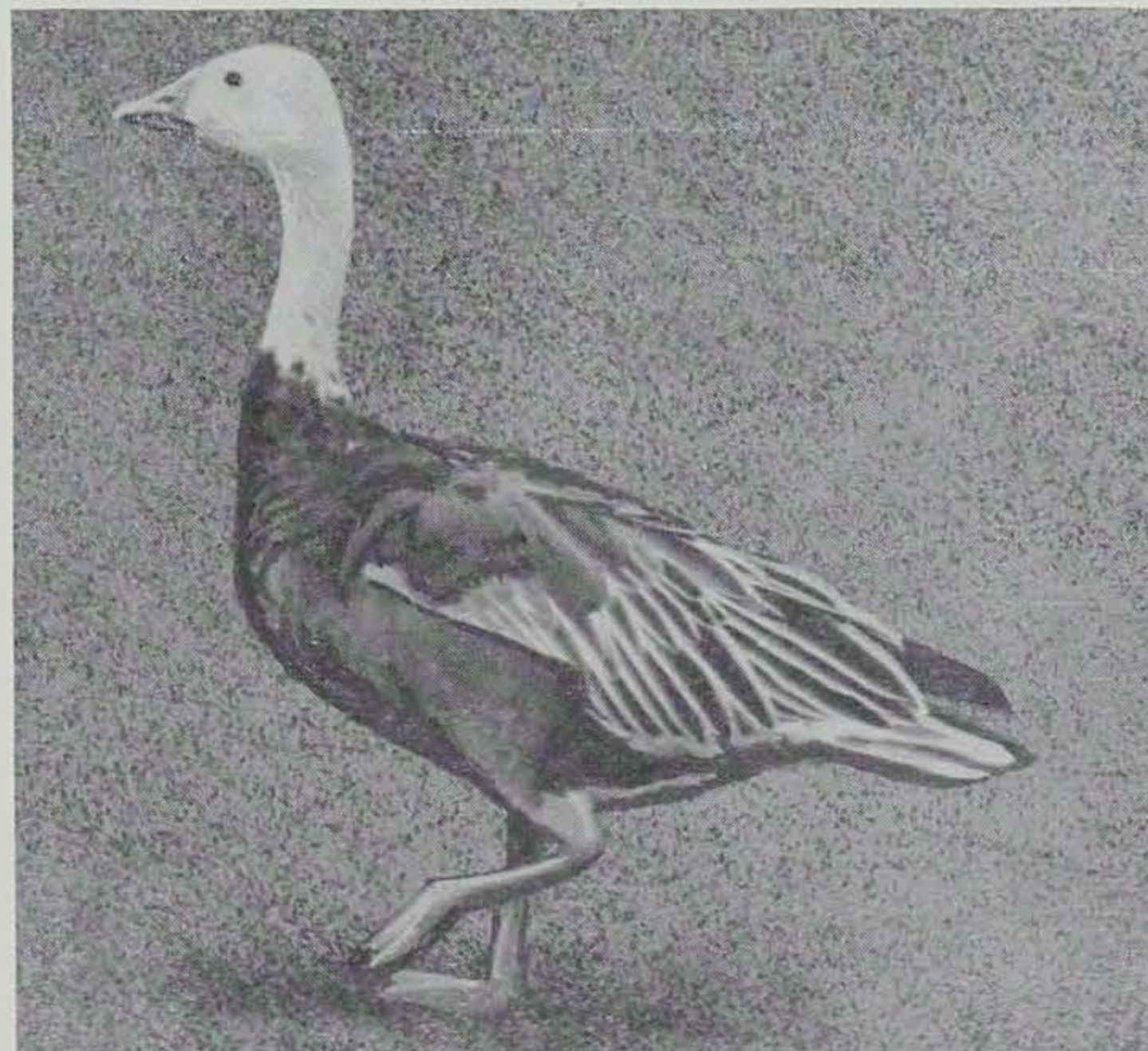
Consequently, where formerly there were timbered areas, today we have barren waste. The timber was removed, the soil plowed and cultivated, and then because the permanent cover was gone, the soil on the steep slopes began to erode. The result is land which is worthless.

Greater returns were received for a few short years, but what about the future? The timber is gone, the soil is gone, and countless years must go by before these areas can once more be built up to productivity.

We must not repeat this folly.

War will cause us to again draw heavily from our timbered land. Let us do so in a judicious manner so the next generation will not be given the heritage of land made worthless because we have failed to think.

For their size beetles are the strongest of all live creatures.



"Kungovick", the Blue Goose.



Project No. 497.

PHEASANT MANAGEMENT

Leaders: Thomas G. Scott and Dr. Geo. O. Hendrickson.

Graduate Research Assistant: Thomas S. Baskett.

This quarter terminated a three-year nesting study of the pheasant on a circumscribed portion of 1,520 acres of the Winnebago Experimental Area. During the three years, location data were obtained on 533 pheasant nests, and many other data on about 500 of this number.

The season of 1941 offered especial opportunity for nesting studies, for the breeding population was extremely great, probably averaging about 120 or 130 pheasants per square mile. Consequently, the number of nests found, 318, was high as compared to the other two years. (See Table 1).

From this data, it appears that as breeding populations increase, the proportional nesting success decreases, and that the number of nests per hen increases.

Manifestations of the heavy populations were constantly evident during the 1941 nesting season. In one red clover hay field of 16 acres, 19 pheasant nests were found after mowing. Nests were found in peculiar locations, and many "dump" nests in which more than one hen laid, appeared.

In 1941, the nests were located as follows:

Fence rows	6.3%
Road ditches	15.1%
Hay fields	50.6%
Small grain	19.5%

The remaining 8.5% of the nests were in pastures, waste and idle land, in early cover later removed, and in various other locations.

In 1939 and 1940 only about one-third of the nests found were located in hayfields, whereas one-fifth to one-fourth of the nests found were in fence rows, while more than half were in hayfields. The reasons for these changes are not now discernable, but may relate to higher breeding populations. Further work with the 1941 data may result in the reclassification of several nests.

About 66 nests under observation in 1941 hatched, producing some 300 chicks of shootable size, on the 1,520-acre area. Correc-

tions made for nests not found would augment this figure to some extent.

During the quarter, an article on destruction of pheasant nests was written for the **Farm Science Reporter**, and it is to appear soon.

In late September, Stirling Kyd, who is to become the Research Graduate Assistant for Project 497, was taken to Winnebago County and introduced to various members of the community in which the work has been done during the past years.

Tree-planting Machine Helps Speed Work

Many state-owned dry lake beds have been and are being developed for maximum game production. Part of this development program is planting trees to provide winter cover in which game birds and animals can seek safe shelter even during the severest winter storms.

During the spring of 1941, more than 120,000 trees were planted on four of these areas by three men. Most of these trees grew.

The question is often asked, "How can three men do so much work during the short planting season?" The answer is easy. Long hours, hard work, and a tree planting machine.

This tree planter was originally developed as a vegetable transplanter and, with a few adaptations, is widely used successfully where great numbers of trees are planted on clean ground.

When in operation, one man drives the tractor, and two men sit on the machine and alternate in planting trees. A steel shoe opens the trench, and two wheels fill in and pack the soil after the plant is placed in position. On the Iowa areas when short rows were planted, 1,000 trees per hour were placed in the ground. On long rows almost double this number were planted in an hour.

Trees used in the Iowa plantings include green ash, jack pine, hazel nut, black cherry, wild grape, wild plum, silver maple, mulberry, Russian olive, and Western yellow pine.

Areas planted and total numbers of trees were: Goose Lake, Green County, 56,870; Lanesboro, Carroll County, 7,500; East Swan Lake, Emmet County, 50,000; Birge Lake, Emmet County, 8,950.

Lacey-Keosauqua Park contains 2,234 acres.



Trees add to the beauty of one of Iowa's lakes.

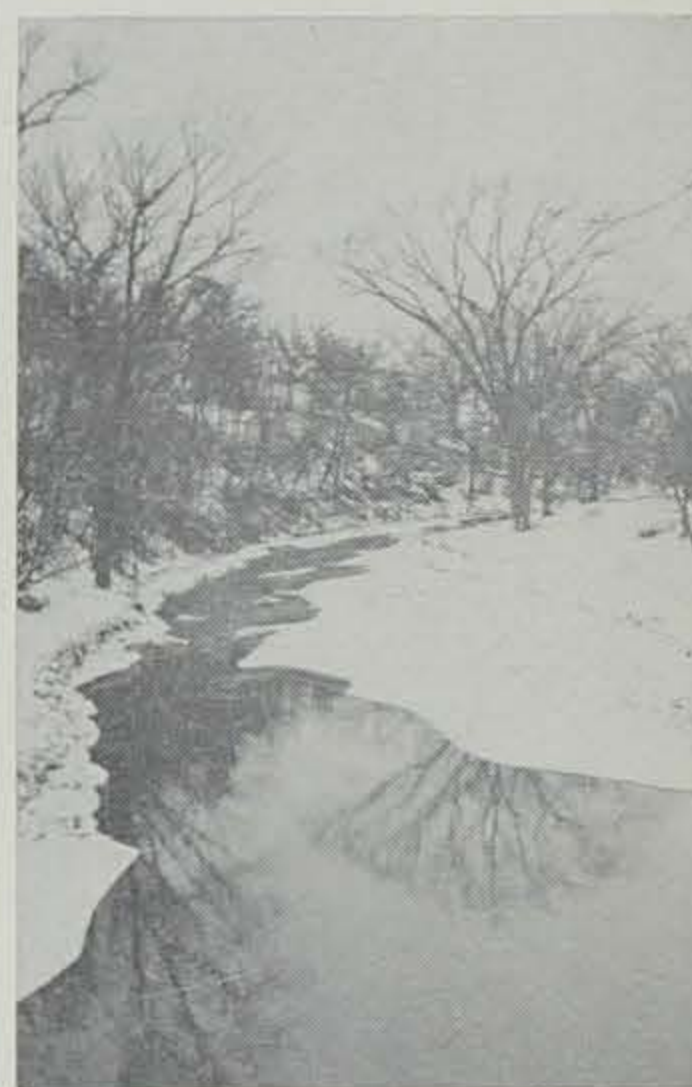
Cankerworms Pest of Trees

(Continued from Page Five)

is trapped. This method is practical only on isolated trees, or if bands are put on all trees.

Each year increasing reports of improper and injurious methods of banding are causing more experts to discourage the general practice of tree banding.

However, the second method mentioned is a highly effective and desirable method of control. A solution of lead arsenate and water to which an adhesive agent is added is sprayed on the foliage. As the worms eat the leaves they are poisoned. A solution of one and a half to two pounds of lead arsenate to 50 gallons of water, to which one pound of soy bean flour has been added for a spreader and adhesive, will readily control cankerworms or other leaf chewing insects.



Iowa stream mirrors winter forest scene.



This tree was planted by a grandson, now a grandfather

Table 1. Summary of Basic Nesting Data

Year	Est. Breeding Pop.	No. of Nests Found	Success %
1939	50 to the square mile	75	37.5
1940	80 to the square mile	140	25.0
1941	130 to the square mile	318	21.7