

IOWA CONSERVATIONIST

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Ground Hogs Build Homes For Iowa Fur-bearing Animals

By RICHARD F. TRUMP

No one knows just how much it costs to raise an Iowa ground hog. The price must be figured in terms of alfalfa, beans, clover, and corn—plus a small additional tax for the troublesome holes sometimes found in fields and for excavations which may lead to eroded banks.

Exact figures for these items must remain a pure guess until research on this common Iowa rodent produces definite information. So must the figures on the other side of the ledger. For to date no one knows just how much the woodchuck contributes to man's welfare by digging dens which are used by other more valuable mammals — cottontails and fur bearers. And few Iowans know how much it is worth as a source of meat.

The ground hog's preference for crops rather than for wild food is evidenced by the fact that its population has increased greatly since white men took over this region and began to cultivate the land. The centers of ground hog population today are found along the brushy creeks bordering cultivated fields of corn and legumes. The woodchuck, finding man's crops to his liking, has become a **field** chuck.

Although the dens are mostly in the protective cover near a good food supply, the animals sometimes invade the fields. Here they dig short burrows having usually only one or two entrances, using them for emergency escape during the feeding periods in the morning and evening. A certain amount of the crop is covered with subsoil thrown from the holes, and the den openings at times may be a danger to horses and other livestock. In talking

(Continued to Page 59, Column 1)

Spirit Lake Massacre By Band Of Renegade Sioux Indians Retold



Abbie Gardner Sharp and the Gardner cabin, which was the site of the opening of the Spirit Lake massacre and which has recently been purchased by the state.

Food Habits of Channel Cat Reveal Interesting Facts

By REEVE M. BAILEY and
HARRY HARRISON, JR.
Iowa Fisheries Research Unit

As part of a contemplated life history study of the channel catfish, the food habit interrelations were studied from September, 1940, until October, 1941. During this period 912 stomachs were secured from catfish taken in the Ledges State Park section of the Des Moines River; 769 of these contained food. Because of differences in forage organisms found in various waters the food eaten may not be the same as in other areas, but should fairly represent the feeding behavior at the area studied, or in other localities where comparable conditions occur.

A wide variety of foods were consumed; representatives of

some 50 families (12 orders) of insects, 14 kinds of plants, 17 species of fish, crayfish, snails, a bryozoan, a nestling bird, chicken feathers, mammal hair, and fish baits were among the items found.

Size of the catfish played a more important role than seasonal variation in the selection of food eaten. Catfish less than four inches long (see figure) had fed almost exclusively on aquatic insect larvae. Eighty per cent of the specimens containing food had true flies (**Diptera**), chiefly midge and blackfly larvae, 35 per cent had eaten mayfly (**Ephemeroptera**) larvae, and 31 per cent contained caddice flies (**Trichoptera**). Other groups of insects were represented by few individuals. Catfish from 4 to

(Continued to Page 60, Column 1)

Dark Period of Iowa History Recalled By Cabin Purchase

The recent acquirement by the state of the Gardner cabin and site at Arnolds Park again brings to the minds of Iowans the Spirit Lake massacre, the only Indian massacre that occurred in our state during its settlement.

In 1857 at the door of the Gardner cabin, the first built in Dickinson County, renegade Sioux Indians began the murders and scalplings that in a period of six days cost the lives of 40 Iowa pioneers.

To understand the story of the tragedy, the conditions existing immediately prior to the massacre must be understood. In 1850 the government established a military post at Fort Dodge and in 1851 purchased the land belonging to the Sioux Indians that lay west of the Des Moines River and north of Fort Dodge. In 1853 the post was abandoned, and the troops established Fort Ridgely at the north line of the purchase near the junction of the Rock and Minnesota Rivers in Minnesota.

After the departure of the troops, parties of Indians often came back to the old hunting grounds to hunt and fish and frequently committed depredations upon the scattered families of settlers who had begun to make homes in the new purchase.

Prior to the establishment of Fort Dodge one Henry Lott, who was known as a "whisky seller" among the Sac and Foxes, had been driven out of Webster Coun-

(Continued to Page 58, Column 1)

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Spirit Lake

(Continued from Page 57)

ty by the Sioux chief, Sidomina-dotah. Lott's stock was killed, his family mistreated, and one child was frozen to death after fleeing in terror from the Indian raiders. Lott swore vengeance against the Sioux, and shortly after the soldiers moved north he murdered the Sioux chief and all his family at their winter quarters in Humboldt county.

After these brutal murders the infamous Inkpaduta became leader of this band of marauders, and every unprotected settler from that time forward was in a state of alarm. During the next few years the Indian bands became more bold, but they did not murder, confining their activities to begging, plunder, and terrorism.

In spite of Indian trouble, settlement of our northwest continued rapidly, and by the summer of 1856 the ring of the cabin-building axe could be heard in many of the groves along the Des Moines and Little Sioux Rivers, and, paced by Roland Gard-



An early painting representing the massacre of the Gardner family at Okoboji in 1857 and the capture of Abbie Gardner by Inkpaduta's renegade band of Sioux Indians.

ner, a half dozen families that year established homes in the Iowa Great Lakes region.

The winter of 1856-57 was one of unprecedented fury, and deep snows early in the year isolated the settlers in Cherokee, Clay, Buena Vista, and Dickinson Counties. In February Inkpaduta's band, consisting of some 14 warriors, some squaws and papooses, began rampaging on the lower Little Sioux River and travelled upstream. The scattered settlements in their line of march were subject to every form of terrorism and cruelty short of death. The band's supreme violence was reserved for the Dickinson County pioneers.

On the shore of Okoboji on March 8, after begging food at the Gardner cabin, they shot and killed Mr. Gardner, beat the women to death with firewood, and scalped them before the eyes of the children. They then murdered the children, sparing only one, the 14-year-old Abbie Gardner, whom they carried into captivity. The occupants of the other two cabins on West Okoboji suffered similar fates. The Indians proceeded to East Okoboji, where they attacked two cabins, killed the men and children, and took Mrs. Thatcher and Mrs. Noble prisoners. Their bloody work was finished in Iowa on the 13th of March, when they attacked the cabin of the Marbles on Spirit Lake, killed the husband, and carried Mrs. Marble away.

In the entire lakes colony not a single person was left to carry the awful news to the outside. However, a trapper returning to the settlement the day following the Gardner murders witnessed the scene of death and desolation at the Gardner cabin and, after much suffering from cold and hunger, reached the Minnesota settlements and spread the alarm.

When news of the massacre reached the soldiers at Fort Ridgley, a company of regulars was sent out to pursue the Indians. The chase in the terrible weather was evidently half-hearted, and

the Indians and their captives escaped.

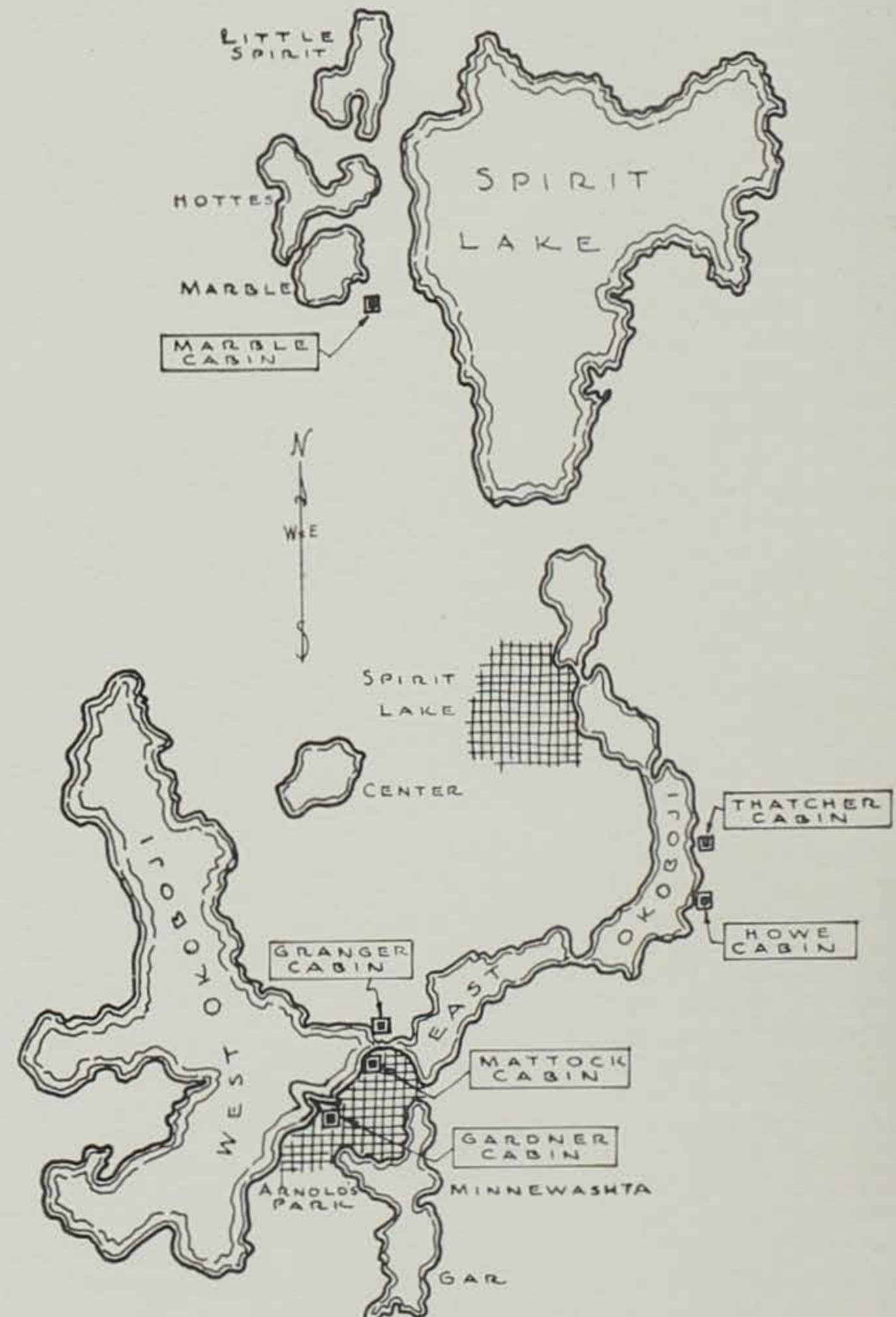
When news of the tragedy reached Fort Dodge, a relief expedition of 100 citizens was organized there and in Webster City. The expedition set out on March 24 and was able to make only six or seven miles through the tremendous drifts the first day. Finally on the last day of the month, when the expedition

had almost reached the Minnesota line, they were informed that the regular soldiers from Fort Ridgley had given up the chase. The commanding officer, after calling for volunteers to proceed to the lakes to bury the dead, ordered the expedition to return. Before reaching home many of the volunteers were badly frozen, and two members of the party were frozen to death.

The saga of the four captured women was both tragic and heroic. The Indians fled westward through blizzards and high water with their plunder, much of which was carried on the backs of the captives. Little 14-year-old Abbie Gardner's pack, weighing some 70 pounds, consisted of, in her own words, "eight bars of lead, one pint of lead balls, one tepee cover made of the heaviest, thickest cloth, one blanket, one bed comforter, one iron bar three feet long and a half-inch thick, the use of which I did not know, one gun, and one piece of wood several inches wide and four feet long to keep the pack in shape."

The westward march, which continued far into Dakota territory with almost unbearable suffering for the white women, and

(Continued to Page 63, Column 4)



Map of the Spirit Lake region showing the approximate locations of the six cabins that were built in 1857, the occupants of which were massacred.

Ground Hogs

(Continued from Page 57)

with farmers in regions thickly populated with ground hogs, however, I have not discovered actual cases of livestock injury.

While feeding on corn the woodchucks often gnaw at the base of the stalk and pull the plant down so the ears are within reach. Last August 29 I counted the down stalks in a Van Buren County field bordering a creek where the concentration of chucks was high. In the area of worst damage, 16 out of a series of 59 stalks had been destroyed in the first row parallel to the creek. In the second row the damage dropped to 11 out of 61 stalks, in the third 7 out of 60, and in the fourth row only one out of 59. Beyond the fourth row I found no stalk damage which could be attributed definitely to the ground hogs. So in this situation at least, the damage was confined to a relatively small portion of the field, certainly less than one half of one per cent of the whole field.

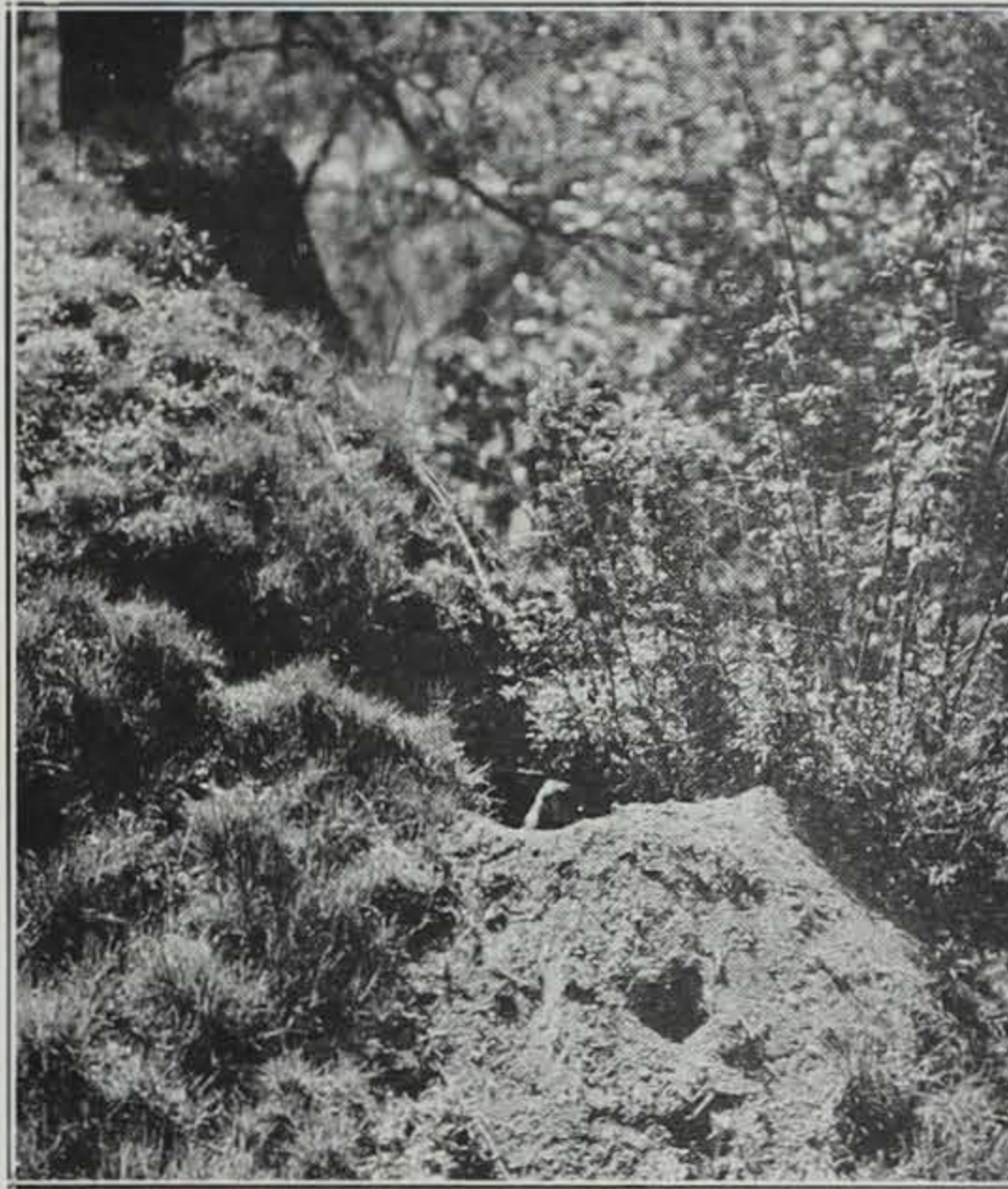
The damage to legumes is at times more extensive. In localized situations the ground hog population in Iowa may reach two animals per acre of the farm's legumes. But one woodchuck to each 10 acres of legumes is probably nearer the average concentration.

After examining and weighing the stomach contents of a large number of New York specimens, W. J. Hamilton, Jr., concluded that every woodchuck requires about a pound of green matter each day. The damage to alfalfa, then, might be estimated as follows: Active about six months while alfalfa is available, each woodchuck may eat about 180 pounds of alfalfa per year. If the average yield is figured at 4.5 tons per acre, green weight, two woodchucks per acre might take 4.0 per cent of the crop. For the assumed average concentration of one animal per 10 acres the damage would amount to only 0.2 per cent of the crop at a maximum. Most probably the woodchuck damage would be less than



No one knows just how much the woodchuck contributes to man's welfare by digging dens which are used by other more valuable mammals, such as cottontails and fur bearers.

Ground hogs are outside their dens chiefly during the morning feeding period that generally begins an hour or two after sunrise, and during the evening feeding period, which begins a few hours before dark and lasts until dusk.



0.2 per cent because the animals also feed on wild plants.

It is interesting to note that entomologists have estimated the loss from the alfalfa weevil to average between 5.0 and 8.0 per cent.

On the other side of the ledger is the complex relationship between the ground hog and other more valuable mammals. A writer in *FUR, FISH AND GAME* said that when he wanted to find cottontails he headed for woodchuck territory. He declared that in areas where woodchucks were greatly reduced the rabbits were also scarce. Ecologists explain this situation by saying that the woodchuck burrows serve as protection to the rabbits against severe weather and predatory enemies. It is known that besides serving as protective cover to other mammals while the woodchucks hibernate in their nests, these dens are frequently taken over as breeding homes for valuable fur bearers.

In an attempt to learn just what species do use the chuck dens, and how frequently they use them, we have been fastening cockleburs on thin stakes and placing them at the entrances of the dens. Mammals going in and out leave hair on the burs. When analyzed, these hair samples will help unravel some of the unknown facts about woodchuck ecology.

Enough is known already concerning the economics of this rodent to make a few predictions and suggestions. The experience of eastern states, together with the trend of agricultural practices and woodchuck population in Iowa, suggests that we will have more chucks tomorrow than we have today. One reason for this is that the woodchuck has been neglected both as a game animal and as a source of food.

As they become more abun-

dant we will probably wake up to the possibilities, just as sportsmen and conservationists in eastern states are already doing. Not a cleaner animal is to be found than this vegetarian of the clover fields. Taken from July through September of their first year, they make a tasty, unrationed meat dish. When dressing the animal, however, it is advisable to remove the pea-sized glands from the inner side of the front legs just under the body; when not removed they may impart a musky flavor to the flesh.

It is reported that in some sections of Kentucky boys are catching the fattened chucks just before hibernating time in the fall. The heavy layer of fat is then removed and rendered into lard as a means of helping in the war effort.

Besides repaying at least part of the farmer's investment for feeding the ground hogs, these rodents can offer some fine off-season shooting for the sportsman. My own experience along this line has been confined largely to catching them alive in order to put numbered tags in their ears; but those who have leveled their sights on a chuck, as he sits up momentarily to inspect his surroundings, declare it is first-rate shooting.

The chucks are outside their dens chiefly during a morning feeding period that generally begins an hour or two after sunrise and during the evening feeding period which begins a few hours before dark and lasts until dusk. Since woodchucks are seldom more than about 40 yards from a burrow, the hunter who bags them must be a cautious stalker as well as a good shot.

Reserving final suggestions, then, until research answers a number of pertinent questions, it is safe to say that hunting is one of the easiest and certainly the

Mourning Dove Booklet Gets High Praise

The Bulletin Editor, Agricultural Experiment Station of the Iowa State College at Ames, has for free distribution Research Bulletin No. 310, "The Ecology and Management of the Mourning Dove in Cass County, Iowa", by H. Elliott McClure.

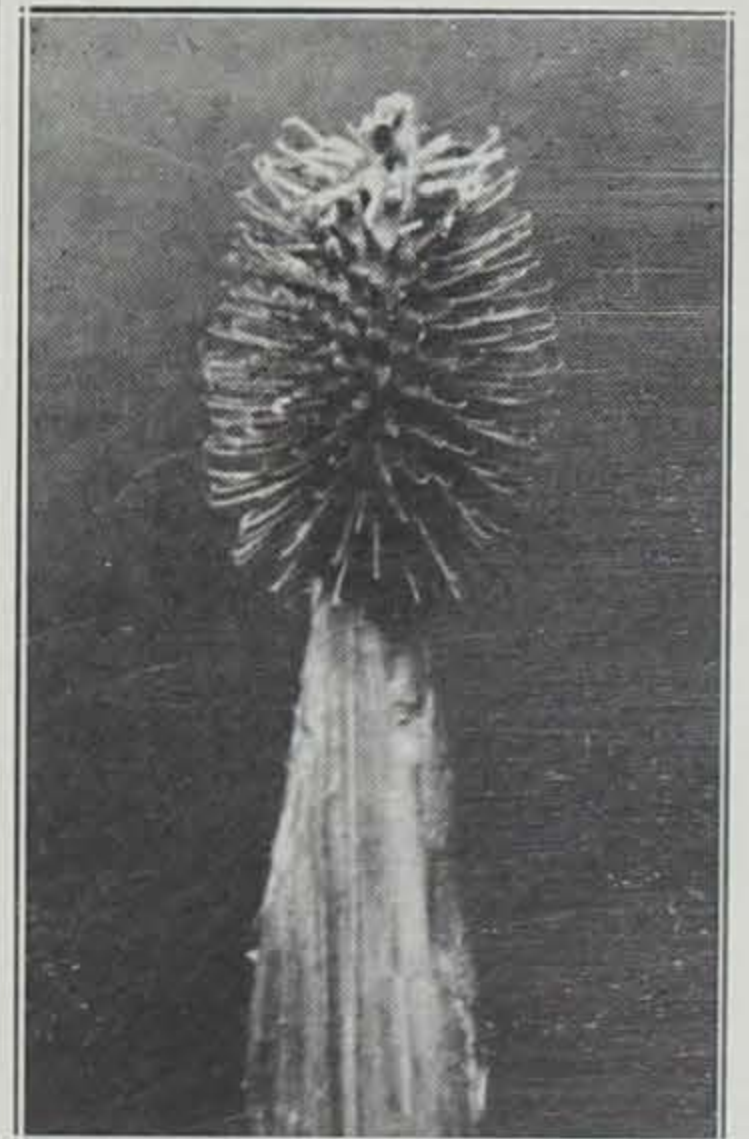
This bulletin is one of the best written, most informative research articles to have been called to our attention for a long time. McClure's life history of the mourning dove, production observations, and notes on three years' nesting and food habits, as well as numerous other topics, are extremely interesting.

McClure states, "In Iowa the dove is among the commonest of breeding birds, and observations in Cass County, Iowa, during 30 months of 1938, 1939, and 1940 reveal that the county production was high, averaging an estimated 200,000 young yearly from 73,000 adults." During the period the author had under observation nearly 4,000 dove nests.

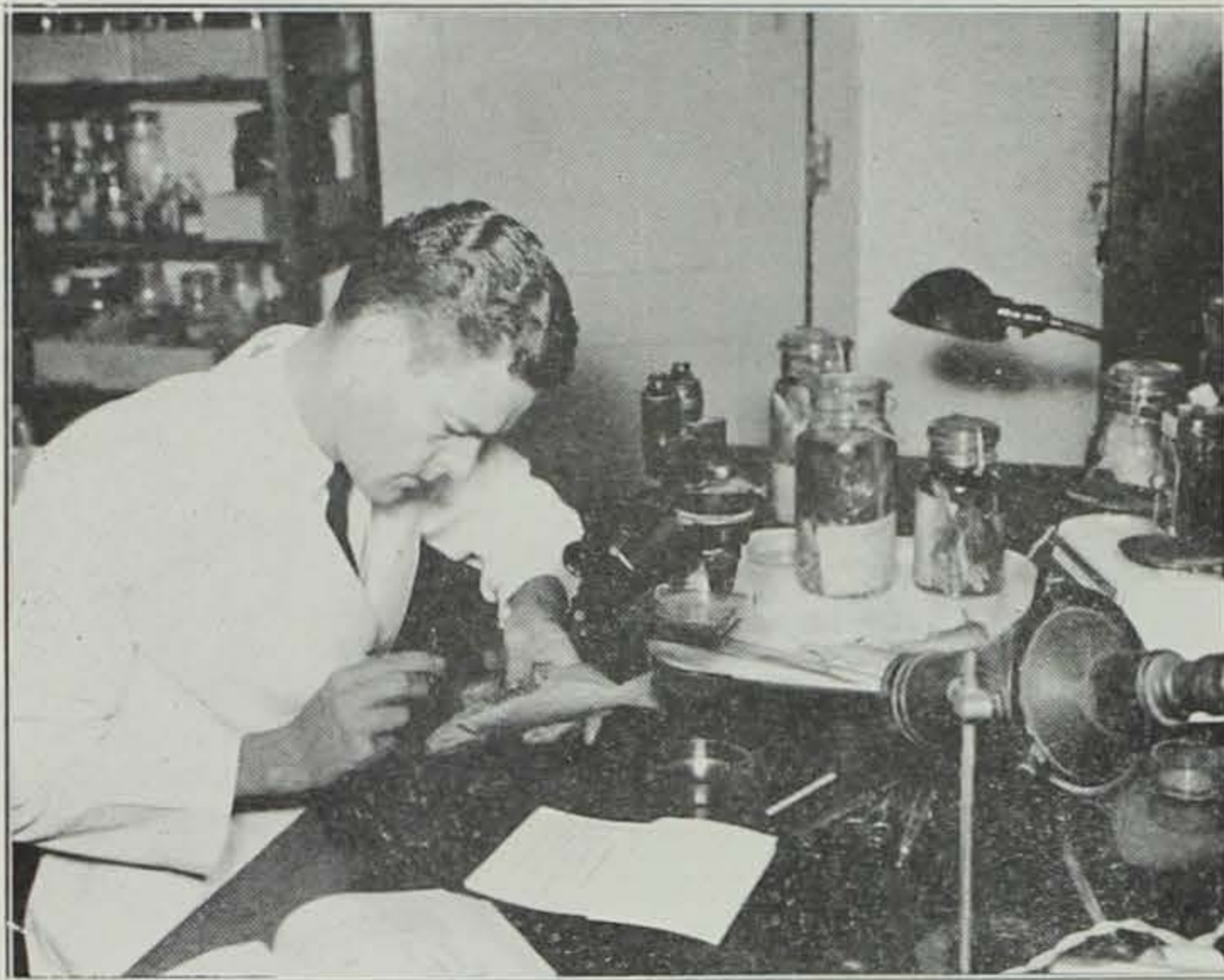
McClure observed, "The average length of time required for eggs to be incubated was 13.9 days, which for three years varied only 0.2 of a day." Within 14 days after the egg hatched, McClure found the young birds were ready to leave the nests.

Sportsmen and bird students interested in mourning doves should write to the Agricultural Experiment Station for this free bulletin.

most profitable ways of keeping the ground hog population down to a reasonable level.



In checking what species of mammals use woodchuck dens and how frequently they are used, cockleburs are fastened on thin stakes and the stakes pushed into the soil at the entrances of the dens. Mammals going in and out leave hair on the burs.



Dr. Reeve M. Bailey examining the stomach contents of a channel catfish as part of a contemplated life history study of this popular fish.

Catfish

(Continued from Page 57)

7.9 inches in length, although relying on insects as the staple food, supplemented them with some plant seeds, a few small fish, and an occasional bryozoan, snail, or crayfish (see figure). True flies were the most used insects, occurring in 77 per cent of those which contained food, and were followed by mayflies, 60 per cent; caddice flies, 51 per cent; beetles (*Coleoptera*), 24 per cent; and true bugs (*Hemiptera*), 14 per cent. Catfish from 8 to 11.9 inches in length ate fewer insects (58 per cent by volume), but more fish, plant materials, and other foods (see figure). True flies were less prevalent than in the two smaller size groups; they were present in 41 per cent of the stomachs containing food and were exceeded by mayflies, 46 per cent, and caddice flies, 42 per cent. Beetles were found in 24 per cent of the stomachs. Minnows were eaten by 15 per cent. During the late spring white elm seeds were consumed in large numbers; three specimens contained 647, 576, and 262 fruits, respectively. Eight per cent had eaten crayfish.

Legal-sized fish (12 inches or longer) had a more varied diet than smaller groups. Although insects were present in a larger percentage (80) of stomachs than were fish (38), they were less important volumetrically (see figure). Of the stomachs which contained food, 52 per cent had caddice flies, 32 per cent mayflies, 29 per cent true flies, 23 per cent beetles, and 11 per cent true bugs. Terrestrial insects were eaten very infrequently by young catfish, but were used more extensively by each successive size group. But they never were as important as aquatic insects. One-fourth of legal fish contained terrestrial forms in con-

trast to the three-fourths which had eaten aquatic species. The fishes eaten were predominantly minnows, but an occasional darter, sucker, or small channel catfish was found. Plant foods were taken by 34 per cent of the fish. These were largely debris or seeds, of which fruits of the white elm were the most common item; others included corn, ragweed seeds, grapes, and an acorn. Several (eight per cent) had eaten crayfish. Mammalian hair and fragments of domestic chicken probably indicated scavenging on dead carcasses. One catfish had eaten a nestling bird.

When tabulated according to the number of insects eaten instead of as percentage of stomachs in which each group was represented, some enlightening information became apparent. In the smallest size groups eight, 16, and nine per cent, respectively, of the aquatic insects eaten were caddice flies, but 72 per cent of those eaten by adults were caddice flies. For true flies the percentages in successively larger size groups were 81, 65, 71, and 12. Mayflies numbered nine, 15, 18, and 13 per cent of the aquatic insects. It is apparent that midge larvae and other flies are of great importance to young catfish in the Des Moines River, although the same forms constitute but a small part of the food of adults. Caddice flies, on the other hand, are not extensively used by smaller fish, presumably because of their inability to extract them from their larval cases, but are the most important insect food of large fish.

Seasonal variations in food, while not marked, showed some interesting trends. Most conspicuous of these was the extensive use of white elm seeds during May by all but the smallest size group. This represents a response to seasonal food avail-

ability. Fish were eaten more commonly during August and September than at other times, but this may be due to lower and clearer water during this period of the investigation, conditions which would facilitate predation. Mayflies were eaten most commonly during the spring and early summer, whereas caddice flies were little eaten during this time but were taken in large numbers from July to October. The explanation for this seasonal change hinges on changes in the numbers of these organisms available. Bottom samples of the insects indicated a marked increase in the number of caddice flies, beginning in July, and a decrease in mayfly numbers after June.

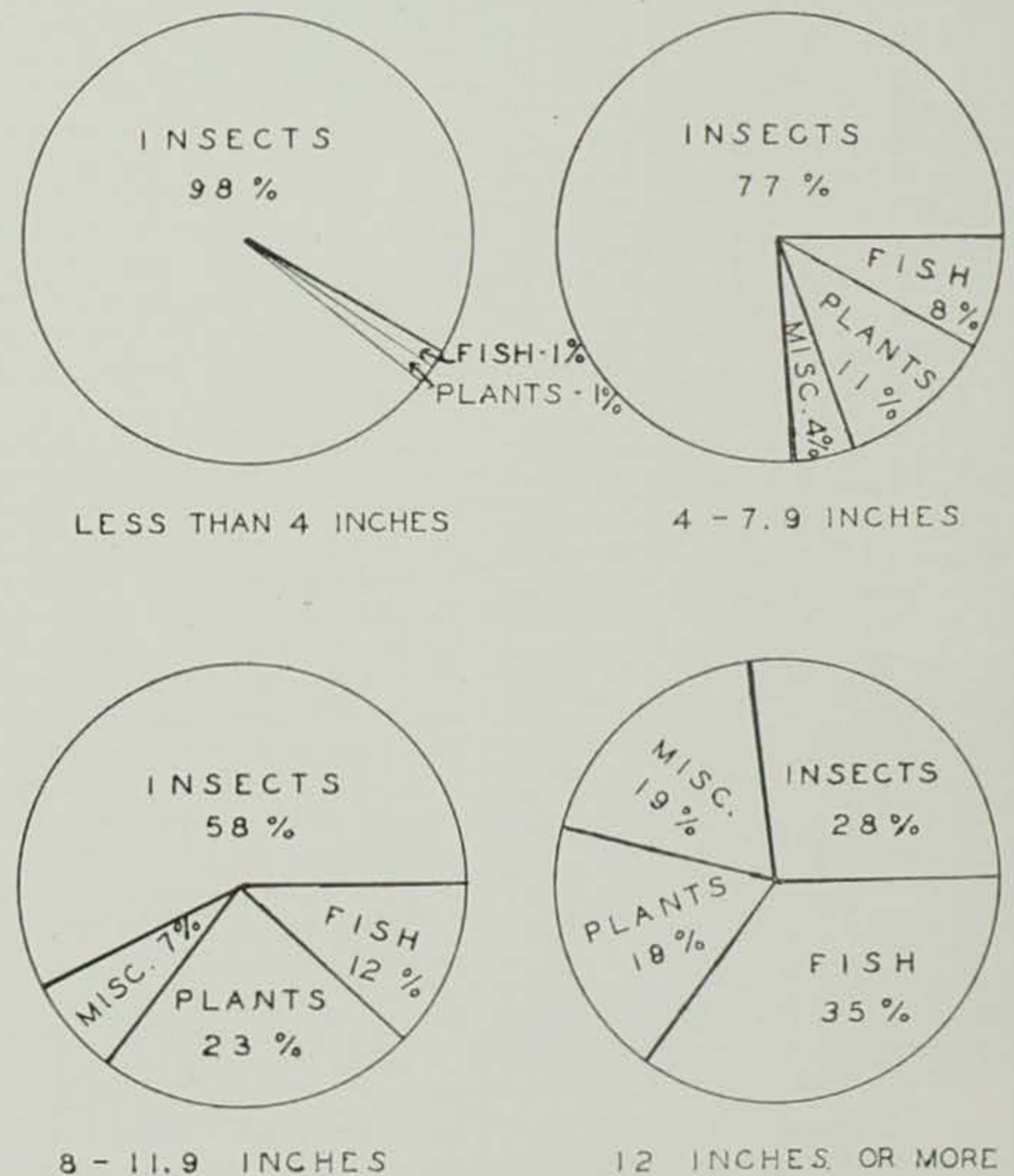
In order to determine the relationship between numbers of different forage fish in the river and the numbers eaten by the catfish, samples of forage fish were seined each month, and numbers of each species in the stomach contents were counted. Thirty-one species of potential forage fish were represented in the seined samples, and 17 of them were found in the stomachs. There was a close correlation between the number of each in the river and in its frequency as catfish food. Forty-nine per cent of the small fish in the river and 43 per cent of the fish found in catfish stomachs were steelcolor shiners, the dominant forage fish. Sand shiners constituted 18 per cent of the fish population and 17 per cent of the food. Young catfish

made up two per cent of the small fish fauna and two per cent of the fish eaten by larger catfish. It is evident that size of fish and relative numbers available were the chief factors in determining which fish were eaten.

Aquatic plants, crayfishes, and mollusks were found to be of infrequent occurrence in the catfish stomachs, but other investigators have reported them to be eaten much more commonly. All of these are rare in the study area. It would be advantageous to study the food habits, especially of adult catfish, at a locality where these items as well as minnows and insects are common. The fish would then have a greater variety of foods to choose from, and food preferences, if any, could be determined.

Studies of the bottom fauna indicated a paucity of aquatic insect larvae. This is believed to be caused in part by the marked and rapid fluctuations in water level and, perhaps indirectly, by factors associated with the silt load, attributable to soil and bank erosion. In contrast to the sparse bottom fauna many insects were found to inhabit the log jams and down timber along the edges of the stream. Trees felled by undercutting of the banks often remain in the stream for several months or years before being carried away by flood waters. In addition to serving as good food-producing areas these provide excellent shelter for fish, and it is well known by fishermen that the

(Continued to Page 64, Column 2)



Volumetric composition of the food of different size groups of channel catfish from the Des Moines River.

Hobnobbing With The Sportsmen

By REV. LAURENCE NELSON
Bellevue Leader



Reverend Laurence Nelson, author for the past two years of "Hobnobbing with the Sportsmen" in the Bellevue Leader, pastor of the First Presbyterian church of Bellevue, and president of the Eastern Iowa Fish and Game Club.

This department "Conservation Columnists", is to give each month a little sketch of one of the columnists who write outdoor columns regularly for newspapers. These writers are widely known for what they write, and we know that you will enjoy these briefs of what and who they are.

I come from Nordic stock. My parents came to this country as adults from the small peninsula of Europe called Norway. They settled in the northern part of Minnesota, and here I saw my first glimpse of light. The place of my birth may account in part for my enthusiasm for the out-of-doors sports. In an attempt to isolate the occasion that gave rise to my hunting and fishing life, I am sometimes at a loss; but it might be that the spark was kindled when I first fired a shotgun.

I recall it vividly. Dad placed me in a prone position, warned me to hold the gun snugly to my shoulders and fire. It seems that I can still feel the impact of the discharge as my 75 pounds of tender youth jarred even in my prone position. But from that day on I learned to love the gun. I soon acquired a .22 caliber Hamilton rifle. Some will remember this flat little gun, smaller than the now modern BB air guns used by boys. From the .22 I graduated to a single shot scatter gun, and with this arm I learned to hunt in earnest.

In our northern area rabbits, partridges and prairie chickens abounded, and in pursuit of this game I spent entire Sundays in the woods, without dinner, and liking it.

As I rounded by fifteenth birthday I was accorded the privilege

of a deer hunting license and the loan of a 30-30 Remington rifle. I set out alone to what I thought was a favorite haunt for the deer, but spent the entire day in vain. As the sun took on the appearance of a red ball on the western horizon, I decided to climb the steep hill that separated me from the highway and a model T Ford.

I paused to rest a minute before beginning the ascent, leaned my gun against a fallen tamarack tree, and seated myself on a stump. I had hardly relaxed before I heard shots in the distance, and soon a crashing of leaves and twigs arrested my attention. In what seemed a moment I saw a pair of beautiful antlers, a rounded chest, a sleek body and a white tail coming in my direction.

In less time than it takes to tell I leveled my rifle at the shoulder region of the buck and fired. The speed of events had kept me from getting excited and my shot was true, for the buck fell headlong against a tree, and when I approached to bleed him, he was dead. It was my first buck. My heart was beating frantically. I had become a deer hunter. I glanced at the falling sun, blazed a few trees to mark the spot, and ran madly to get help to remove the carcass.

Today the mounted head hangs in Hachmann's Sporting Goods Store here in Bellevue, a token of my pride and an example of good taxidermy. Many a season has followed; I have shot several deer, but none has measured in thrill to that first buck of my boyhood days.

Fishing took my fancy early in life, first on a grocery string and a bent pin, and later on more glorified tackle from the show windows. Our home was situated between two streams, an ideal spot for a boy to promote

a fishing spirit. One of the early episodes of my fishing experience came on a Friday afternoon when with a lad of similar persuasion I skipped school.

This was bad because my parents had some straight-laced ideas about school and children. It occurred to me that if I could get an excuse of sufficient merit I could master the situation. I promptly applied an old nail to the seat of my pants, causing my appearance to be anti-social, but, in my humble estimation, good for fishing. I believe the trick would have fooled my parents had I not had a younger brother in school, who carried a note from the teacher indicating my error.

The result was that I did enjoy an afternoon of fishing, caught some fish, but came home to do penance, and the next week spent all my recesses in school to square myself with a fussy teacher. But in my youthful estimation it was worth it.

Nearly six years ago I came to Iowa. I regretted leaving the land of my nativity, and came with reluctance to what I thought was a land of corn and hogs. My mind was soon changed, for I found sports in more abundance here than I had enjoyed heretofore. The Mississippi River with its catfish, its perch, its bass, its crappies and its pike simply thrilled me. The Mill streams west of town taught me to fish carefully for the German browns and the rainbows. The Green Island bottoms gave birth to a duck hunting fever. The moonlit nights gave an interest in 'coon hunting. The splendid squirrels of the oak groves taught me to use a rifle with efficiency. The pheasants of western Iowa gave new experiences to me, and the nimble fox before anxious hounds filled my life with thrills.



Mallards of the Green Island bottoms, which gave birth to Reverend Nelson's duck hunting fever and which are partly responsible for his exclamation, "What a great state in which to buy a license to hunt and fish!"

Thanks, Fellows, For the Boost

BUCHANAN WILD LIFE ASSOCIATION
Independence, Iowa

Fellow Sportsman:

Knowing your interest in conservation, we have taken the liberty to send you a sample copy of the state publication of conservation efforts. While it is possible to observe the results of the Buchanan Wild Life Association's work locally, to get a better scope of the results throughout the state, we feel this little magazine worthy of your attention.

The war has, of course, temporarily pushed some of the more constructive programs of conservation into the background. Yet, those of us on the homefront have a duty in holding the gains already made. Not the least of the things for which perhaps your son or brother is fighting is the privilege of chase in field and stream. To many of the boys this right to enjoy the God-given bounties of Nature is very important.

From time to time articles of interest to many servicemen will appear in this magazine. It is permissible to clip these items and forward them to show the sportsmen on the real front that we on the homefront are not forgetting this little part of that wonder we like to call the American way.

The cost of printing and mailing the "Iowa Conservationist" to you for one year is 40 cents. It is published on a non-profit basis. If you will fill in your correct mailing address, enclose 40 cents, and leave same with either Fred Kemp or Rev. Hellman at Fairbank, Jerry Boldt at Jesup, Egland Barber Shop at Winthrop, Tabor's Hardware Store or Gates' Motor Supply at Independence, we shall be glad to forward it to the Conservation Commission and get you on the regular mailing list.

Dutch Wackerbarth, President
Buchanan Wild Life Association.

I have now reached the place in my thinking when it appears that there is no better place in these United States to enjoy sportsmanship than right here in the good old corn state.

I now ramble along the river and watch Charles Finch cast expertly for the evasive perch, or "Jerry" Weygandt (now deceased) flick a fly, or I sit in a blind next to the Tarr boys and watch four mallards come in to expertly employed call, and also see the same four mallards hit squarely and land within wading distance of the blind. I see the commercial men with nets bring in the carp and buffalo, or the trot line men drag in the catfish. All I can say is this—what a great state in which to buy a license to hunt and fish.



The North American colonists were not only excited by the wealth of the forest. They were amazed by its variety.

Those who settled Massachusetts had never seen a hickory before. They did not wait to find out its Indian name. They used a name from the old country and called it a "walnut", just as they called the native New England grouse a "pa'tridge", and still do.

European names for unfamiliar American trees ran out. In the 1830's the best-selling American book was the Rev. Dr. John Mason Peck's **Emigrant's Guide to the West**, which was also a **Gazetteer of Illinois** with notes on adjacent states. In describing the forest resources of that section of the Mississippi Valley, Dr. Peck, a native New Englander, famous in his generation as a learned and literary man, used names of trees and shrubs and plants as familiar as cornbread to most Americans, but many of them not known yet to the great dictionary in England, the (Oxford) New English Dictionary.

The Middle West is "average" America; Ohio is an "average" Middle Western state; and Ohio's Montgomery County, with Dayton its principal city, is a representative county.

Native to this county alone are 104 species of trees, while all Europe, not counting Russia, has only 85. The United States has more than 1,100 species; Ohio alone has 128. England has only 29; France, 34; Germany, 60. England has no native gums, hickories, sassafras, tuliptrees, buttonwoods. Montgomery County has in its 500 square miles 13 varieties of oak and seven of ash. England's 200,000 square miles has only one of each. Visiting Britishers are awed by the beauty of America's dogwood, redbud, locust in full flower. But so vast is our country, the American forest has no truly representative section. Every forest region has several species unknown to the others.—American Forest Products Industries, Inc.

DO YOU KNOW THAT

If you buy the Mrs. a fur coat called any of the following, it is made from rabbit skins: French Seal, French Beaver, Beaverette, Chapchilla, Chinchillette, Coney or Cony, Ermeline, Erminette, Marmotine, Moline, Near Seal, Polar Seal, Lapin, Sealine, Squirrellette, Squirreline.

Here's An Idea Worth Copying

Dear Fellow Sportsman:

The 1943 dues for the Vinton Fish and Game Club are now due. It is important for the conservation organizations to carry on as actively as possible during the war. That is one of the things that we stay-at-homes owe to the boys who are fighting for us.

During the last war, wildlife suffered tremendous destruction requiring 15 years to even begin to make up the lost ground. During the last several years, good progress has been made in Iowa toward improving conditions. When the boys come home, they will expect to find the America they are now dreaming about. Most of them enjoy fishing, hunting, etc., as much as we. Our club owes it to the Benton County boys to protect the wildlife and a sound conservation program. Your dues and your co-operation as a member will help carry on that work.

Because of traveling restrictions, the club's entertainment program will have to be reduced this year. But to make up for that for this particular year, the club has decided to give each paid up membership a year's subscription to the "Iowa Conservationist". Enclosed is a copy of the magazine. It is the official publication of the Iowa Conservation Commission and is costing the club 40 cents out of your \$1.00 to supply it to you. Please pay your dues immediately in order that you can begin receiving your first copy of this fine monthly magazine on Iowa wildlife. Dues may be paid to the Treasurer, Harold C. Bryant, by the members near Vinton. You will probably find it more convenient to pay _____, who has kindly consented to assist in your vicinity.

We are sure that you will want to have a part in carrying on this important work and that you will enjoy the magazine, which you will receive monthly throughout the year.

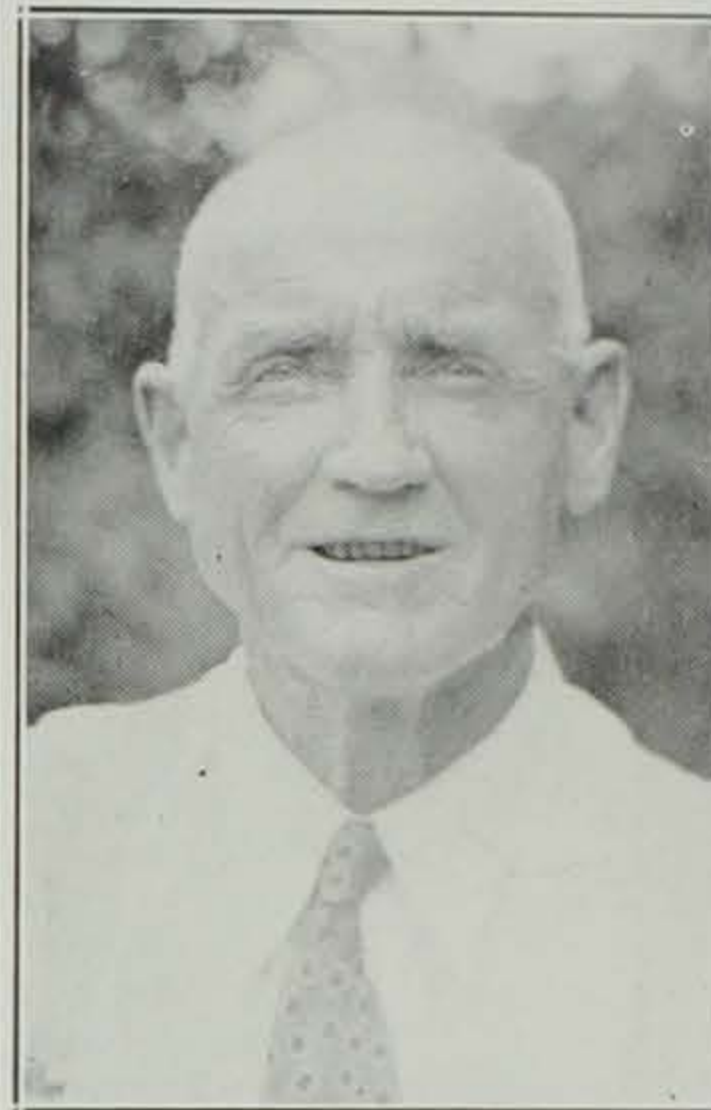
Vinton Fish and Game Club,
By Glenn Gordon, President.

Cigarettes Can Be Used to Check Sizes of Fish

If you are unable to get accurate measure any other way use cigarettes. The length of any standard size cigarette is 2¾ inches and the new long cigarettes are 3¼ inches.

Lowest population of animals of any one species in the United States is reported to be the woodland caribou, with a total of 15 in Minnesota. Second lowest is the grizzly bear, with a population of 1,250 in six states.—Clinton Herald.

Pioneer Passes



George B. Coon

George B. (Mac) Coon was a familiar figure to the visitors at the fish and game exhibit at the state fair grounds for more than 33 years.

In late June George B. Coon, 80 years old, suffered a stroke while engaged in his duties as park custodian in Farmington State Park and died July 1 without having gained consciousness. It was "Mac's" way. Recently when he was advised by his superiors to "take it easy and hire the heavy work done," Mac replied, "I'm just like a fire horse, and I expect to remain that way until my last fire."

Mac was born at Eddyville April 24, 1863, and moved to Albia when still a young man. In 1905 he was appointed deputy game warden by George A. Lincoln, and since that time was employed by the State Conservation Commission and its various predecessors.

After being a deputy game warden for more than 14 years, Mac was appointed custodian of the state game farm at Clive, where he was in charge of the deer herd and game birds, as well as the hundreds of confiscated birds and mammals of different kinds that were sent to the farm from all over the state.

In this capacity Mac was a familiar and interesting personality to the thousands of Iowans who visited the game farm each year.

For 33 years Mac Coon was in charge of the game exhibit at the state fair, which in early days was shown under a large circus tent. After the fish and game building on the fair grounds was built, he took charge of the birds and animals there. Mac's supreme thrill came each year at fair time, and he was a familiar figure at the exhibits, much of the time carrying a deodorized skunk in his arms through the crowds in the building.

Romance Among The Trees and Flowers

(Fill in the blanks with names of trees or flowers.)

This romance began in the sand at the _____ the first day they met. Her name was _____ **Bud**. His name was _____ **Wood**.

She was _____ with the boys. In fact, _____ of them hung around, and her fond _____ wanted her to look out for the future and _____. She would have none of the rich _____, however, and was _____ crazy to marry Red Wood.

Red thought she was a _____ and pressed his suit. "_____ are a real _____ beauty, the _____ of my eye." Thereupon he _____ to marry him. But Cupid's first _____ missed its mark and struck Rose Bud's little brother in his _____ **breeches**. Johnny fell on the _____ **moss**, where he thought to _____ and maybe get a quarter for his pains.

Rose called, "_____ _____; you are not hurt." "Oh, Sis," wailed Johnny, "How can you _____ that?"

Johnny gone, Red Wood resumed his courting in her _____. "Mend my _____; press your _____ to mine, else I shall _____ away."

"Red, you are impetuous and full of _____; we will be married at _____ tomorrow."

So Jack _____, as _____ was falling, placed a crown of _____ **wreath** on Rose's brow and performed the ceremony. Soon **baby** _____ pervaded the nursery, and _____ **stars** lighted the heavens as _____ sang lullabys to _____ **William**.

(See answers on page 64)

War Lessons Bode Evil To Ducks

Frank Powers of the Cedar Rapids Gazette believes that additional restrictions on duck hunters will be necessary at the conclusion of the war. He says, "Lots of our boys are becoming experts in the art of camouflage, and the way they have learned to disguise themselves in the South Pacific war theater will make it a cinch for them in the duck blinds." He thinks they will have the ducks eating out of their hands and the ducks won't know it until it's too late.

Mac loved fair crowds, but he loved more to be with "his boys" as he called the warden force. He was proud of every single one of the wardens and the work that they did.

After 38 years' service to fish and game, Mac's "boys" carried him to a highly deserved rest in the Albia cemetery July 3, 1943.

Railroads Respond To Appeal From Izaak Walton League

At a recent meeting of the Des Moines Chapter of the Izaak Walton League a discussion of game cover brought out the fact that railroad right-of-ways were one of the important homes for wildlife, particularly for pheasants and cottontail rabbits. Recognizing this, the League members lamented that miles of right-of-way were burned or mowed, thereby destroying a large part of their value from a game standpoint.

The League voted to inquire into the whys and wherefores of the mowing and burning and to see if this practice could not be discouraged.

The prompt responses from the officials of the railroads were courteous and sympathetic, and because of the tremendous interest in this problem among sportsmen throughout the state, briefs of some of the letters are here given.

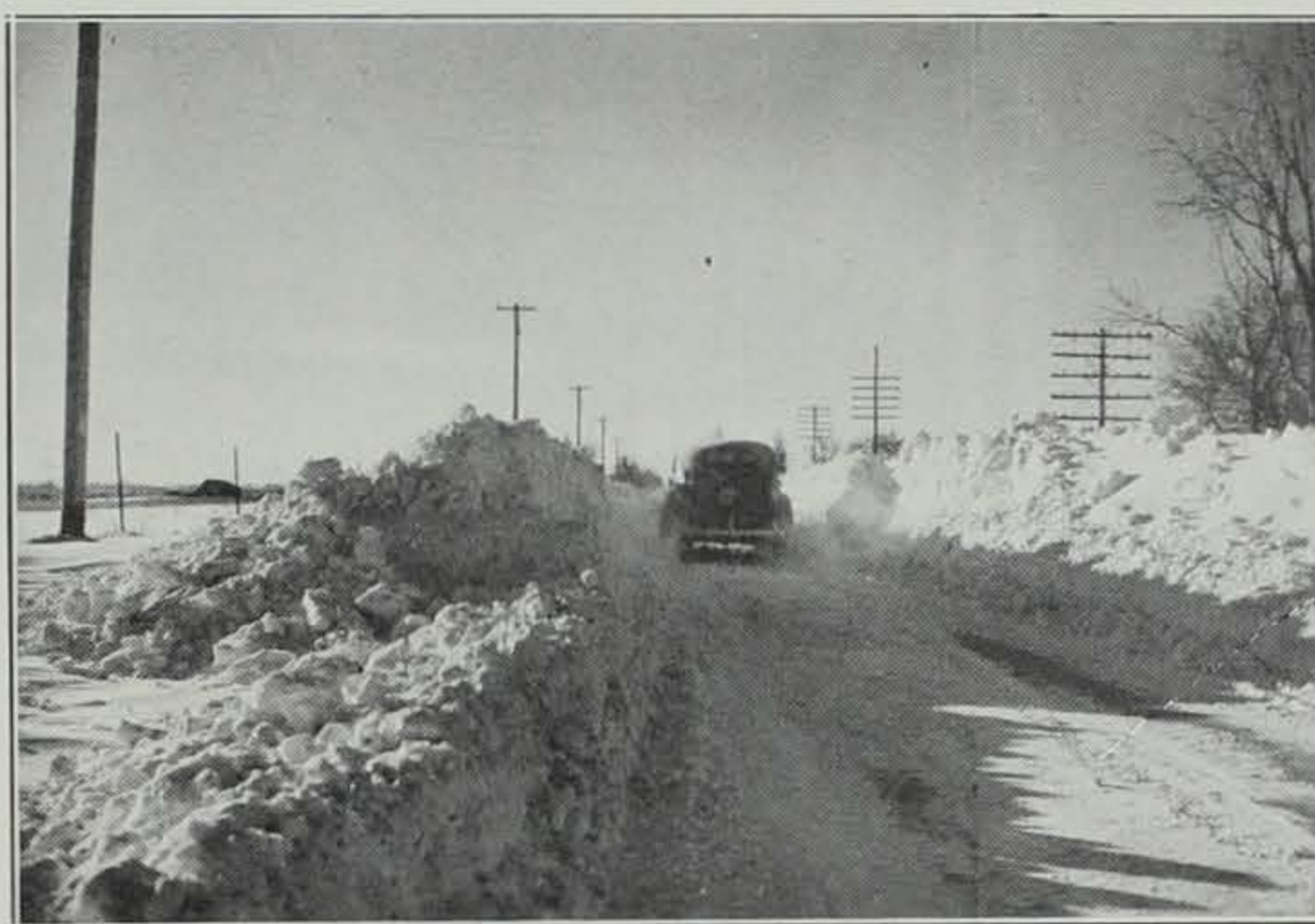
From the Burlington lines the League received the following reply:

"Referring to your letter . . . a considerable amount of this kind of work is necessary to afford protection against fire spreading from the right-of-way to adjoining property, and, as I am sure you know, railroads are required to keep certain noxious weeds cut down. It has never been the policy of the Burlington to do more of this kind of work than we consider necessary. . . . Under existent conditions, with labor limited, you may be assured we will do no more work of this kind than can be avoided. Probably less mowing and burning of right-of-ways will be done this year than has been true in the past. Yours very truly, H. C. Murphy, Assistant Vice President."

From the Chicago-Northwestern Railway, Chicago:

"Replying to yours relative to converting railroad right-of-way to game preserve, this is something that has been given serious consideration in the past, and there are several difficulties which confront us in attempting to carry out such a project.

"The cutting of grass and shrubbery on our right-of-way would: (1) immediately bring us into conflict with state laws requiring the removal of noxious weeds, (2) obstruct the view of our tracks from highways, (3) present a fire hazard during the dry season involving possible destruction of timber, bridges, pole lines, signs, and fences, (4) seriously interfere with proper drainage of our property and in many instances result in drifting of snow onto the track, (5) create more unstable roadbed conditions with possibility of washouts, particu-



One of the major reasons that certain sections of railroad right-of-way are mowed or burned is that heavy growth of vegetation seriously interferes with proper drainage of the grades and in many instances results in snow drifting onto the tracks.

larly where burrowing animals are present and burrow into the embankments.

"We wish to assure you that we are in sympathy with the conservation work of the Izaak Walton League. Very truly yours, L. L. White, Chief Operating Officer."

From the Minneapolis & St. Paul Railroad Company, Minneapolis:

" . . . We wish to acknowledge receipt today of your letter about right-of-way conditions in the state of Iowa which would be conducive to certain wild game.

"We have practiced permitting adjacent farmers to mow sections of our right-of-way in order to obtain fodder for their livestock. In other instances we have actually permitted nearby farmers to graze their stock on our premises, and each year there is a considerable amount of burning accomplished. The latter action is taken in an effort to minimize weed nuisance, particularly noxious weeds.

"However, we are very much in sympathy with the thought expressed in your letter and consequently are asking our people to give full consideration to that subject with a view to being as helpful as conditions may permit. Yours very truly, J. W. Devins, General Manager."

From Fort Dodge, Des Moines & Southern Railway Company, Boone:

"I have your letter addressed to our superintendent in which you call our attention to the desirability of providing nesting grounds for wildlife along our right-of-way.

"You will readily realize that we cannot burn selected spots but must make a complete job wherever we undertake burning operations. However, it has been our policy, for the past several years, to stop right-of-way burning before the nesting season begins. Also it has been impossible

during the past several years for us to make a complete job of burning the right-of-way. Thus, if we burn a mile in one location, the right-of-way in each direction is apt to be left that season without burning. Also there are low spots with heavier growth which remain unburned at all times. Therefore, I feel that we are doing all possible to conserve wildlife, and the pheasant population along our right-of-way bears this out. Yours very truly R. L. Cooper, Chief Engineer."

From Chicago, Milwaukee, St. Paul & Pacific, Chicago:

"I have your letter about the cooperation the Izaak Walton League would like to have from the railroads to avoid the molesting of nesting grounds along the right-of-way. I am furnishing our superintendent in the state of Iowa a copy of your letter, asking that he cooperate in every way possible in carrying out the suggestion. Very truly yours, J. T. Gillick, Chief Operating Officer."

From Wabash Railroad Company, St. Louis:

"I have your letter in which you request that, insofar as possible, we eliminate the burning and cutting of vegetation along our right-of-way.

"It is our desire to cooperate with the Izaak Walton League in its program of conservation. However, the burning and cutting along our right-of-way is done in the interest of fire prevention and the control of noxious weeds in compliance with certain legal requirements and recognized safety principles, and I believe that our current practice has already reduced this work to a minimum consistent with these requirements. Yours very truly Vice President and General Manager."

From Chicago, Rock Island & Pacific, Chicago:

"Referring to your letter in regard to preservation of pheasant

Spirit Lake

(Continued from Page 58)

with constant threats on their lives, is related in detail in Abbie Gardner Sharp's "History of the Spirit Lake Massacre".

The first of the captives murdered was Mrs. Thatcher, who was pushed into the flood waters of the Sioux River on the western crossing and pushed under by the savages with long poles. Later, in the Dakota territory, Mrs. Noble was beaten to death with a club by one of Inkpaduta's sons. Mrs. Marble was sold to friendly Indians and returned to civilization in May.

Abbie Gardner continued west with her captors, the most vicious Indians on the continent, and after four months a captive, was ransomed and ultimately returned to the cabin on Okoboji, the scene of her childhood tragedy. Abbie Gardner was married to Cassville Sharp late in 1857 and died in 1921. She is buried in the family lot at the foot of the monument erected by the state in 1895 at Arnold's Park to commemorate the massacre.

It was the editor's fortune, or misfortune, to be stricken with influenza in 1918 while staying with the family of the late Harry Allen of Arnolds Park. Members of the Allen family were also stricken, and Mrs. Sharp accepted the responsibility of watching this very sick boy of 10 through a rather lengthy convalescence in her home.

Mrs. Sharp was a patient, kindly, rather frail old lady, and a Christian Scientist of firm conviction. To a boy's mind, and the minds of her friends, her story of the massacre only 61 years earlier was as distant and impersonal as the Roman Conquest or the discovery of America, but it is a burning chapter in the history of a great state, a state which must not forget and which must now and forever cherish and protect the monuments of its progress.

and quail nesting grounds along the railroad right-of-ways.

"We are willing to cooperate if at all possible. However, it is necessary to clean our right-of-ways to avoid fires and subsequent damage to telegraph lines and bridges, and claims from adjoining property owners. It is also necessary to meet requirements covering destroying seeds of obnoxious weeds. Your truly, W. H. Hillis, Operating Officer."



Railroad right-of-ways, particularly through the "clean-farmed" prairie portions of the state, are of major importance as cover-producing areas for all species of wildlife.

An Appeal To Conscience

I can visualize the great need for a real understanding of Alaska's wildlife in the immediate post-war period. We are going to need all the help we can get to help kill the prevalent notion that Alaska is swarming with big game, and that no amount of hunting can hurt it. Along these lines I have recently drafted a poster which will be similar in make-up to the "Creed of the Jungle Cock". They will be placed in all construction and military camps throughout Alaska.

APPEAL TO HUNTERS

ALASKA is not overrun with big game. The herds are widely scattered. The rate of increase is lower than in warmer countries. The winter death rate is higher. Predators plague them from all sides. The game animals have held their own in the past only because of the small human population.

Now, with thousands of newcomers here in the interests of national defense—many planning to make future homes here—the game needs added protection. This protection must come from YOU!

DO YOUR PART by killing no game animal unless you need it. No shooting just to hang a pair of horns on the wall, or to see a wild creature fall dead. No wanton waste.

Consult your conscience as well as the game law. Live up to the regulations. See that others do the same.

This is YOUR Alaska—YOUR game—YOUR heritage. Protect it!—Frank Dufresne.

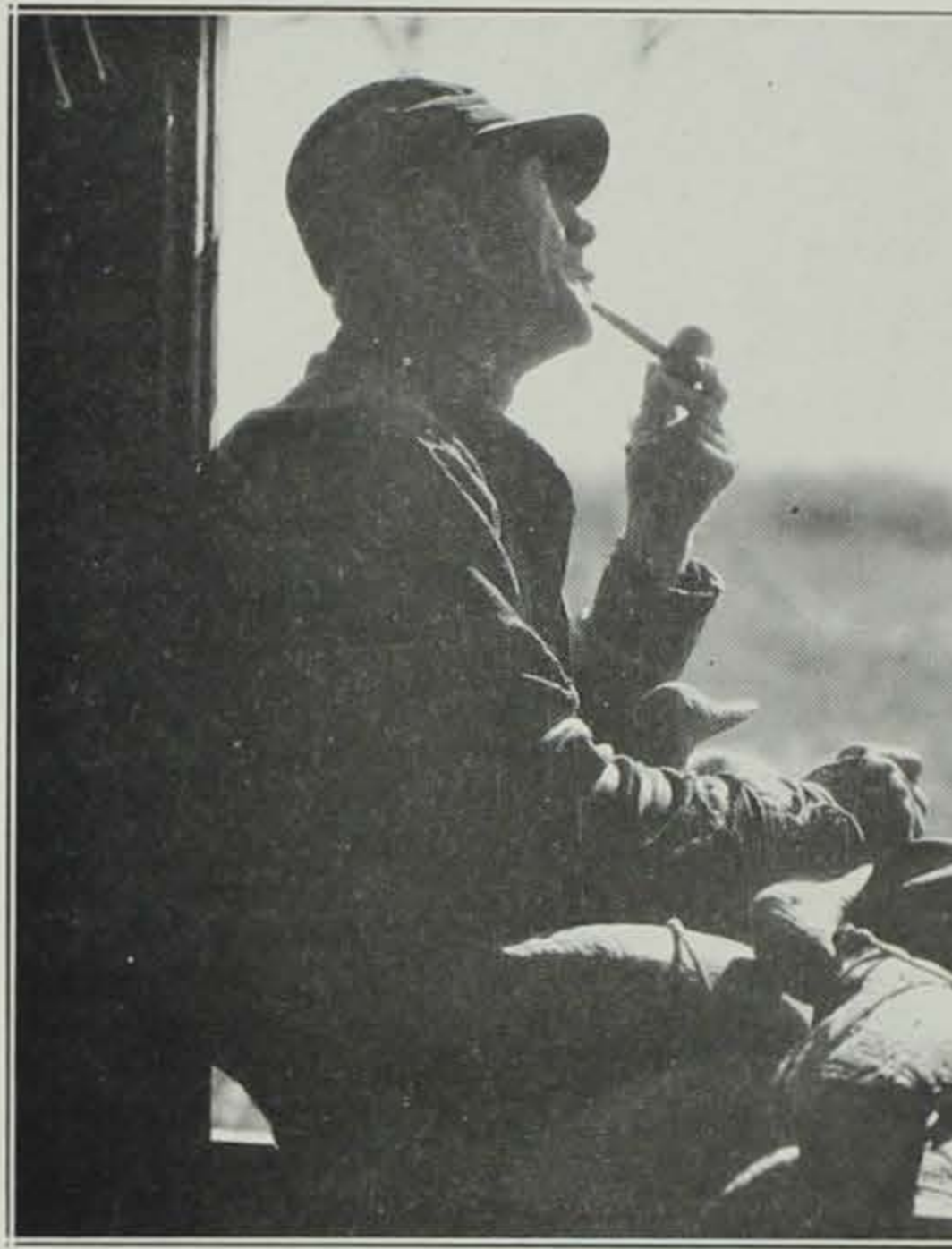
Pickle or Smoke Some of Your Catch

If any fisherman wants to salt or pickle or smoke some of his catch this summer, we suggest he write the United States Fish and Wildlife Service, Merchandise Mart, Chicago, for "Home Preservation of Fishery Products", which is leaflet No. 18. This is a complete and helpful set of directions on how to smoke or salt any fish. Copies may be obtained free by writing the United States Fish and Wildlife Service.

Another good one available is on how to cook carp in about 20 different ways. This is leaflet No. 19, "The Carp: A Valuable Food Resource".

A total of 260,017 pounds of raw fats were salvaged from pelts of fur-bearing animals by St. Louis fur dealers. The fats were sufficient to produce glycerine for 750,000 rounds of 37mm. ammunition, or 290,000 pounds of gunpowder.

"... But now that I'm all set to hunt, I find the season's over."



A Duck Hunter's Dilemma

"I've studied all the legal lore on hunting ducks and geese
I've read more legal volumes than the justice of the peace
I know what ammunition is the latest legal kind
I can load a legal shotgun from behind a legal blind
I've paid my legal rental for a lake by which to wait
And I have a legal license from the county, town, and state.
I can legally determine from a rustle in the sky
A legal bird, its plumage, just where 'twas hatched and why
I have a legal calendar, a stop watch, and a clock
I can pick a legal bird within a flying flock
I have a legal hunting dog, whose legal name is Rover
But now that I'm all set to hunt
I find the season's over."

—From a letter sent to the U.S. Fish & Wildlife Service.

Catfish

(Continued from Page 60)

best fishing spots are often found in or near such masses of debris.

During this investigation it was noted that natural reproduction, as indicated by the abundance of small catfish, was very satisfactory. Stocking catfish here seems unnecessary since enough are produced naturally to provide a population equal to the carrying capacity for the stream. Whether or not food shortage limits the carrying capacity is uncertain, but in view of the scanty bottom fauna and the relatively small area of rich food-producing log and brush piles, such a conclusion seems probable. If this be true, an increase in the number of log and brush piles would raise the carrying capacity for catfish.

Attaching long, anchored cables to trees which are about to be undercut by the stream, as well as those already lying in it, would appear to provide a possible method of catfish management worthy of investigation. Such devices would also aid in the control of bank erosion.

All Bears Looked Alike to Wildcat

In the June issue of the "Iowa Conservationist" Gib Knudson, of the Fort Dodge Messenger, neglected to tell this story. He claims the principal actor is a relative of his who before his goldmining days was a fisherman.

"Wildcat lived by himself near the Yukon in a cabin a half mile below his mine. He adopted an orphan brown bear cub, fed it, tamed it and took it to work with him each day.

"Finally he rigged up a little pack harness for the bear and let it carry his lunch. Bruin grew fast and Wildcat had a better idea.

"He made a bigger harness and let the bear carry a load of ore down to his cabin from the mine each night. He increased the size of the harness as the bear grew until it was carrying a 1,000-pound load at a clip. Then one day the bear vanished.

"Lonely without his pet, Wildcat set out to look for it and found it asleep in a clearing. He aroused the bear out of its snooze

Romance Among the Trees and Flowers

This romance began in the sand at the **beech** the first day they met. Her name was **Rose Bud**. His was **Red Wood**.

She was **poplar** with the boys. In fact, **phlox** of them hung around, and her fond **paw-paw** wanted her to look out for the future and **marigold**. She would have none of the rich **wandering jew**, however, and was **plum** crazy to marry Red Wood.

Red thought she was a **daisy** and pressed his suit. "**Yew** are a real **American beauty**, the **apple** of my eye." Thereupon he **aster** to marry him. But Cupid's first **arrow-head** missed its mark and struck Rose Bud's little brother in his **Dutchman's breeches**. Johnny fell on the **blanket moss**, where he thought to **balsam** and maybe get a quarter for his pains.

Rose called, "**Johnny-jump-up**; you are not hurt." "Oh, Sis," wailed Johnny, "How can you **lilac** that?"

Johnny gone, Red Wood resumed his courting in her **virgin's bower**. "Mend my **bleeding heart**; press your **tulips** to mine, else I shall **pine** away."

"Red, you are impetuous and full of **wild ginger**; we will be married at **four o'clock** tomorrow."

So Jack-in-the-pulpit, as **nightshade** was falling, placed a crown of **bridal wreath** on Rose's brow and performed the ceremony. Soon **baby-breath** pervaded the nursery, and **blazing stars** lighted the heavens as **locusts** sang lullabys to **sweet William**.

Mr. Cottontail An Unknown Quantity

With wildlife working its way into the towns as it is, things are getting tougher for dogs who haven't been out in the country for the past six generations. Take our watch dog, Bill, who is now sharing his yard with a half-grown buck cottontail rabbit, and is working his way toward a nervous breakdown as a result. Not that the rabbit has attacked Bill yet, but a town dog can never be sure what a wild animal will do next.—Burlington Hawkeye-Gazette.

and was surprised to have his pet turn on him.

"The ingratitude infuriated Wildcat, who seized a club and walloped the bear into submission. After a terrific tussle, Wildcat got the harness on, and after another battle he loaded the ore and led the groggy bear down the trail by an ear.

"Then when he reached the cabin, another bear, very tame and amiable, lumbered affectionately out to greet him!"