

IOWA CONSERVATIONIST

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COMMON SENSE IN CONSERVATION

2,000,000 MULTIFLORA ROSE PLANTS AVAILABLE

By Paul Leaverton
Superintendent of Game

Two million multiflora rose plants from the State Forest Nursery at Ames will be distributed for wildlife cover and soil erosion control plantings this spring by the State Conservation Commission. A million five hundred thousand of these rose seedlings will be used in farmer-sportsman cooperative programs.

Approximately 500,000 seedlings will be available to individuals for game cover planting. They may be secured through county extension agents, soil conservationists, and local state conservation officers while the supply lasts. The plants must be used for wildlife cover or soil erosion planting and will be available at \$15 per thousand.

The bulk of the multiflora rose plants available will be used in cooperative programs. Any organized group, such as Izaak Walton Leagues, conservation clubs, 4-H Clubs, Farm Bureaus, commercial clubs, or other public service organizations may set up a cooperative conservation program on farms that are operating in the soil conservation plan. Farmers who wish assistance in wildlife cover or erosion control planting should secure cooperation from local organizations. It is expected that more than 400 such cooperative programs will be set up on Iowa farms by March 1.

Under the farmer-sportsman cooperative program, one-half of the cost of the project will be paid by the State Conservation Commission, the other half by the sponsoring group. The local state conservation officer is the key man for the Conservation Commission, and groups or individuals wishing to inaugurate a program should contact their local conservation

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Sports fishing in the lakes is being improved by large scale removal of non-game fish that are competitors for food and space. Jim Sherman Photo.

IOWA'S TROUT PROGRAM

By R. B. Cooper
Superintendent of Fisheries

Trout have been cultured in Iowa since the first state fish hatchery was established at Anamosa in 1873. In 1880 a hatchery was constructed on the isthmus between Spirit Lake and East Okoboji Lake, and trout and eggs were transferred from Anamosa to the new site. Fish, including Atlantic and California salmon, lake trout and brook trout, were stocked in virtually all of the important lakes and streams in the state for many years. Although considerable success attended the efforts of the pioneer fish culturists in establishing certain non-native species of trout in the spring-fed streams in northeast Iowa, it soon became

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By Phil Jarnagin

One generation plants a tree and another comes along and cuts it down. This paradoxical bit of philosophy seems to characterize the whole conservation picture. We plant trees in order to utilize them when they reach maturity and thus keep our lumber industry alive. Gone are the days when we were content to wantonly use up our God-given forests without making any provision for replacing the felled trees.

We have often heard scoffers charge that sportsmen's groups such as the Izaak Walton League, Will H. Dilg group, and others are only interested in propagating wildlife so that they can return later and shoot or trap it. At first glance there seems to be some measure of truth in this sharp accusation. However, the real intent of the game conservation program goes much deeper than that.

Conservationists are coming to view fish and game populations as factors which thrive best when intelligently propagated and harvested. Such a concept provides better hunting and fishing, but it also provides more stable wildlife conditions and makes sure that valued species will not become as extinct as the legendary passenger pigeons. When fish become overcrowded they have insufficient food and become stunted and undesirable. Likewise when deer are left to multiply without a reasonable "harvest" they soon starve to death because of the ever diminishing supply of natural food.

It is the job of professional conservation groups to scientifically provide conditions that will keep the balance of game population in a healthy relationship to its environment. Sportsmen's groups soon learn that this is the only true road to continuance of their favorite pastime. Therefore, intelligent sportsmen acclaim the efforts of the conservation depart-

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CORMORANTS EAT CARP

Cormorants—large fish-eating birds distantly related to pelicans—eat 95 per cent carp in some Midwestern lakes and streams, the U. S. Fish and Wildlife Service reports. Many biologists have stated during past years that cormorants principally eat rough fish and seldom prey on food or game fish. Recent observations by wildlife biologists in the upper Midwest completed a study that corroborates these earlier findings.

The studies of the cormorant's dietary habits were made in Utah, Wisconsin, Oklahoma, South Dakota, Missouri, and Illinois.

Some fishermen in the Midwest have thought that cormorants were

competing with them for game fish, but these studies indicate that the birds eat only very small quantities of bluegills and bass. It is the slow, surface-wallowing carp that fall prey to the cormorant. In the Mississippi River basin a relatively similar situation occurs, where cormorants feed mainly on gizzard shad.

Along the Atlantic coast, however, cormorants at times feast on commercial fish which they steal from pound nets, and are thus not welcomed by commercial fishermen. But the habits of the birds vary according to the area in which they congregate and the availability of fish occurring there. Except for those cormorants which rob the nets of commercial fish, the birds on the coast eat fish of little value to men: sculpin, gunnel, sand lance, capelin, etc.

Besides raiding pound nets in certain areas, other local depredations of cormorants are evident—as at some fish hatcheries. Where a proved need occurs, cormorant control is undertaken locally by state and federal agencies.

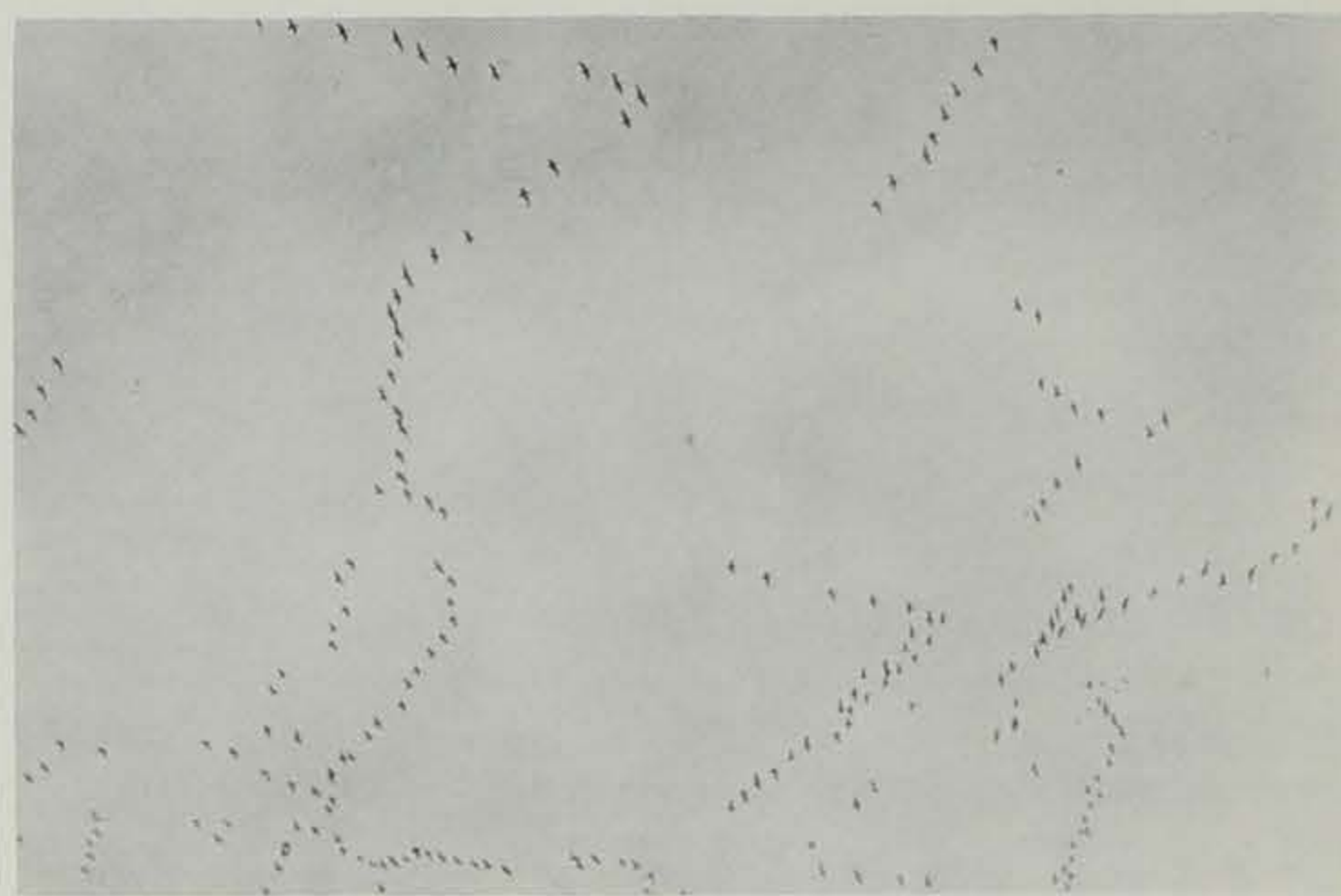
Cormorants rarely eat trout or salmon, studies show, because they can't catch them or because the fish inhabit the deeper, colder water. In the New England states the cormorant often catches the slow-moving suckers, and local sportsmen seeing the birds fishing often accuse them of taking trout.

Fishing clubs along streams flowing into the Gulf of St. Lawrence used to pay a bounty of 25 cents a head on cormorants, until Canadian ornithologists proved that not a single captured bird had eaten salmon.

Because the cormorant devours fish voraciously, it is often regarded as the emblem of gluttony. It is a dark-colored water bird with webbed feet, long neck, and slender hooked beak. In China, a species of cormorant is trained to catch fish for commercial fishermen.



Studies of the cormorant's food habits reveal that he is a fish-eating glutton. However, in the Middle West its principal food consists of slow-moving rough fish. Harlan News Advertiser.



When high-flying flocks of ducks or geese struck the radar beam, they flared and momentarily broke ranks. Jim Sherman Photo.

RADAR THROWS DUCKS OFF BEAM

Scientists may be a step closer to solving the age-old mystery of bird migration as the result of experiments conducted with radar at the Delta Waterfowl Research Station maintained by the Wildlife Management Institute and Mr. James F. Bell of Minneapolis on the Manitoba breeding grounds.

Although H. Albert Hochbaum, director of the station, feels that experiments still are in such an early stage that no particular significance can be placed on results, interesting reactions of migrating ducks to radar beams have been noted. Portable radar equipment borrowed from the R.C.A.F. was used last spring to help trace the migration of birds. When high-flying flocks of ducks struck the radar beam, they reacted in a peculiar manner.

"We obtained at least a dozen positive reactions when the birds flared and broke, much as if they had been shot, when they hit the radar beam," Hochbaum reports. "The birds appeared to become momentarily confused in their flight, then they would regroup and continue on their way."

Only migrating birds seemed to be affected. Birds considered to be natives of the vast waterfowl breeding marsh did not respond to effects of the beam, and radar seemed to affect only those moving along a regular migration route. Similar experiments are underway in the United States, and Hochbaum hopes to be able to obtain the radar equipment again next spring for further study into the phenomenon.

Eels in America and Europe leave their streams and swim to the warm Atlantic waters north of the Equator. There they produce their young and die. The young eels swim back to the same homes which their parents left.

The Tuatara, a New England reptile similar to a lizard, builds two burrows. It occupies one and a petrel, an ocean bird, occupies the other.

NEW YORK WATER SHORT-AGE—A CONSERVATION LESSON

Shaveless, bathless New Yorkers living on rationed water are learning a hard lesson in conservation which the rest of the nation might well ponder, according to the Wildlife Management Institute. Although the situation has been treated with typical American humor in the press and on the radio, it is only superficially funny. Viewed realistically, the New York problem has too many characteristics of near disaster to be passed over lightly.

Yet there is an ironical twist which may contain an element of grim humor for cynical conservationists, for flowing by Manhattan Island is one of the largest rivers in the East, too polluted for human consumption except at its extreme headwaters. More fortunate communities have no occasion to gloat, for bacteriologists have been peering anxiously through microscopes at samples from dwindling municipal water supplies in many communities, while in some coastal towns pumps are sucking from wells pushed dangerously close to the salt line. America as a nation, through pollution, inadvisable drainage, and denudation of watersheds by faulty agricultural and forestry practices, has lowered its water tables and has fouled its surface supplies; yet it wastes more water than it uses.

Americans will hear more of water conservation in the future. As a nation we have labored too long under the delusion that drinking water is something that flows unendingly from a chrome-plated faucet whenever we need it. Water and soil are the two basic natural resources, and their conservation—wise use—is vital to the future security of America.

Otters are found on every continent except Australia.



The timber wolf reaches a maximum weight of 150 pounds. Here a frozen 120-pounder killed on the Minnesota-Canadian border shows the difference in size between this animal and the brush wolf or coyote common in this state. Thomas J. Kakac Photo.

at about the time of the Civil War. The timber wolf is a much heavier, much larger animal than the prairie wolf, or coyote, the latter weighing up to 40 pounds, with the timber wolf weighing 60 to 100 and, in exceptional cases, as much as 150 pounds.

The *Field Book of Mammals* lists the "northern coyote; brush wolf (*Canis latrans* Say)." It is found on the "humid prairies and bordering woodlands of the northern Mississippi Valley in Iowa and Minnesota and the northern edge of the plains westward to the base of the Rocky Mountains in the province of Alberta. It is the largest of any species of coyotes."

Seton, in *Lives of the Game Animals*, says of the coyote: "While a hunter by profession and by choice, there is nothing in the way of fish, flesh or fowl, dead or alive, that the coyote disdains for food. Ground squirrels, mice, rabbits, frogs, snakes, eggs, and fledgling birds are on its bill of fare, and the hen yards, as well as sheep folds, are levied on in times of need. Coyotes rarely molest pigs and calves, but they are very troublesome among other livestock. In summer they kill many turkeys, and sheep are particularly subject to their inroads."

In addition to animal foods, coyotes eat considerable vegetable matter, including melons, peaches, grapes, apples, wild berries, corn and grasses. Insects, too, are included in the coyote's diet, with grasshoppers and crickets an especial favorite.

Seton observes that, "winter or summer, it is the rule for two coyotes, a male and a female, to run, hunt and live together," and he believes that they mate for life, or until one or the other of the pair is killed.

It is generally believed that the male is not permitted to enter the den where young are born until the eyes of the young are open. Papa Wolf does, however, help

provide food for the young until they separate from the parents in late summer or early fall.

Coyote dens are usually dug by the coyotes themselves. Oftentimes they enlarge burrows dug by badgers, ground hogs, skunks or even ground squirrels. The den entrance, about 10 by 20 inches, is located on a slope, generally concealed in the bushes.

In Iowa three to ten young are born during April and considerable numbers are presented to county auditors for bounty payments during April and May.

Iowa statutes require the boards of supervisors of each county to pay \$10 for each adult wolf and \$4 for each wolf cub killed within the county. In spite of the mandatory bounty, in effect for many years, the prairie wolf, brush wolf, coyote, or call-him-what-you-will, thrives and more than holds his own in the Hawkeye State, where his big, tough brother, the less adaptable timber wolf, has failed to survive.

There are certain "soldiers" among ants whose duty is to defend the colony.

Sea lilies are really animals, but they look like the plants for which they are named.

"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.

WOLF OR COYOTE?

By James R. Harlan
Assistant Director

One of the endless arguments that reaches a fever peak each winter in the "hot stove leagues" is whether the animal killed on the last circle hunt was a wolf or a coyote. This is one of the few controversial wildlife subjects where both the "tis's" and the "taint's" can be pleased with a single honest answer.

The animal killed was both a wolf and a coyote, but it definitely was not a timber wolf.

Some wildlife students think that the timber wolf has not been a resident in Iowa during historic times. However, too many identifications by competent observers have been made to rule it out as a one-time native.

The diary of John J. Audubon contains an entry written on May 11, 1843, while he was ascending the Missouri river just below the mouth of the Little Sioux river in Harrison county:

"May 11. We have seen one wolf on a sand bar seeking for food, perhaps dead fish. The actions were precisely those of a cur dog with a long tail, and the bellowing sound of the engine did not seem to disturb him. He trotted on parallel to the boat for about one mile. When we landed to cut driftwood Bell, Harris and

I went on shore to try and have a shot at him. He is what is called a brindle colored wolf, of the common size."

A footnote by Elliott Coues in a reprint of the diary in the *Annals of Iowa*, October, 1948, says in part, "This wolf is to be distinguished from the prairie wolf (*Canis latrans*), which Audubon has already mentioned. It is the common large wolf of North America of which Audubon has much to say in the sequel, and wherever he speaks of wolves without specification, we are to understand that this is the animal meant. It occurs in several different color variations from quite blackish, through different reddish and brindled grayish shades to nearly white. * * *"

Numerous other early writers mention the large gray wolf and differentiate between it and the smaller prairie wolf. (See "Echoes From the Past" in the current issue.)

Anthony's *Field Book of Mammals* lists the "gray wolf; timber wolf (*Canis nubilus* Say)," giving its range as "great plains of Iowa, Nebraska, Kansas, Wyoming, the Dakotas, and east to the Great Lakes." Modern biologists, however, have not received a single specimen for examination, and most of them believe that the timber wolf has been long extinct in Iowa, passing out of existence in the wild along with the buffalo



This 30-pound brush wolf or coyote, four feet from tip to tip, killed near Walnut, Iowa, is typical of the Iowa representative of the wolf tribe. Walnut Bureau Photo.



Blossom-laden multiflora rose provides nesting sites for numerous species of insect-eating birds. Des Moines Register & Tribune Photo.

MULTIFLORA ROSE FOR LIVING FENCES

(In cooperation with the Mediapolis Farmers-Sportsmen Conservation Association, the following article is reprinted from the June issue of *Illinois Wildlife*, that state's conservation magazine. The article was supplied the New Era by Harold Linder, Sperry rural route, president of the county association.)

"Say, Jim, what do you think of that new multiflora rose they're recommending for a living fence?"

"Well, it looks good to me, Joe, but I'd like to know more about it."

And so it goes—some people have heard how this new plant, multiflora rose, makes a stock-tight fence in three to six years. Others have heard what an inexpensive fence it makes, while some have heard that it makes fine cover for quail and rabbits. Still others have read that it makes a good home for insect-eating songbirds. Those who have seen it in bloom have commented on its beauty, while those who have seen its big crop of red fruits have wondered how useful it is for wildlife food.

That's how it is—many people have heard *something* about multiflora rose, but most of them would like to know the *whole* story. They have certain questions they want answered. That's why this article was written—to answer those questions.

What is multiflora rose? It's a large rose that was brought to this country from Asia. It has been used for years by growers of ornamental roses as a hardy rootstock on which to graft the ornamental varieties.

How did its use as a living fence get started? Back in 1935 the U. S. Soil Conservation Service, sensing the need for a plant that would quickly produce a stock-tight living fence, began to try out a great many plants. Out of these

trials came the present thorny variety of multiflora rose.

What is its mature size? On the best soils, multiflora rose grows to a height of 8 to 10 feet and occupies about the same width. On poorer soils its mature size may be only 6 to 8 feet in height and 6 to 8 feet in width.

Where is the best place to use it? Multiflora rose is best suited for interior farm fences, especially as a contour fence between pasture and crop land. It is also well suited for use around farm ponds and other odd areas. There are indications that the removal of Osage orange hedges on the black prairies is resulting in some wind erosion. Field fences of multiflora rose will help solve this problem and provide homes for much-needed insect-eating songbirds. Look into the legal angles before using it as a line fence. It doesn't do well in shade, so don't use it around woodlots unless it is kept at least three feet from the edge.

Naturally, living fences should be established in permanent locations to avoid the necessity of removal and replacement at a later date. The best way to be sure of this is



The abundant bright red fruits, or hips, of the multiflora rose add to the winter beauty of this plant and provide food for wildlife. Jim Sherman Photo.

to establish them as part of a complete farm conservation plan prepared with the help of your local soil conservation district.

What about soils? Like any other plant, multiflora rose grows best on deep, fertile, well-drained soils. It grows more slowly on clay-pan or sandy soils and should not be expected to make a living fence on severely eroded clay-pan soils or very drouthy sands.

Is it really stock-tight? When planted about 18 inches apart at Elsberry, Mo., it turned horses, cows, sheep, goats, and hogs that had been ringed.

Does it spread? Do you know any plant that doesn't? Multiflora rose occasionally spreads by layering, especially when the growing tips are covered when plowing or cultivating. A few instances of spreading as a result of seed distribution by birds are known. However, in 12 years of observation there is no record of its becoming a nuisance. It can be honestly said that spreading is not a problem.

Is it easily killed? Yes, it can be killed by 2,4-D compounds. It can be mowed off with a heavy mower. It is not nearly so difficult to remove as larger trees like Osage orange.

Does it require trimming? No, it does not grow large enough to need trimming.

How much do living fences cost? They are less expensive than wire fences, even when the value of the land occupied by each is included in the figures. Based on 1947 prices and including the cost of materials, labor and land, a living fence of multiflora rose costs only 62 per cent as much as a fence made of 26-inch woven wire with two strands of barbed wire on top. Furthermore, the wire fence has an annual maintenance or replacement cost of about \$10 per 100 rods, while the living fence has none.

How does it compare with Osage orange hedge? Living fences of multiflora rose have all of the advantages and none of the disadvantages of hedge. It does not grow tall enough to reduce the yields of farm crops, neither does it have a wide-spreading root system. It requires no maintenance—in other words, no trimming or pruning. It makes a better fence, requiring no wire to make it stock-tight. Its thorns are too short to puncture tractor tires. It provides a home for twice as many songbirds.

Is it good wildlife cover? Yes, multiflora rose is excellent cover for quail, rabbits, and songbirds. There is some indication that for maximum value to quail a double row is superior to a single row.

Is it good wildlife food? Not particularly. Quail make little use of multiflora rose for food. Little is known about its food value for pheasants. Rabbits "bark" it to some extent. Robins, mockingbirds, waxwings, and other songbirds

feed on it, especially during their northward migration in the spring. Prairie deer mice and white-footed mice, valuable little animals that feed on insects during spring, summer, and fall, use multiflora rose seeds extensively during the winter.

How should living fences be planted? The simplest and best way is to prepare the ground the fall before planting. Mark the new fence line with stakes, then plow a back-furrow, making two rounds with a two-bottom plow. Then smooth with a harrow—either disk or drag. Making a back-furrow provides a double layer of topsoil in which to plant and provides for better drainage.

In the spring open a new furrow on the ridge of the back-furrow. Set the plants one foot apart, holding them in place with a handful of soil. Then plow another furrow to cover the roots completely. Pack the soil around the plants by running the tractor wheel as close to the row as possible.

Of course, if a tree planting machine is available, that's still easier. Plant on the ridge of the back-furrow.

When should the planting be done? As early in the spring as possible. Multiflora rose leafs out early—more plants will live if planted before leafing-out time.

Should the new fence be cultivated? By all means, either cultivate or mulch. The latter is best and saves work. Straw manure, old stack bottoms, or plain straw are good mulches. If you have no mulching materials, cultivation the first year will pay dividends in added growth.

What about fertilizer? More needs to be known about this. Generally speaking, if you cultivate or mulch, no fertilizer is needed, but there are indications that nitrogen promotes faster growth, particularly on clay-pan soils. If you want to try it, use about 2½ pounds of 20 per cent nitrogen fertilizer as a side dressing per 100 feet of fence.

Is protection from livestock necessary? Not always. New plantings of multiflora rose will withstand moderate grazing by horses and cattle, but it cannot compete with sheep.

How soon will it turn stock? In three to six years, depending on the soil and the care that is given it in the way of mulching or cultivation.

When will it bloom and produce fruit? Usually in the third year, but this will depend on rate of growth.

Where can planting stock be obtained? There are three sources: commercial nurseries, the Illinois Conservation Department, and your local soil conservation district. (In Iowa, commercial nurseries, district soil conservationists, and the State Conservation Commission.)

How much has been planted in
(Continued on page 16)

Echoes From The Past

(Editor's Note: This is the first of a series relative to wildlife in early Iowa. Additional excerpts from pioneer books, newspapers, and diaries will be printed in future issues.)

SKETCHES OF IOWA AND WISCONSIN (1839)

By John Plumb, Jr.

Game and Fish. The country abounds with game of various descriptions. Deer and rabbits or hare are to be found in great numbers, and it is said will increase with the settlement. The same may be said with regard to the prairie hen, partridge and quail. The prairie fowl is very fine and plenty. Vast quantities are to be found among the stubble after harvest, in cornfields, stacks, etc. During the whole fall and first part of winter there are plenty of ducks and geese.

In the fall and spring the geese light on the prairies in great flocks to feed on the wild rye, etc. Many turkeys are found, but they will in a great measure retire as the settlements advance.

Vast numbers of buffalo are found east of the Missouri River, say 150 or 200 miles west of the Mississippi, but they are in greatest numbers west of the Missouri River. There are very few squirrels and scarcely any bears. A great variety of fine fish are found in the several rivers, but no salmon or whitefish.

Annoyances from Ravenous Beasts and Serpents, Etc. The whole country appears to be most completely free from everything calculated to annoy or injure man. There are no panthers and very few wolves or foxes. There are a

few prairie wolves, but they are hardly stout enough to destroy a good large sheep, let alone cattle or hogs. These animals, wolves and foxes, will disappear as soon as the country is settled, there being no large swamps, mountains or hedges for them to take refuge in when pursued, and the country being so open, they would fall an easy prey to their pursuers.

There are scarcely any snakes or reptiles. The delegates in traveling about six weeks through the territory never met with a single rattlesnake, although there are a few in certain parts of the territory, nor any other except garter- and water-snakes.

Although hardly a hollow tree can be found but has a swarm of bees in it, yet, strange as it may appear, there are no wasps or hornets. The cause must be that those insects generally build their houses near the ground and consequently they are destroyed by fire in the fall or early in the spring. Flies and mosquitoes are not so troublesome in Iowa as in Canada. There are but very few hawks, crows or other destructive birds.

Game. The season is close at hand when sportsmen may take their guns. The woodcock are now in prime order and may be bagged without any infringement on the game laws or the imputation of poaching. The young pheasants



Many wild turkeys were found in the Hawkeye State when it was opened to settlement. As John Plumb predicted in 1839, they retired as settlement advanced and are no longer found truly wild in the state. R. F. Trump Photo.

* * * * *
and prairie hens are also well grown and in fine condition. The kindness of friends enables us to speak from experience, having been recently favored with a few braces from their well stored bags.

Deer will become abundant as the Indians leave us. Partridge, pigeon and turkey are very plenty and will soon be fair game. Bear and elk some distance hence may also be found.

We could make the mouth water of some of our Eastern epicurean friends by a bare enumeration of the many good things in the fish and fowl line with which we are blessed were we so mischievously disposed, but we are too amiable for that and will no further offend in that way than by telling them a word of our prairie hen, of which we suppose them to know but little, but which we beg leave to assure them is one if not the chief of our delicacies and will balance their canvasbacks and their oysters.

The prairie hen, then, is no less distinguished a bird than the pinnated grouse or heath hen, some few of which are found on Long Island, some parts of New Jersey, and the northeastern part of Pennsylvania, and which so highly are they esteemed readily command in the New York market from \$3.50 to \$5 per brace. They are nearly the size of a common barn fowl and in the fall of the year become gregarious and are found in large flocks. In summer they go to the prairie. They become excessively fat, do not fly far or fast, and are easily bagged. Their habits are different in some respects from the northern bird of the same kind, and in consequence there is a difference in the color of the meat and its flavor, but they are certainly no less delicious on that account.

Come here this fall and bring your gun along, and your pointer if you have one. We'll show you how to do up the prairie hens.

WHERE'S THE SOIL?

*Hordes of gullies now remind us
We should build our land to stay,
And, departing, leave behind us
Fields that have not washed away;
When our boys assume the mortgage
On the land that's had our toil,
They'll not have to ask the question,
"Here's the farm, but
WHERE'S THE SOIL?"*
—Tennessee Valley Authority

QUITTING THE FARM?

Tired of farming? Want to get rid of your land? Here's the recipe:

Try to make yourself believe no one will have use for the land after you're gone. Cut any size farm into irregular pieces.

Add several successive cash crops to remove the humus and fertility.

Stir the thin layer of top soil frequently until the soil particles are ready to be carried off by a hard rain. Carefully work the land up and down the slopes so that the furrows will form small rivulets for rapid disposal of excess water—and soil. Keep doing this until the hardpan shows through on the hilltops and slopes.

Then cut into deep, irregular gullies and leave out in the sun to bake.

When done, season with an unpainted house, broken-down gates and fences, some worn-out machinery, a rickety barn, a good sprinkling of unpaid bills and add a pinch of despair. Garnish with weeds. Set fire annually to all woodlands and ground cover, keeping Nature from assisting in the process of rebuilding new soil on misused and over-grazed land. After the land is too poor to even grow wildlife, serve with a tax sale and move on.

(This recipe courtesy West Plains Daily Quill.)



John Plumb, Jr., writing in 1839, advised that deer were found in Iowa in great numbers and "it is said will increase with the settlement." After that time deer became almost extinct in Iowa, but in recent years have increased remarkably.



While some government agencies are promoting drainage, the Soil Conservation Service, the United States Fish and Wildlife Service, and the state conservation departments are building lakes and restoring marshes. Jim Sherman Photo.

UNITY OF ACTION NEEDED IN CONSERVATION

Conservationists for some time have been disturbed by the hydraulic growth of governmental agencies entrusted with the care of natural resources. Expansion alone has been essential to match new needs created by an increasing population. The growth in many cases, however, has been outward away from the common center. Mr. Charles L. Horn, chairman of the Minnesota Emergency Conservation Committee, sums up the situation ably, the Wildlife Management Institute believes, in the following words:

"There is no coordination.

"We have an incredible hodge-podge of bureaus and agencies, including the Departments of Agriculture and Interior, the War Department represented by Army Engineers, the Extension Service largely in the hands of 48 different state agricultural colleges, and many other bureaus and agencies, pulling in opposite directions, without any coordination and confounded by jealousies and political considerations.

"There is no water policy; there is no land use policy. We are not even attempting to approach water resources from the standpoint of land use.

"The Army Engineers are still damming, ditching, draining, dredging and leveeing. They have been on the job for many years. They now have new allies in the various soil conservation districts who are subsidized by federal grants, and who are aided and abetted by agricultural extension divisions of state universities in a vicious program of farm pothole drainage. They seem determined on draining every such pothole; already 2,000 farm potholes have been drained since 1947 in Day County, South Dakota, alone.

"While these and other agencies are promoting drainage, the Soil

Conservation Service, the U. S. Fish and Wildlife Service, the state conservation departments, local individuals and groups are advocating conservation of potholes and are attempting marsh restoration.

"While some federal agencies are advocating deserts, the U. S. Department of Agriculture is doling out hundreds of millions of dollars to farmers in agricultural states, including Minnesota and South Dakota, for the building of artificial potholes.

"It's an intolerable mess with impossible tragedy in the immediate offing.

"There are too many agencies too exclusively engrossed in their own specialties, failing to interpret the implications of soil erosion, improvident grazing, deforestation, drainage of marshlands and destruction of watersheds. Responsibility is not centered; there is no effort to see things whole. *A merger is an absolute and immediate must.*"

The solution to this complex problem lies in unification of federal conservation activities under a single governmental department. Such recommendations already have been advanced by the Hoover Commission's natural resources "task force" report. The establishment of a Natural Resources Department along lines suggested in this report would coordinate and unify these closely interrelated agencies, which now often seem to be racing in all directions toward the same goal.

The heliographer American antelope is the only native American of all our hoofed animals.

To turn a world of beauty into a world of ugliness is a great crime.—Howard Braucher.

The drone bee dies soon after the wedding night.

WITH EYES THAT SEE

"Today we know our resources are not inexhaustible. . . . The land can be used up, the forests, the grassy ranges, the waters. They ARE being used up. Look about you in Iowa, with eyes that see. Look upon your corn fields where the rows still march with geometrical precision uphill and down. Look upon them in the winter when they are bare, and see how the gray has replaced the deep black loam of the hilltops because of erosion. Look in the spring, when the young corn is growing, and see how the plants at the crowns of the hills are weaker, a paler green, than those on the lower slopes and in the bottoms. Look at harvest time, and see the reduced yield from the wind-and-water-swept high places. . . .

"Our organizations of adults are slowly, painfully, gropingly trying to cope with the problems (of conservation). . . . With the help of all who have eyes to see the need, and a willingness to put the national welfare before self, we will succeed." — William Voigt, Jr., speaking at the Iowa State Teachers Convention.

ENGLISH SPARROWS

Will you inform us where we can get the English sparrow? There are several of my friends wanting them, and we would like to know where and at what cost they can be obtained.—C. J. Mirrell, Upper Alton, Illinois. (We are unable to say where they can be procured.) —The Cultivator and Country Gentleman, Albany, New York, April 15, 1869.

SNOWY OWLS AGAIN APPEARING IN IOWA IN NUMBERS

An unusually large number of snowy owls, whose natural home is the far North, have been observed in Iowa during the past few weeks. The snowy owl is conspicuously white and has very small feathered ear tufts, giving the head a round appearance. It is about two feet long. The white of the plumage is generally broken by a number of dark bars. This owl, differing from most other birds of the owl family, is generally silent and does most of its hunting during daylight. It prefers open country and may often be seen perched on a haystack, post or other elevation.

The food of the snowy owl con-

sists largely of small mammals, such as rats, mice, and rabbits. However, three of the owls were observed recently on Round Lake Refuge feeding on ducks that had apparently died from lead-poisoning.

When food becomes scarce in the North, about once every four years, snowy owls in large numbers fly South into the United States in search of food.

This owl is considered beneficial, is protected by both state and federal law, and there is no excuse for shooting these birds when they make their periodic appearance in the state.



This beautiful snowy owl, one of numerous visitors during the past winter, was captured alive near New Virginia recently. After appearing for its portrait, it was released to continue its war on rodents. Don Berry Photo.

STATE HUNTING LICENSE AND FEDERAL DUCK STAMP SALES
July 1, 1948, to June 30, 1949

State	Resident	Non-Resident	Total	Fees Paid By Hunters	Federal Duck Stamps
Alabama	250,063	1,821	251,884	\$ 479,503	12,595
Arizona	59,390	2,168	61,558	298,775	8,562
Arkansas	197,868	4,503	202,371	371,117	60,758
California	501,261	3,189	504,450	1,800,968	171,388
Colorado	359,043	12,681	371,724	2,101,923	41,407
Connecticut	48,085	583	48,668	215,262	7,699
Delaware	20,467	691	21,158	28,635	4,823
Florida	104,751	1,831	106,582	465,294	22,916
Georgia	162,837	1,912	164,749	368,255	5,018
Idaho	165,258	2,875	168,133	729,121	45,575
Illinois	467,487	3,368	470,855	985,224	110,980
Indiana	406,637	1,414	408,051	631,872	35,574
Iowa	347,352	1,948	349,300	718,232	63,805
Kansas	188,921	1,924	190,845	311,495	53,094
Kentucky	216,233	2,103	218,336	436,091	7,712
Louisiana	221,702	499	222,201	234,177	80,701
Maine	118,886	17,494	136,380	651,364	12,142
Maryland	112,369	3,952	116,321	301,171	15,418
Massachusetts	171,951	2,182	174,133	409,342	19,370
Michigan	965,518	12,361	977,879	2,847,013	83,582
Minnesota	504,160	1,810	505,970	798,284	162,300
Mississippi	190,033	563	190,596	439,562	20,507
Missouri	330,143	2,846	332,989	1,096,256	69,269
Montana	169,233	1,257	170,490	729,425	36,040
Nebraska	219,272	2,874	222,146	320,610	64,991
Nevada	20,825	3,347	24,172	189,364	10,574
New Hampshire	92,132	14,064	106,196	520,616	3,656
New Jersey	141,081	1,491	142,572	446,112	17,649
New Mexico	54,002	2,501	56,503	325,724	9,010
New York	837,178	10,136	847,314	1,689,258	66,809
North Carolina	281,157	3,291	284,448	763,789	15,749
North Dakota	104,356	3,281	107,637	344,583	53,936
Ohio	717,129	1,163	718,292	1,035,733	39,176
Oklahoma	186,607	1,327	187,934	286,824	55,625
Oregon	214,670	2,733	217,403	1,127,900	65,947
Pennsylvania	850,589	28,080	878,669	2,122,378	47,389
Rhode Island	12,924	210	13,134	30,559	2,564
South Carolina	137,763	2,983	140,746	304,164	9,797
South Dakota	168,895	25,934	194,829	806,671	62,509
Tennessee	281,256	1,548	282,804	587,653	25,746
Texas	291,868	1,428	293,296	623,506	164,075
Utah	116,941	5,791	122,732	720,277	34,558
Vermont	66,455	7,749	74,204	240,282	3,865
Virginia	274,315	4,055	278,370	719,563	13,293
Washington	383,085	604	383,689	1,959,882	74,555
West Virginia	320,424	3,454	323,878	691,539	1,859
Wisconsin	418,788	2,555	421,343	1,038,618	101,842
Wyoming	63,096	7,668	70,764	622,721	11,461
Alaska					4,881
District of Columbia					14,618
Hawaii					43
Puerto Rico					186
TOTALS	12,534,456	224,242	12,758,698	\$34,966,687	2,127,598



Trout fishing in Iowa is possible because of an extensive trout rearing and stocking program. Reproduction in the wild is rare and unimportant. Jim Sherman Photo.

Program . . .

(Continued from page 9)

lings. In 1933 all the fish released were over seven inches in length.

In 1931 an extensive survey was made of all potential trout streams in northeast Iowa, and a list of all suitable trout waters was compiled. Most of the streams have been analyzed several times, and all of the trout waters in the state have been classified according to their value and the fishing pressure exerted upon them.

The policy of the Commission is to stock only such streams as will support trout throughout the entire fishing season. Many factors are considered in the biological evaluation of a good trout stream. They include temperature, volume of flow, tributary springs, gradation, velocity, color and turbidity, alkalinity, pools and shelter, riffle areas, shade, aquatic vegetation, fish food, etc. Of these requisites perhaps temperature, volume, cover, and fish food are the most important. Experiments conducted in Iowa and other states indicate that water temperature higher than 75 degrees F. is generally fatal to brook trout, while brown and rainbow trout may endure temperatures as high as 80 degrees F., providing the stream has good gradation and volume.

Trout streams are stocked in advance of the open season and several times during the course of the year. The number of fish stocked and the frequency of stocking depends upon the classification of the stream and the number of trout available for distribution.

Most Iowa trout are stocked during April, May and June, when the streams are at their best. During the hotter months of July and August only the major streams are stocked; then from September till the end of the trout season (No-

vember 30) all streams receive additional fish.

During the 1949 open season approximately 200,000 trout, ranging from 7 to 12 or more inches in length, were released. Each year 15,000 to 20,000 of the smaller yearlings are held over for the next season. These fish grow to a length of 12 to 14 inches in length and are mixed in with the 7- to 10-inch yearlings at distribution time, thereby giving each stream its proportionate share of larger fish.

Checks are made in many of the streams during the winter months with an electric shocking machine to determine the carry-over population, thereby helping to evaluate each stream.

Iowa's 44 trout streams are in the so-called "driftless area" in

the northeastern corner of the state. The good trout streams arise in clear springs from the limestone bluffs which line the valleys and are found largely in Winneshiek,

Allamakee, Fayette, Clayton and Delaware counties. Erosion control is very important in this area to lessen the amount of soil being washed into the streams, where it fills up the holes and levels off the bottom, smothering out the natural trout food. It is of paramount importance that soil conservation measures be taken in the immediate future if these streams are to be preserved for this and future generations as trout waters.

Iowa has approximately 250 miles of trout water, receiving 200,000 trout annually, or 800 fish per mile per year.

The actual cost of raising trout in Iowa to stocking size of 7 to 12 inches is 14.67 cents per fish. This cost includes labor, feed, distribution, and incidental expenses connected with hatchery operation.

The major expenditure in trout production is for food, with trout in nurseries taking a complicated diet of dry food, beef milt, beef livers, and ground fresh carp.

During the past year it took a total of 206,800 pounds of food to raise 200,000 trout to an average weight of six ounces, each trout having consumed approximately two and three-fourths pounds of food.



Checks are made on sections of trout streams during winter months with an electric shocking machine to determine carry-over populations. Trout are temporarily stunned and easily counted by this method. Jim Sherman Photo.

Common Sense . . .

(Continued from page 9)

ment and cooperate with it wholeheartedly. They hold the game hog in contempt.

First hand examples of the modern conservation program in action may be seen right here at Storm Lake. When the fish biologists concluded that there was an overabundance of crappies in the northwest Iowa lakes, they established a continuous open season on them (keeping possession limits) to enable fishermen to help restore the normal balance. Likewise when the little lake was opened to trapping this winter, a large area was posted to preserve a safe "seed-stock" of muskrats. Beaver were trapped for a few days this winter because they were becoming too numerous and causing undue damage to farms. This was the first time in 75 years or more that such trapping has been allowed.

With the fast growing numbers of hunters and fishermen it becomes more important that game laws are carefully written and observed. The pressure upon wildlife is increasing steadily as civilization at the same time reduces natural cover. This constitutes a real challenge to the Izaak Walton League and to state conservation groups. And it should instill in the mind of the individual sportsman a keen appreciation of the pleasures he still enjoys and a resolve to do all he can to make sure that he does his part in conforming to the program for the common good.

The state conservation department reports that there were 714 arrests made during the month of November for hunting, fishing and trapping violations. Convictions brought in fines totaling \$24,188.50 and violators spent a total of 875 days in jail. Illegal fur provided the heaviest fines, but also 12 hen pheasant shooters paid fines of \$100 or more. The total number of fines and the amounts levied set an all-time record. This should give us something serious to think about. It shows the need for more and more educational work. And it shows that those who do believe in law enforcement should set examples for the neophytes who are trigger-happy or lack respect for the conservation program. If the situation gets out of hand the true sportsman will suffer along with the stumble-bum.—Pilot Punches, Storm Lake Pilot Tribune.

Living Fences . . .

(Continued from page 12)

Illinois? At least 1,000,000 plants of multiflora rose have been planted in Illinois since 1937. If you want to see some in your vicinity, ask the soil conservation district about it. If any have been planted locally, chances are he will be able to direct you to them. (In Iowa, 400,000 since 1936.)—Medapolis New Era News.



Multiflora rose does not need trimming or care after it is once established, will provide a living fence that will turn livestock in three to six years, and is especially adapted for contour fences. Des Moines Register & Tribune Photo.

Rose Plants . . .

(Continued from page 9)

officer, who will explain details of the plan and have necessary cooperative agreement forms.

Other shrubs and trees for game cover and soil erosion control will be supplied by the Conservation Commission at cost from the forest nursery. However, multiflora rose will make up the bulk of stock distributed in 1950.

This plant is called multiflora (many flowers) because of its mass of spring blossoms. These flowers are followed by abundant pods or rose hips about the size of peas which turn red in the fall. They hang on most of the winter and furnish emergency winter food for birds.

This rose does not spread and does not need trimming or care

after it is once established. It will provide a living fence that will turn livestock in three to six years in the south one-third of the state.

Not much is known of its growth and hardiness in the north part of the state except that many plantings were made in 1947 and 1948 in several counties bordering the Minnesota line. So far there has been a good survival. Its deep root system makes the plant an excellent soil erosion control plant.

Multiflora rose seedlings when planted must be cultivated for two years. It is not a miracle plant, but needs care the same as other trees and shrubs to assure success. Competition from weeds the first two years is the main source of trouble, and cultivation is necessary during this time. After two years the plants require no care.



In addition to providing stock-tight fences, the new rose adds beauty to the landscape and provides exceptional cover for song and game birds. S. C. S Photo.

UNIFORMS FOR COMMISSION PERSONNEL

Shades of the Northwest Mounted Police. Iowa's conservation officers are going to be all dressed up, and they always have many places to go.

For the first time since 1934 Iowa conservation officers will don snappy new uniforms, complete with insignia. It will be an official dress uniform and is to be worn at all meetings, special occasions, and as may be directed by the Conservation Commission.

The full outfit will consist of a gray-green gabardine Eisenhower dress jacket and garrison cap, tan gabardine trousers, tan poplin shirt, green tie, and suitable insignia. Sounds like something that might have been dreamed up by a Dior or an Adrian, with emphasis on the masculine side.

Unfortunately, Iowa laws make no provision for picking up the check for the cost of this type of uniform, and it will be considerable. This is to be regretted. We believe that if a state wishes to uniform its officers, it should contribute to the cost of the apparel, especially since it is strictly dress, and not service garb.

We're for the idea. There is nothing nicer than a snappy uniform emblematic of the sovereign power of a great state, and Iowa is a great state. A conservation officer in uniform will lend dignity to any gathering. Iowa is but following the practice prevalent in many of our Midwestern states. We have seen a lot of these boys and they look mighty nice in uniform.—Davenport Democrat.

SOME MIRACLES TO PONDER

Who planned the mechanics
That print without fail
The white on the tips of
The cock robin's tail?
And who do you think fixed
That beautiful thing,
The red on the bend of
The blackbird's wing?
And how?

Who planned for the black on
The meadowlark's throat,
Which comes by a rule that
No man ever wrote?
Who planned the contrivance
From dust of the earth;
That brain for your thinking
You had at your birth?
And why?

—Leroy G. Davis

SECRETS OF STATE

"It is the duty of every citizen to communicate to his government any information which he has of the commission of an offense against its laws. To encourage him in performing this duty, without fear of consequences, the law holds such information to be among the secrets of state . . ." (Worthington v. Scribner, 109 Mass. 487)