IOWA CONSERVATIONIST

Volume 12 FEBRUARY, 1953 Number 2

PREHISTORIC FISH TRAP NEAR AMANA

THE OLD AND NEW AT STORM LAKE STATE PARK

By Charles S. Gwynne
Professor
Department of Geology
Iowa State College

There are many Iowa State parks which have been made, in a sense, by man, through the creation of a lake. But in Storm Lake State Park in Buena Vista County we have one, most of which was made—also truly by man—through the creation of land. The park is on "made land," which extends for a mile or so along the east shore of Storm Lake.

In 1939, a barrier-dike was built parallel to the swamp lake shore. Then a dredge was set to work pumping sediment from the bottom of the lake. A long pipe carried it back of the dike where it discharged. The sand and clay settled out and the water flowed back to the lake. This method is often employed in "making" land. In this case it was the proverbial one of killing two birds with one stone. The lake was deepened and at the same time a swampy section of the shore was converted to useful land.

Of course, the main attraction at the park is the lake. Storm Lake is not, like many of the state-park lakes, a man-made lake. The lake basin is the work of glaciers. It is a large depression in the terminal moraine of the last glacier. Terminal moraine is the name applied to the deposits built up at the margin of glaciers. It is usually more hilly and has steeper slopes than the surface over most of the area occupied by the glacial ice. There are many terminal-moraine lakes, particularly in northern Minnesota and Wisconsin. Some lake basins are made through glacial erosion of the bedrock.

Usually, also, the drift of the terminal moraine has much more coarse material than does the drift in the country back of the terminal moraine. This in part accounts for

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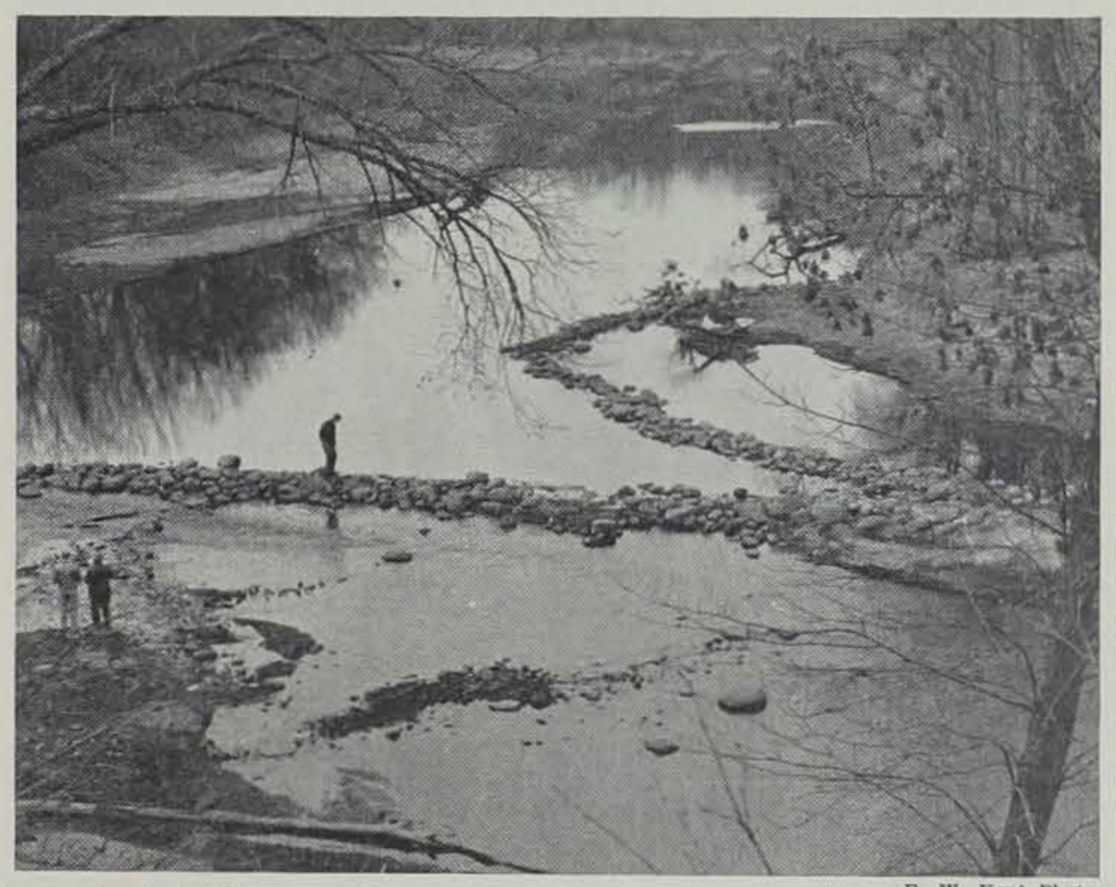

F. W. Kent Photo.
Low water last fall practically exposed the bottom of the Iowa River and the entire structure of the ancient Indian fish trap was exposed.

That *OLD BLACK MAGIC* of Hunting

By John Madson
Education Assistant

It's too bad that modern science has no place for superstition. Sometimes a man gets desperate, and finds little comfort in scientific logic. When he misses six pheasants in a row, for example. That's when I start thinking of witch-brews in the dark of the moon.

You can lay your poor shooting to a blown pattern or wrong lead if you want to. But if you go to the real root of the trouble, you will blame your bewitched gun, and there is a lot of ancient precedence to back you up.

A bewitched gun offers no problems to a student of black magic. Where there's a cause, there's a cure. Just tack a sheet of paper to a tree, and on it draw the face of the bewitcher. Then shoot the target with a silver bullet. Burn the target, dig the silver bullet out of the tree, and your gun is dehexed.

Aside from unjinxing your gun, there are other ways to improve its performance. First, when you buy it, rub the stock on your left leg three times. This is very potent magic. Never let a woman touch one of your guns, and never shoot a snake. The snake will "poison" your gun, and its accuracy will die. Cats don't have such a toxic effect on firearms, but shooting one will hex a gun just the same.

The Irish believed that rubbing a gun with the fat of a corpse improved its accuracy threefold. Never carry a gun on your left shoulder if you want good hunting, and whatever you do, keep your gun pointing at the ground until you see game, or you will miss your target. This last is one of the few hunting superstitions that really makes sense.

There is an old English belief that if two hunters accidentally strike their guns together, they will be hunting together the next year. Another story has it that if a gun is accidentally discharged at the beginning of a hunt, the hunter will bring home plenty of game. (Prob-

(Continued on page 110)

By F. W. Kent

Last fall, while searching for information on the location of Indian Mounds in eastern Iowa, a reference was found to an early Indian fish trap in the Iowa River near Middle Amana.

This reference, by Charles R. Keyes in the *Iowa Journal of History and Politics* for July, 1925, told of a stone dam that had been found by early pioneers in the Iowa River near Amana. According to Keyes, the dam was built of glacial boulders, the uppermost of which was visible during low water. The dam's shape was that of a great V with the open point directed downstream. The south wing of the dam was a hundred yards long; the north wing slightly less. Keyes went on to state that the Indians set fish traps in the narrow opening to which the fish were confined. He also mentioned that the dam had not been given much examination, but that it lay in an area rich in antiquities, since "on the river terrace to the north are two village sites, and on the hills around are many groups of mounds."

Accompanying Keyes' article were two illustrations, showing nothing much but a riffle and a few boulders projecting above the water.

When Dr. Robert Tidrick of the University of Iowa flew over the area to locate the structure, it took three trips before he found it in a bend of the river next to a high bluff. A photograph from the air aroused our curiosity even more, so we visited it on foot. It is almost a mile from the nearest road.

The extremely low water stage of last fall had practically exposed the bottom of the river, and the entire structure was visible. As Keyes had stated, it was a large V-shaped dam, built of glacial boulders, and pointing downstream. What we saw was the base of the dam, which was still substantial and fairly intact. The dam is not as high as it once was, as indicated by the height of a sheltered section near the north river bank, and the fact that many glacial boulders are strewn downstream in the river bed.

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A HOUSING PROJECT FOR WOODY

February is a dead spot in the sportsman's calendar. Hunting season is over, fishing is far away, and you probably have a cold. But if you're handy with tools, building nest boxes for wood ducks is a valuable way to mark time until trout season.

If you're a hunter or fisherman, you know the wood duck. It is our most beautiful waterfowl, a delicious table bird, and one of the few ducks that nest in Iowa. Prior to 1918 it was hunted to the point of extinction for its flesh and plumage, which was highly valued for trout and salmon flies. Under complete protection from 1918 until 1941, the species has increased, but it is now apparent that protection alone will not restore it to its former abundance. The wood duck's natural habitat has been reduced, and there is evidence that it suffers from a lack of nesting sites in Iowa. By providing more and safer nesting habitat, the production of ducklings can be greatly increased.

The natural nest site of the wood duck is a cavity in the trunk or large branch of a tree. No particular type of tree or location is required, but the duck prefers a site near some body of water. It may be forced to select a tree a long distance from water, even in dooryards and city parks.

The size and depth of the nest cavity may vary greatly, and it may be from three to fifty feet above the ground. If the duck cannot find a natural cavity that suits its taste, it may occupy a man-made nest box of proper design.

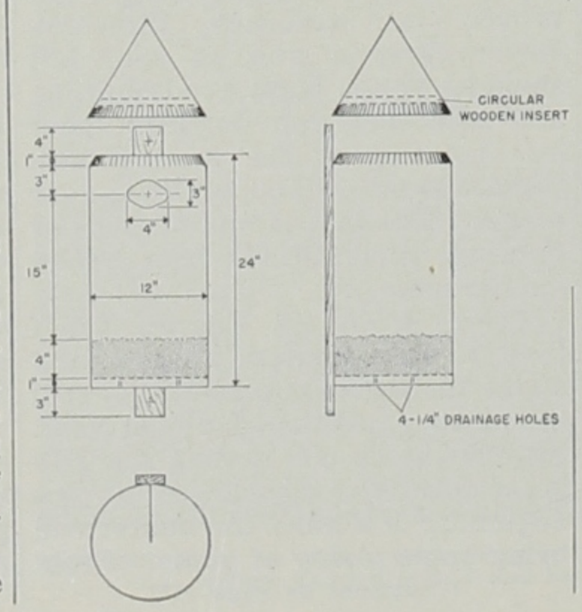
Wood ducks suffer greatly from egg predation by squirrels, opossum, raccoons and even snakes in natural nesting sites. This predation also occurs in man-made "duck boxes" unless certain precautions are observed. To keep out squirrels, three features must be included in wooden boxes: a metal cone or pyramid on the roof, a roof overhang in front, and metal facing on the front and sides.

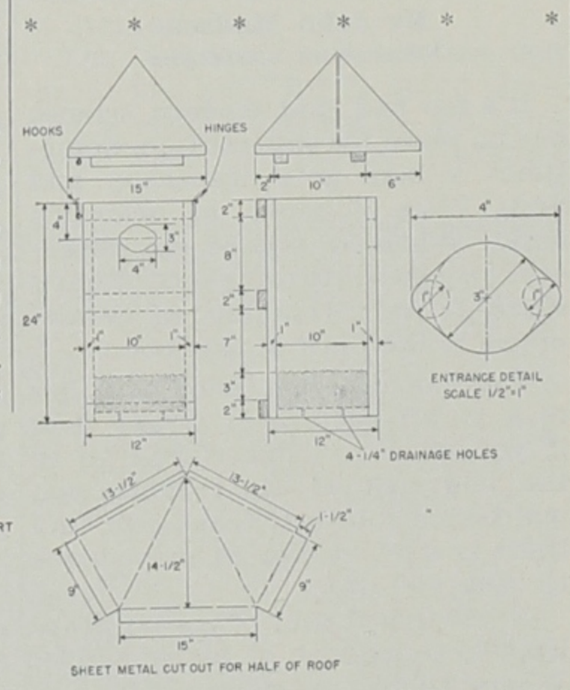
Wooden boxes are usually made from one-inch lumber free from knot holes and cracks. For low cost, native or second hand lumber may be used. Any knots or cracks must be covered, for the ducks will not use boxes permitting light to enter near the bottom. Since the ducklings must climb to the entrance hole to leave the nest rough lumber should be used at least for the front section. If only dressed lumber is available, attach a strip of screen wire or hardware cloth to the inside of the front to permit them to climb out.

Jim Sherman Photo.
Experiments have shown that galvanized sheet metal wood duck boxes are predator proof and readily accepted by the birds.

The entrance hole is centered on the front of the box from four to six inches from the top. An oval hole 3" x 4" will effectively keep out 'coons, and still allow entrance for the ducks. Such an oval hole should be used on all wood duck boxes, with the small diameter vertical and the large diameter horizontal.

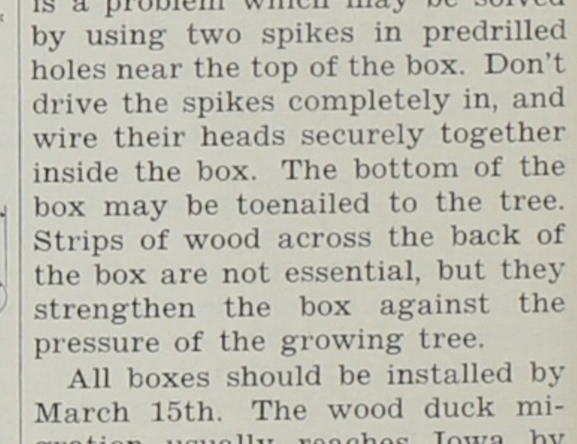
The box may be filled with hardwood sawdust or planer shavings to a depth of four inches. Leaves may be used, but they are less attractive than the wood particles which line the bottoms of natural cavities. At least four ¼" drain holes should be drilled in the bottom of each box to prevent the accumulation of moisture.





A new type of metal box has been developed by Frank Bellrose of the Illinois Natural History Survey. This box is made from 12" stove pipe with a wooden bottom and a conical sheet metal roof, designed to prevent the entrance of predators. In order to permit the ducklings to climb out, the interior of the box is covered with automobile undercoating about ⅛" thick. This can be painted on with a brush. About one pint of undercoating is needed for each nesting box. A box of this type is easy and cheap to build and is highly recommended. All metal or metal-covered nesting boxes should be painted a flat olive-drab of "dead grass" color. Wooden boxes may be left unpainted, but some form of paint or wood sealer will help prevent rotting and warpage and add to durability.

A third design is modified for post mounting on marshes and ponds:



Suggested sites for this type of box are marshes, oxbow lakes, overflow lakes, and farm ponds. Post boxes should be placed from six to 10 feet above the water surface, and on all river locations the box must be well above the flood crest.

Tree boxes should be mounted at a height of 10 to 20 feet in living trees not more than a fourth of a mile from water. Avoid placing the boxes with a northern exposure. Annual growth of the tree is a problem which may be solved by using two spikes in predrilled holes near the top of the box. Don't drive the spikes completely in, and wire their heads securely together inside the box. The bottom of the box may be toenailed to the tree. Strips of wood across the back of the box are not essential, but they strengthen the box against the pressure of the growing tree.

All boxes should be installed by March 15th. The wood duck migration usually reaches Iowa by the middle of March and the ducks begin their search for nesting sites immediately. They usually set up housekeeping in April. The eggs are small, rather round, and light cream colored. A full clutch contains from eight to fifteen eggs and the cavity hollowed out in the wood chips will be filled with down from the female's breast. If you wish to check for occupancy in early May, incubating females may be flushed by rapping sharply on the tree trunk or post with a club.

Nesting boxes will not entice

(Continued on page 109)

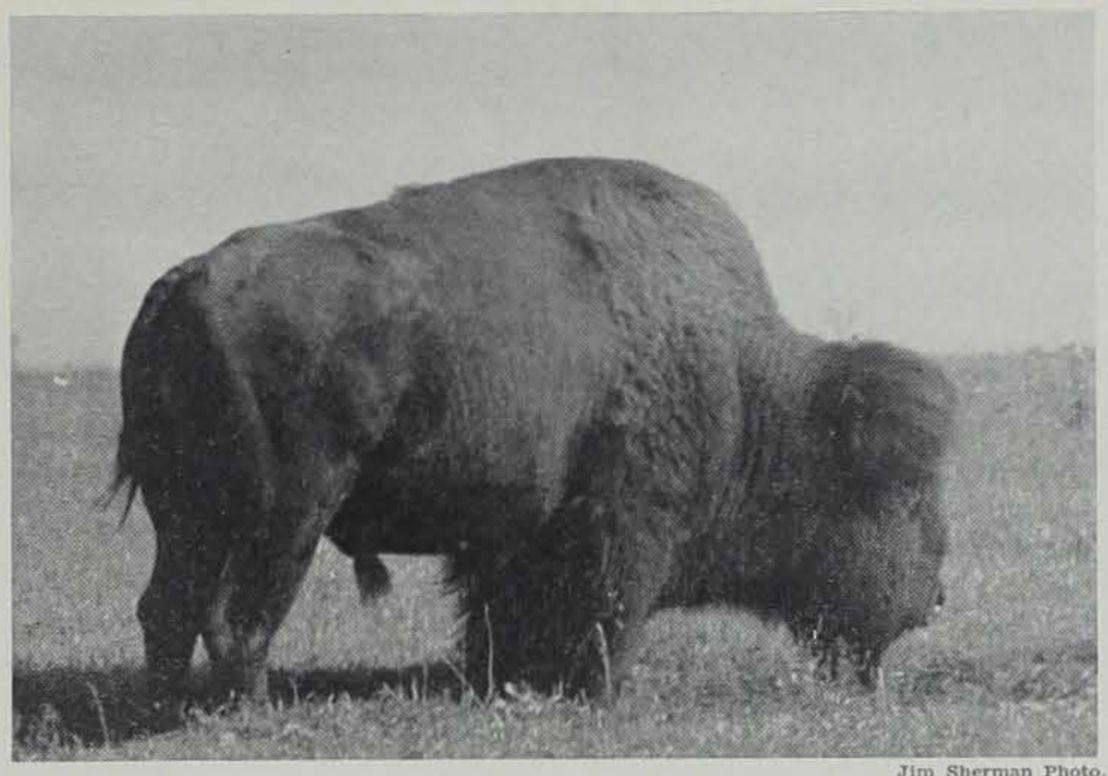
THE AMERICAN BISON

By David H. Thompson and Roberts Mann

In Montezuma's zoo, Hernando Cortes marvelled at a curious beast which he said was "a rare composite of several divers animals;" and when the first Spaniards reached the plains of Texas and Oklahoma they were awestruck by vast herds of those "crooked-backed oxen." Pére Marquette, who spent the winter of 1674 on the shore of Mud Lake, now part of Chicago, wrote in his diary about the "wild cattle" that saved them from starvation. Father Hennepin and Tonty's nephew left detailed accounts of how the Indians killed such "cattle" along the Kankakee and Des Plaines rivers, and on the prairies of Illinois.

What these men saw was the American Bison which, like the beaver and the deer, was to greatly influence the history of the United States. Since the Ice Age, it has been the largest animal in America. The moose is taller but not so compact and ponderous. An old bull bison may be 10 feet long, stand six feet high at the shoulder, and weigh considerably more than a ton. It is not a buffalo. The true buffaloes of Africa and Asia, dangerous animals in the wild, do not have that big broad hump over the shoulders, covered with a dense mat of shaggy hair, nor that long beard under the chin. Our bison is rather stupid and, in spite of its great strength and formidable appearance, conceals a peaceful retiring nature inside that massive curly head. There are many records of men passing unharmed thru a grazing herd, and of migrating herds calmly dividing to pass around a team and wagon. However, although the bison's senses of smell and hearing are very acute, their eyesight is poor, and it meant almost certain death to be caught in the path of a frenzied thundering stampede.

Bison originally ranged over about one-third of North America, from Mexico to Great Slave Lake in northern Canada, and from the Columbia River to the Alleghenies. The eastern race was exterminated in New York and Pennsylvania about 1800. The Woodland Bison of Canada is a little larger and darker, with more slender, longer horns. Frontiersmen told of herds numbering 100,000 that wore deep trails to the salt licks in Kentucky and elsewhere. The B&O RR follows an ancient buffalo trail thru the mountains of West Virginia.



Jim Sherman Photo.
An old bull bison may be 10 feet long, stand 6 feet high at the shoulder and weigh considerably more than a ton.

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On the Great Plains, however, their movements were largely north and south. Roughly divided into a northern, a central, and a southern herd, they made mass migrations in autumn and spring. In May of 1871, in western Arkansas, Col. R. I. Dodge travelled 25 miles thru the path of a herd that, moving slowly northward, required a day and a night to pass that point. Actually, such masses were a conglomeration of innumerable small herds of from 50 to 200, somewhat separated and each led by an old bull. The plains were not black with buffalo *all* the time. They were constantly on the move, feeding on the short but highly nutritious gramma grass and buffalo grass, so that no area was overgrazed.

According to the most generally accepted estimate, by Ernest Thompson Seaton, there were at least 60 million bison in North America when the white man came. There were probably about one million Indians, including 100,000 on the Great Plains, but the red men killed only what they could use. The wolves and panthers killed many but these were usually very old, sick or crippled. The natural increase—one calf per cow each year—was largely offset by those that perished in blizzards, prairie fires, in the treacherous quicksands of those western rivers, and especially by the tremendous losses that occurred when they attempted to cross those rivers on rotten ice in spring.

The extermination of the bison was inevitable. The plains and prairies that supported those roaming herds of huge beasts are now dotted with cities and towns, crossed by a network of railroads and highways, plowed to produce vast acreages of wheat, corn, cotton, and other crops, or fenced and grazed by millions of cattle and sheep. We should be ashamed of the cruel senseless waste when they were slaughtered and left to rot but the cold fact is that the buffalo was doomed by civizilation.

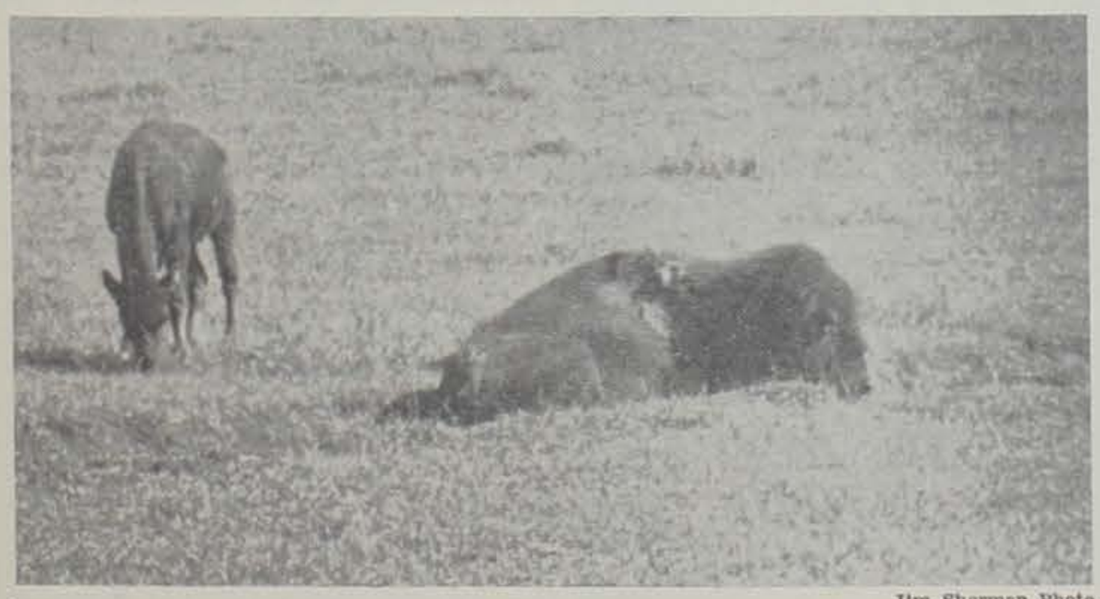
Until we came, the Indian was still living in the Stone Age. His weapons were primative, his needs were simple, and until horses appeared—wild descendants of those left behind by the early Spanish explorers—his only domestic animal and beast of burden was the dog. At least nine tribes of Plains Indians, such as the Sioux and Comanche, were nomads who depended almost entirely upon the buffalo, but they killed no more than what they could use—usually less. To several other tribes, like the Pawnee and Kansas, who lived in villages and grew corn, tobacco and other crops, the buffalo was less essential. That was even more true of the eastern "woodland" Indians.

The typical Plains tribes attempted no agriculture and made no pottery. Their culture, including their religion and mythology, was based wholly upon the bison which furnished them with food, clothing, weapons, tools, utensils and shelter. Their tepee was a conical framework of long slender poles covered with dressed buffalo hides. They used every part of the animal. Its flesh was their chief food, supplemented by berries, edible roots, and by corn obtained from other tribes. The tongue was a delicacy and the liver was eaten raw. The surplus meat was dried into "jerky" to be eaten in emergencies or pulverized and mixed with tallow, marrow and berries to make pemmican. The brains were used in preparing skins for robes, moccasins, leggings, shirts, parfleches and bags. Buffalo hides were stretched over the frames of saddles, shields, and the tub-like "bullboats" for crossing rivers. Spoons and other articles were made from the horns which, with the hoofs, also furnished glue. Small bones were used for needles and awls; larger ones for weapons; shoulder blades for hoes. Buffalo droppings "or chips" were the principal fuel on these treeless plains.

The wholesale slaughter of the bison began after the Civil War, at first for their meat—of which only the tongue, hump and hindquarters were used. During the '70's and early '80's, millions were killed for their hides alone, and the carcasses left to rot. As the railroads penetrated the West, they advertised cheap excursions for "sportsmen" who liked to see how many buffalo they could kill in one day. Eventually the bones, which in many areas covered the plains as far as one could see, were gathered by nesters (homesteaders), and a strange wild breed of men called "bonepickers", shipped east, and used for fertilizer or to make charcoal for refining sugar. Then there was nothing left of the buffalo but a memory. In 1900 there were only about 800 left alive.

The Indians bitterly resented this destruction which meant the end of their way of life. There were years of terrible massacres and bloody warfare, especially with the Comanche and the Sioux. Their ultimate defeat was hastened by the extermination of the buffalo, urged and aided by Gen. Phil Sheridan and the U. S. Army. Today, by careful management, there are about 25,000 bison in parks, reservations and zoos in the United States and Canada.

And a hybrid of the buffalo with domestic cattle—the Catalo.—*Nature Bulletin, Forest Preserve District Cook County.*



Jim Sherman Photo.
Although the bison has long been extinct in the wild in Iowa, several small herds are kept in captivity in this state by individual farmers.

"JOE BEAVER" By Ed Nofziger

Forest Service, U. S. Department of Agriculture

Yes, Joe, there is a lot of bread and butter going downstream in that silt-laden river.

Jim Sherman Photo.
"The multiflora rose hedge we planted behind our house a year ago last spring is beginning to pay off. It bloomed for the first time last June."

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ROSE HEDGE BEGINS TO PAY OFF

The multiflora rose hedge we planted behind our house a year ago last spring is beginning to pay off. It bloomed for the first time last June and the red seed pods left by the flowers are attractive to a pair of cardinals who are spending their second winter in our neighborhood.

We have noticed, from the kitchen windows, the redbirds in the hedge, eating the berries. They stand on tiptoe to get the pods high enough on the arching stems to be put of reach and then, with their broad, rounded bills, crack them open and make short work of the meat inside.

It looks as if the hedge will help hold the cardinals, who for two winters have been feeding on the sunflower seeds we scatter about under a cedar tree for them and other seed-eating birds. They can mix up their diet a little more now.

The hedge is about 60 feet long with the plants spaced a foot apart. It has thrived where the morning sun got at it and is coming along, but shorter stemmed, where it marches through the shade of a jackpine. The tallest stems are head-high and it was only on these sun-bathed plants where flowers, small pinkish-white rose clusters, bloomed the second year.

The flowers are nice but not spectacular. If it had been blossoms we wanted, we would have planted another kind of rose. We wanted it for birds and to hedge in a stretch of backyard. If it doesn't winterkill, and this is pretty far north for it, this hedge should be just the ticket for the spot it's in.

It is the thorniest stemmed rose we have ever stuck our hands on, which makes it (or will when it fills out) an enemy-proof refuge for birds. Unless you have wings you can't get into it without getting scratched. The dogs leave it alone after trying it a few times. We see them backing out, shaking the prickles from their coats. A cottontail has been cropping a few stems and this has got to stop.

When the time comes to crop it, we'll do it.—*Emmetsburg Democrat.*

GUN SAFETY IN SCHOOL

Fayette County's official tally of highway deaths during 1952 was only two, a truly commendable record. With the thousands of miles of highway traffic in this county, only two deaths for the entire year is a record of which we can be proud.

However, the same daily papers that carried the highway death figure reported the third fatality in Fayette County from gun accidents, as Lyle Miller, a 13-year-old Fayette youth died at Mercy hospital in Oelwein of a wound suffered accidentally while he was hunting rabbits.

We would imagine that particular ratio of three accidental gun deaths to two highway deaths has been repeated nowhere else in the nation.

And in all likelihood it won't be repeated here in Fayette County over any future year.

But it certainly should make us pause and consider our efforts in behalf of gun safety.

All of these three accidental deaths involved youngsters. All were due to mishandling a gun. One was the proverbial "gun that wasn't loaded," the other two were carelessness while hunting.

We have for years been teaching highway safety to our youngsters in the public schools.

Perhaps we've reached the time when somewhere along the line in grade or high school, youngsters should also be taught the few vital rules of gun safety.

A gun, properly handled, can be a continuing source of pleasure to an active, outdoor minded youngster. But, as these three tragedies so clearly point up, it is a lethal weapon when mishandled through either carelessness or lack of knowledge.

We would like to suggest that one class in the public schools of our communities set aside a few minutes, during the year's work, to teach gun handling and safety. If no one on the faculty is qualified to instruct, each community has at least one good sportsman who would be glad to donate his time and talents for such a cause.

State Conservation Officer Harry Blomquist of West Union would also be available and more than willing to help with such a program.

Hunting season is continuing and now, before more tragedies hit home, is the time to do something about teaching gun safety. — *The Fayette County Union.*

Contrary to popular opinion northwest Iowa once produced as many waterfowl per acre of available habitat as any region in the continent.—J. S.

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Bill Ayers Photo.
"Perhaps we've reached the time, when somewhere along the line in grade or high school, youngsters should be taught the few vital rules of gun safety."

Of a 162 tagged channel catfish, 37 per cent stayed within a mile of where they were tagged.

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FISHES STAY AT HOME

Fish apparently are pretty much homebodies. That's the word from John Funk, fisheries biologist of the Conservation Commission, after studying reports of tagged fish taken by Missouri anglers during the past summer.

Of 162 tagged channel catfish reported, 37 per cent had stayed within a mile of the spot they were tagged. Funk found that 35 per cent averaged a 15-mile journey upstream before falling prey to some fisherman, and 19 per cent traveled downstream about 11 miles. Nine per cent made complex movements, up one stream and down another, averaging distances of 47 miles.

Carp were similar. Forty-two per cent moved less than a mile from home, but they had a decided yen for upstream. Thirty-two per cent traveled up the river, averaging 14 miles in their journeys; 18 per cent traveled downstream. Another eight per cent had real wanderlust, traveling an average 120 miles.

The best fireside sitters were the rock bass. No complex movements were reported, and 71 per cent stayed within a mile of the tagging site.

The top traveler was a smallmouth bass which went down White River and up the James before falling for a shiny lure. He had traveled 121 miles! Up and down stream movements for smallmouths averaged five miles, and 69 per cent stayed within a mile of their tagging site. — *Missouri Conservation Commission.*

The Brahminy duck, or ruddy shelldrake of Asia is almost as large as the blue goose. These brown ducks are usually found in pairs. He has the slow wingbeat of the goose, and because of the haunting quality of his goose-like honk the pairs are said by people of India to be incarnations of lost lovers who are doomed to forevermore call vainly for a lost mate.

Jim Sherman Photo.
"Look at it this way: the city boys don't get much of a chance to get out into the field except during their infrequent hunting trips."

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HUNTING BY PERMISSION ONLY

By Robert V. Fischer

We neglected to mention last week that we have plenty of signs reading: "Hunting by PERMISSION ONLY—Please Inquire at Farm House." These signs are absolutely FREE and you can have as many as you desire. Our purpose in making these available is to promote better farmer-sportsmen relationships.

Many in the printing business not only print "No Hunting" signs, they even advertise them, for as high as 25 cents per each. Buddy, it is against our scruples to encourage the placing of "No Hunting" signs on property and you don't have enough money to buy them from us.

We have given out hundreds of the signs mentioned in the first paragraph and have yet to receive a complaint on the results they obtain. And we have never met a farmer on whose land one could not hunt if he was approached first in the proper manner. Occasionally he wishes the hunting saved for a special reason and we, ourselves, have inquired on farms on which our signs were posted and have been told that persons were coming to hunt and that the hunting was being reserved. We certainly did not take offense at this, being pleased that outsiders were given this consideration.

Actually, the relationships between local hunters and farmers are excellent. However we have been feeling rather low of late years over the antagonism expressed by farmers in regards to those persons coming into this territory during the pheasant season.

Look at it this way: the city boys don't get much of a chance to get out in the fields except during their infrequent trips through the rural areas as the hunting around the cities is fairly well worked over. Thus their hunting is restricted to one or two trips a year in which they would appreciate the opportunity to get some shooting. Now these guys aren't boors, they are nice, decent people with whom you would be pleased to associate under any other circumstances. If they are a trifle lax in hunting etiquette it is only because they haven't the experience acquired by those of us who have good hunting conditions at our very doorstep. And it is only fair that we assist them to fill in these gaps rather than to assault them with bitter condemnation.

One of the great benefits of life is to make new friends and to create wholesome associations. Farmers are a gregarious lot and are as big-hearted as any other people. Yet they feel their ire rising when an out-of-county car drives in their yard with the intention of requesting permission to hunt. After these so-called "outsiders" receive several rebuffs and feel their hunting time slipping away it is only natural that they attempt to sneak into someone's back sixty, oftimes with unfortunate results.

Thusly we are asking our farmer friends to extend the same consideration to strangers that they give to local hunters. Rather than judging a party of hunters by their license plate why not talk with them and find out what kind of people they are? In doing so the farmer can acquaint them with the conditions under which he permits hunting on his property and can ask them to cooperate in saving enough birds for stocking purposes. When finished they can report back to him so he can have some idea as to how much hunting will be left for future hunters. You would be surprised how many firm and lasting friendships are made in this manner.

We are proud that we are one of the few newspapers in the state who are actively engaged in improving hunting conditions, through the donations of hosts of the aforementioned signs and by word-of-mouth and printed publicity. We feel that our program is active and progressive and that if it were adopted by other news disseminating agencies in Iowa we would be well on our way toward solving the difficulties.—*The Greene (Iowa) Recorder.*

IOWA SWANS

Twice within a year rare swans have been killed by hunters here in central Iowa. Both times the kill was made by an honest but uninformed hunter . . . who was eager to have his kill a matter of public record . . . and who was firm in his belief that he was killing a Snow Goose. However ignorance is no excuse in the eyes of the law and both of these hunters paid the penalty . . . a very modest sum for such a beautiful and rare bird. This could have been you or me just as well, so . . . in order to absorb and give out some wildfowl education . . . we dug into our library and came out with the following information:

The Whistling Swan—also the Swan or Wild Swan. "Length 54 to 58 inches. Weight 12 to 18 pounds. It is the largest of the waterfowl now found in Iowa. Entire body plumage white. Head sometimes stained with rust. Bill ordinarily black with an oblong yellow spot near base of front eye. Feet black. The juvenile is mostly mottled light gray. Feet are grayish. A large bird conspicuously larger than any of the geese. It's pure white and DOES NOT have black primaries as does the snow goose. In flight and on land or water, its large size and very long neck are outstanding. Cannot easily be mistaken for any other type of waterfowl except the Trumpeter Swan which is practically extinct."

The Lesser Snow Goose—other names, brant, white brant, snow, white wavey or California Goose. "Length 25 to 28 inches. Weight 3 to 6 pounds. Both sexes are identical in appearance though the males are sometimes slightly larger. Bill and feet pinkish lavender. The snow goose is identified by its white plumage and black wing tips which are evident at a long distance. It is the only goose in Iowa having white plumage. ITS SMALLER SIZE AND BLACK WING TIPS MAKE IT EASILY DISTINGUISHABLE FROM THE SWANS." All of the above information was obtained from "Waterfowl in Iowa" published by the State Conservation Commission.—*By John Garwood, Marshalltown Times Republican.*

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Jim Sherman Photo.
Twice last year, swans were killed by hunters in central Iowa. Both hunters paid the penalty, a modest sum for such a beautiful bird.

Housing Project . . .

(Continued from page 106)

birds to unfrequented areas. The boxes should be located in timber where ducks are known to occur, and any installed in open woods along our major watercourses will be eminently successful. Once a box is used, you can put up some more in the same vicinity, with assurance that they will be used. —J. M.

Quail eggs are deposited in the nest over a period of two or more weeks. The hen remains on the nest for only a few moments when laying. In successful nesting, development of the embryo does not begin until the last egg is laid, and parent birds are continuously on the nest.—E. S.

An adult size quail will measure about eleven inches from wing tip to wing tip. In good condition the quail will weigh about six and one-half ounces, and for one meal he will eat from a quarter to a half ounce of grain, insects, weed seed, or greens.—E. S.

Male quail, in June, during good weather, may at sunrise call as many as seven times per minute. During periods of bad weather the "Bob-White" call will be heard only a few times during the entire day. —E. S.

"Waterfowl in Iowa" is no longer in print. The Conservation Commission has authorized a reprint that should be available from the Conservation Commission within 60 days. It will be sold postpaid for one dollar ($1.00).

Blain's Encyclopedia of Rural Sports Illustration.
"A bewitched gun offers no problem to a student of black magic, just tack a sheet of paper to a tree and on it draw the face of the bewitcher."

Old Black Magic . . .

(Continued from page 105)

ably his bag limit of hunting companions.)

According to the occult sciences, your gun may be all right, but your ammunition might be jinxed. So don't count your bullets before you start out on a hunt . . . it's bad luck. But if you drop a cartridge while loading your gun, that cartridge will be a lucky shot. If you want good duck hunting next fall, save the shot from the first duck killed, and you'll have good luck the rest of the season. The old-timers had a simple explanation for this . . . once a shot or bullet is taken from game it will be lucky when used again, for it is a "killer" shot.

If you want to go all out on improving your ammunition, here's some good witchcraft. Back in the old days a German hunter named Freishütz (or "Free-shooter") received seven rounds of ammunition from the devil, with whom he was in league. Six of these shots would infallibly hit the target chosen by the shooter, but the seventh were believed to have infernal connections, obtaining "free balls" either from the devil or one of his conjurers. So the next time you are on a skeet range and see a shooter break six straight birds and then shoot a deacon with his seventh round, view that man with suspicion.

There may be other reasons why you missed those pheasants. For a really good hunt, you should wear a bittern's claw in your buttonhole. The next best thing is a prairie chicken's wishbone hanging over your heart. However, both birds are protected, so you had better just settle for having a lady give you a penny before you go hunting. This isn't very strong medicine, but it's better than nothing.

With your gun and ammunition properly dejinxed and medicated, you're ready to go hunting. But in what direction? To decide, simply, set up a straight stick and hold it by its end. Let it fall over, and whichever direction the stick points is the way to go. Evidently the ancients didn't consider the wind on this point, because if the stick blows over you will approach the game from upwind, which isn't very smart.

The birds and animals you hunt are powerfully influenced by magic. For instance, if you are after 'possum don't leave home until you have greased your dog's left front foot with bacon fat. Then, when you have killed your first 'possum, slit his left ear. If you do this, it's going to be a good 'possum night.

When you go 'coon hunting and hear an owl hoot on the left side of the trail, you might as well go back to bed. But if the owl is on the *right* side of the trail, or if the hounds roll over a couple of times, you're going to bring home 'coons.

If you shoot into a covey of quail, kill one and can't find it, you'll get no more birds from that covey. AND THE WORSE POSSIBLE THING YOU CAN DO IS TO SHOOT A RABBIT UNDER AN ALDER TREE! It's a fearful omen, so don't forget it.

It is also bad luck to shoot a cooing dove, and if you don't believe it is in Iowa these days, just ask a conservation officer. However, it's good luck for two hunters to yell at a dog at the same time, and to draw the blood of any wild animal on New Year's Day means good hunting and fishing for the rest of the year.

Once you're in the field, never eat cheese or chew spruce gum. If you do, brother, you're hexed! Certain California Indians also considered it unlucky to eat meat they killed themselves, so they hunted in pairs and then swapped their game.

The Belgians say that if a hunting dog rolls over three times in dewey grass, he will hunt no more that day, and the Persians claim that if a cat eats any part of the first game of the season, hunting will be slow until next year.

In case you brought a pheasant or quail into the house this season and a drop of blood fell from the bird, discard any object on which the blood fell. That object is bewitched, and will burn or break very easily.

The Cherokees had an incantation which they mumbled when they drew their bows on game: "Instantly may the red Selagwutsi strike you in the center of your soul . . . instantly! Yu!" At the "yu" the bowstring was released. We tried it on pheasant this year, and by the time it was spoken the bird was a hundred yards away. But then, I was using a shotgun, and the incantation was written for bow and arrow.

If I had killed that pheasant, I would have bitten off the tip of its tongue. The Indians claimed that this makes for good hunting the rest of the day.

Seriously, there's not a grain of truth in any of this. You can take it or leave it; I'm too hungry to care one way or the other. I've been fox hunting all week, and haven't eaten anything but raw vegetables. Not that I'm superstitious, but the Indians *do* say that if you eat cooked food before hunting, the game can see the cooking fire inside you. . .

Jim Sherman Photo.
"What we need is an infusion of new and dumber pheasant blood into the present stock."

NEEDED NEW PHEASANT BLOOD

What this country needs is an infusion of newer and dumber pheasant blood into the present stock. Our pheasants have been getting smarter for so many generations that they are now too smart by instinct.

It used to be that they would get up and fly away if anyone got within say 25 or 30 feet of them. But not any more. We stood within six inches of one the other day for several minutes. It was only when we accidentally nudged him with our foot that he got up and flew away.

What chance does a half blind, unable to hunt by smell, human being have against such an adversary? Let's import some of those old-time dumb pheasants that would get up and fly away when they were supposed to. — *Eagle Grove Eagle.*

Blain's Encyclopedia of Rural Sports Illustration.
"With your gun and ammunition properly dejinxed and medicated, you're ready to go hunting."

Of all Iowa snakes only the rattlesnake and the rare copperhead are poisonous.

Jim Sherman Photo.
The park land at Storm Lake was made by dredging silt and sand from the bottom of the lake into a fill area enclosed by a dike.

Old and New . . .

(Continued from page 105)

the great number of boulders, some of them weighing tons, along the shore of Storm Lake. It also partly accounts for the excellent beaches of sand and gravel.

The stoney character of the drift in the vicinity of Storm Lake can be observed in the bluffs on the south side of the lake. It has a high content of sand and gravel, with an occasional cobble or boulder. As it is washed into the lake, the clay and silt are carried out by the undertow and currents. The sand and pebbles are left to form a beach. Of course the larger rocks are not carried out into the lake either. As the lake shore retreats under the action of the waves, the boulders are pushed shoreward by the ice in the winter. Thus the lake comes to have a "walled" character.

The early settlers made excellent use of these boulders. In the absence of good timber they used them in the construction of buildings. Now many of them have been replaced along the lake shore at great cost by the Conservation Commission to serve as rip-rap to protect the shore from erosion.

These cobbles and boulders from the glacial drift are a study in themselves. They once formed part of the bedrock, the solid crust of the earth, of the country to the north. Some of them probably came from a thousand miles away, carried along by the slow moving ice. They are of many kinds.

One kind of rock to which many people's attention is attracted is quartzite. This is a very hard rock —a uniform pink, red, or purplish-red in color. It is composed mostly of the common mineral quartz. A small amount of the mineral hematite, a compound of iron and oxygen, gives the color.

Quartzite is the solid rock which directly underlies the soil and subsoil of part of Lyon County in north-western Iowa, and of nearby areas in Minnesota and South Dakota. It even appears at the surface in places. It was once a bed of sand, accumulated as a deposit on the bottom of an ancient sea. Gradually it hardened to a sandstone. Then in the course of the ages it hardened still farther to form a quartzite.

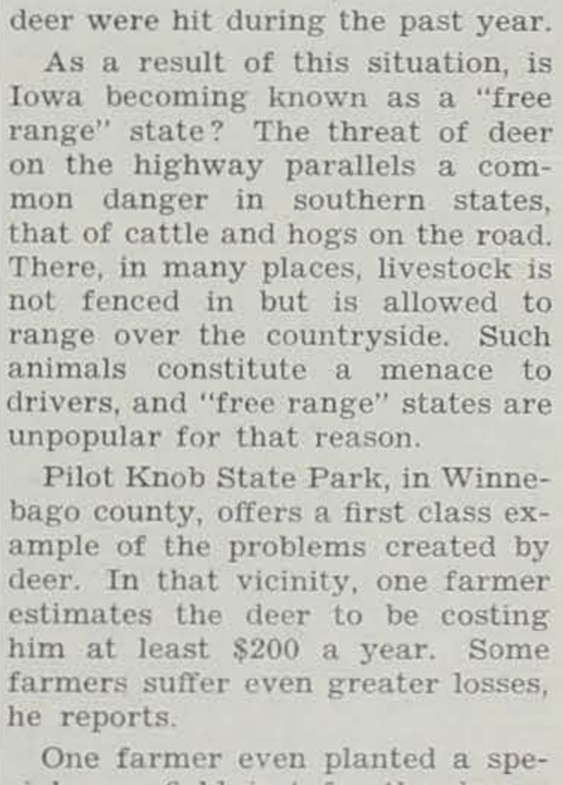
The grains of sand in the quartzite can be seen with a magnifying glass. They are so firmly cemented together that when the rock is broken the break goes right across the grains, instead of around and between them, as it would in sandstone.

There are three classes of rocks, two of which make up almost all of the boulders along the shore. Sedimentary rocks are those formed by the hardening of the sediments. Sandstone, shale and limestone are examples. Most of the bedrock of Iowa is sedimentary. Rocks of the second class are formed from molten rock called magma. Those of the third class, metamorphic, are formed from either igneous or sedimentary rocks, usually through the action of great heat and pressure. Granite is an igneous rock and quartzite is a metamorphic rock.

The boulders that form the "wall" and the rip-rap of Storm Lake are either igneous or metamorphic. Together they are often referred to as crystalline rocks. They are much more resistant to weathering and erosion than sedimentary rock. There are many interesting kinds among them beside quartzite. Even though the glaciers moved over wide expanse of country underlain by sedimentary rock there are few sedimentary boulders in the drift. Thus, there are none along the lake shore. But there is plenty in the form of sand, silt, and pebbles, much of it ground or broken off the bedrock surface by the glacial ice.

The boulders of igneous and metamorphic rock came from the areas to the north where these rocks occur at the surface. The nearest place for many such boulders would be northern Minnesota or Wisconsin. The quartzite blocks on the other hand may have come from southern Minnesota or northwestern Iowa.

Not many streams flow into Storm Lake. Thus not much sediment is brought in by running water. It is primarily through wave and current action that sediment is carried out into the lake. Thus the problem of sedimentation in Storm Lake is not as serious as in many other Iowa lakes. For this fortunate circumstance and for the enjoyable and interesting features of the lake, we must give the principal credit to a vast ice sheet which came down from Canada thousands of years ago.



Jim Sherman Photo.
"Pilot Knob State Park in Winnebago County offers a first class example of the problems created by deer."

Jim Sherman Photo.
Of course, the main attraction at the park is the lake. Anglers find the riprapping placed along the "made land" excellent for shore fishing.

FREE RANGE STATE

Iowa motorists have been warned of the danger of hitting deer on the highways at night. In several counties of the state, four or more deer were hit during the past year.

As a result of this situation, is Iowa becoming known as a "free range" state? The threat of deer on the highway parallels a common danger in southern states, that of cattle and hogs on the road. There, in many places, livestock is not fenced in but is allowed to range over the countryside. Such animals constitute a menace to drivers, and "free range" states are unpopular for that reason.

Pilot Knob State Park, in Winnebago county, offers a first class example of the problems created by deer. In that vicinity, one farmer estimates the deer to be costing him at least $200 a year. Some farmers suffer even greater losses, he reports.

One farmer even planted a special corn field just for the deer—though it must be difficult to teach this fact to the deer! He said the deer had broken down a new mesh wire fence in several places while visiting his corn field.

Due to the danger to motorists and the cost to farmers occasioned by increased deer numbers, it would seem advisable for Iowa to inaugurate a short open season for deer hunting.—*Lake Mills Graphic.*

Dick Kent and R. T. Tidrick Photo.
The air photo of the ancient Indian fish trap shows its location in a bend of the Iowa River, the V pointing downstream.

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Fish Trap . . .

(Continued from page 105)

While the river was still low, another trip was made to the dam with C. J. Posey, of the SUI Civil Engineering Dept. and Dr. H. G. Hershey, State Geologist. Posey found that Keyes had erred in his estimate of the size of the dam, and that each wing was almost exactly 150 feet long, rather than a hundred yards as stated in the original reference. A pocket of glacial boulders was found in the adjacent bluff by Dr. Hershey, and was undoubtedly the source of material used in the dam's construction.

Upon inquiry around the Amana Colonies, we found several people who knew of the dam but few who had seen it or knew what it was. From evidence on the river banks, the dam is patronized by local fishermen who probably regard it only as a riffle since little water is required to cover it. Several of us have canoed over it in the past without suspecting a structure of any kind.

According to Dr. D. B. Stout of the SUI Dept. of Anthropology, this type of fish trap was not uncommon among the Indians, and there are areas where it is still in use. Such a trap usually consists of a fence of poles or saplings woven together and anchored in the rock dam. The apex of the V is left open, and the fish are trapped or speared in the narrow entrance. There is no evidence that the American Indians used nets before the coming of the white man.

It is not known when the dam was built, or how long and effectively it was used. But even if it was brand new, it would still be interesting . . . to conservation officers. Although the ancient Indians weren't concerned, such a fish trap is now highly illegal.

When handling fish while scaling them, dip your hands in salt to prevent fish from slipping out of your grasp.

Wardens Tales

Shop Talk from the Field

Here's one from Bob Cleary, fisheries biologist, about a farmer who literally blew up when he saw some illegal hunting.

"The whole thing happened shortly after the opening of pheasant season in Buchanan County, where a farmer was blasting rocks out of a field with dynamite, using one of those electric push releases.

"He had buried a charge beneath a ledge, and had led the wiring a safe distance away. He was nearly ready to set off the dynamite when he noticed a car driving slowly along the road. It came to a stop near an area where the farmer had noticed some pheasants earlier. The driver furtively poked his shotgun barrel out of his window and was taking aim just as the farmer pushed the plunger on his release box.

"The hunter didn't even bother pulling his shotgun barrel back into the car, and according to the farmer the car was still roaring along in low gear as it went out of sight."

Herb Eells, in charge of Howard and Chickasaw Counties, sends in a story about trapping and chemistry:

"A trapper in Howard County bought his trapping license and ten extra tags for last season. He had always had good luck catching mink, and knew the value of having fairly clean traps.

"His method of cleaning traps was to boil them in lye water. The new trap tags seemed to have a little oil on them, so they went in, too. But, when the time came to empty the pot, all he could find of the tags were the little lead rivets. He had no choice but to buy some more tags, and he was careful not to boil them.

"The trapper claims this is the first time this has happened to him, and he is wondering what kind of material the tags are made of."—*Aluminum-editor.*

From Dr. Paul Errington of Iowa State College comes a curious story, or a story of the curious, as the case might be:

"Here is a little natural history that you as a naturalist might be interested in. One day the week before last (mid-December), I lost the hatchet I was carrying for use in my muskrat studies, and although I knew that it was somewhere along no more than 200 yards of trail, and I worked back and forth over that 200 yards five times looking for it, it stayed lost. Then the recent snow came, and I thought that finished all likelihood of my ever seeing the hatchet again.

"But Saturday, I was working in the same vicinity and saw where foxes had been doing a lot of messing around in the snow. I had a hunch that they may have found the hatchet and become excited about it . . . and so it was. There in the middle of the packed fox tracks was the handle, which the foxes had obligingly uncovered for me. This, of course, is much the sort of thing to be expected of many wild dogs. Back in the mid-twenties when I trapped in the 'west river country' of South Dakota, a coyote would occasionally paw out the spring of a number four Newhouse trap that it had smelled out through the snow, and I think that the foxes were responding to my lost hatchet in essentially the same way."

While we're on the subject of illegal pheasant hunting, Floyd Morley, the Winnebago and Worth County conservation officer, comes up with this one:

"Last pheasant season I stopped a slow-moving car at about 11:30 a.m. Since they were driving so slowly they looked as though they might be hunting ditches, and I became suspicious. Sure enough, they had a loaded shotgun in the car and six birds in the trunk.

"Two of the pheasants were quite warm, and it appeared that two of the other birds were fresh also, although I couldn't be sure. To be on the safe side, I decided to take only the two freshest birds. The problem was solved when the county coroner drove up. He passed his medical opinion on the two birds that were in doubt, and as a result the hunters were not only prosecuted for having a loaded and assembled gun in the car, but also for taking four pheasants during the closed period."

SPRING GAME COVER PLANTING

Farmers may now place orders for multiflora rose, douglas fir, Norway spruce, red pine, black locust, dogwood, green ash, Russian olive, wild grape and stratified black walnut. Prices start at $6 per thousand for black walnut up to $17 per thousand for multiflora rose. Orders should be placed early with county extension directors, state conservation officers or soil conservation service personnel.

One thing we need more than anything else from a hunter-sportsman angle is more game cover. You can help do your part in providing more hunting for yourself, your youngsters and the future generations by getting your farmer friends to order some game cover and help him plant it next spring. You can also join one of your local conservation clubs and promote some extensive planting next spring by the club.

Rabbit raising tests by such organizations as the Missouri Conservation Commission indicate that the only answer to the question of how to have more rabbits is to plant more and more game cover. —*By Russ Graham, Cedar Rapids Gazette.*

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Jim Sherman Photo.
Multiflora rose, less than 2 years old, will soon provide a beautiful stock tight fence around this farm pond.