

STATE OF IOWA - 1950

**A PEEK AT IOWA**

# Wildlife

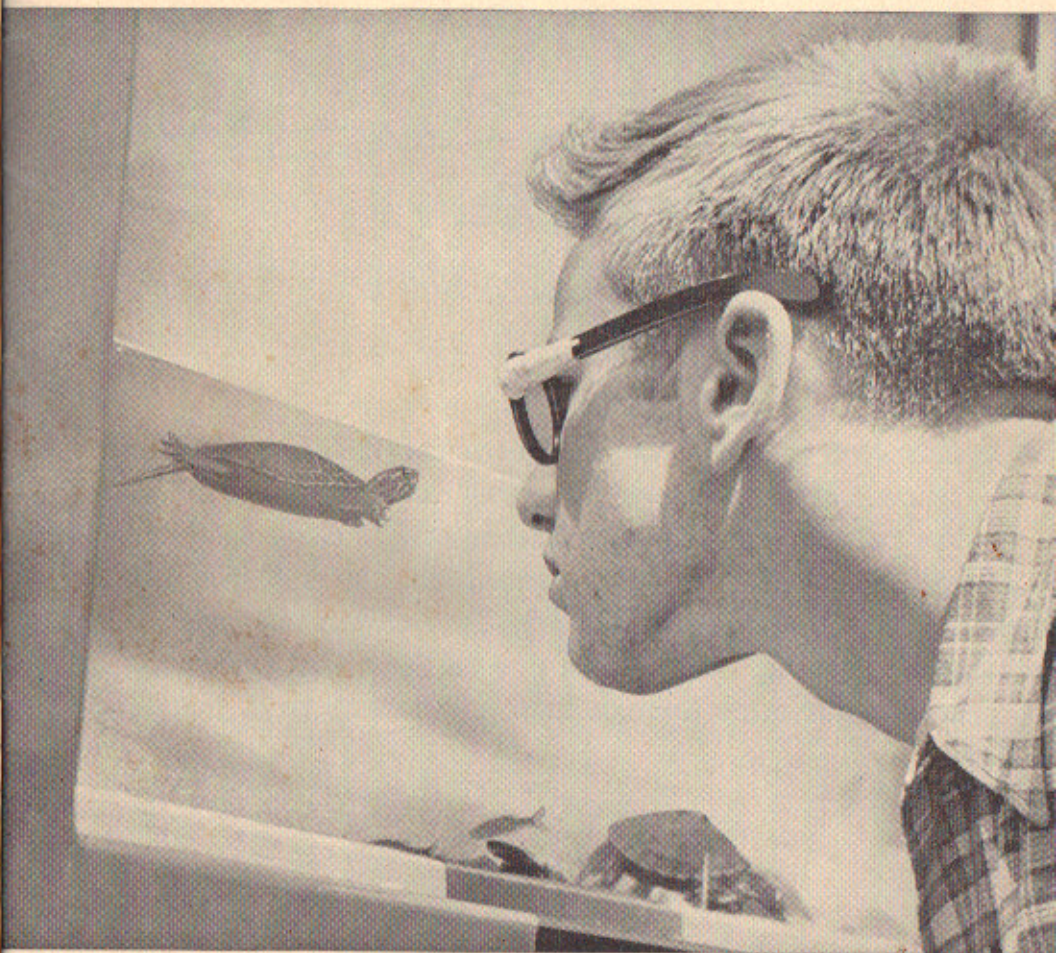


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## CONSERVATION PLEDGE

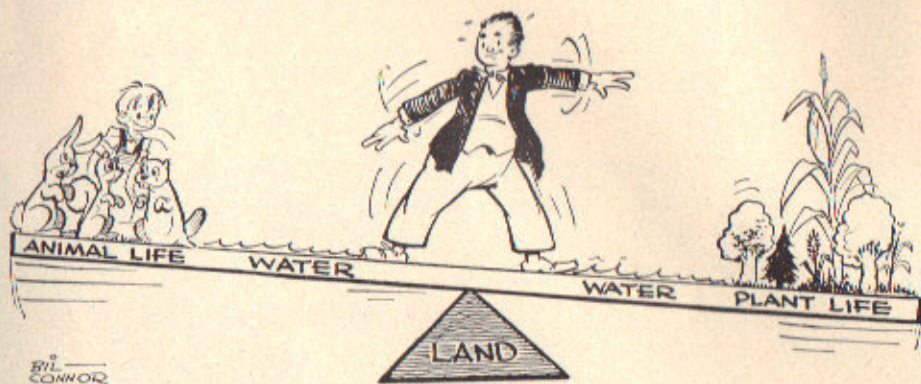


*I give my pledge as an American  
to save and faithfully to defend  
from waste the natural resources  
of my country — its soil  
and minerals, its forests,  
waters and wildlife.*



**A HERITAGE  
TO USE WISELY**

## CONSERVATION MEANS WISE USE



*Conservation Is A Balancer*

Conservation is man's way of controlling the natural balance in nature. Man helps or hinders this natural balance by what he does to land, water, plants, and animals. Land use is most important. Water use is important, too, because water lets plants and animals grow from the land. Man may upset the balance so that the land will not provide for plants and animals. Then man and other animals must move away from that land or starve.

# A PEEK AT IOWA WILDLIFE

*by*

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Published by the

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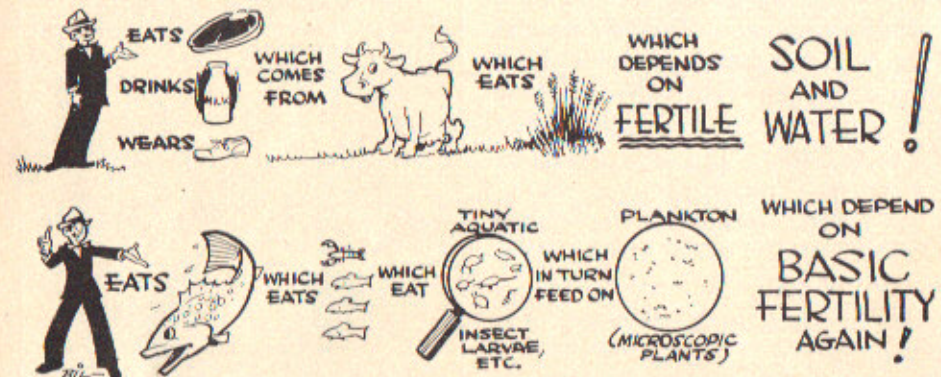
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## INTRODUCTION

The purpose of this bulletin is to help you enjoy the traveling wildlife exhibit. Teachers may wish to use the bulletin in preparing their pupils for the appearance of the exhibit at their schools. We hope that the bulletin will serve as a guide to all who visit the traveling exhibit. It will help you become more familiar with Iowa wildlife.

As you look at the wildlife in the cages and tanks, keep in mind that these animals, birds, fish, and other living things owe their lives to sun, soil, and water. All animals depend on plants for their life. In turn, plants depend upon soil, water, and sunshine. *The health, vigor, and abundance of the wildlife in our fields and streams depends on the way we use our soil, water, and plant life.*



When white men first came to Iowa they were amazed at the richness of Iowa soil. They could hardly believe their eyes when they saw the abundance of plants and wildlife in this new land. In a hundred years we have built from this rich soil a great wealthy state—but at a terrible cost to our soil, water, plants, and wildlife.

One-fourth of our topsoil has washed from our cultivated fields. Our streams have been changed from clear water into muddy, raging floods during rainy seasons. In summer many of our streams are dry beds or trickles of heavily polluted (poisoned) water. The homes for fish and wildlife have often been destroyed by our careless use of soil and water.

We Iowa people are beginning to see that all is not well with our soil, water, and wildlife. We are beginning to correct our mistakes.

We have taken only a few forward steps. We must take many, many more if we are to increase the fish and game in our streams and fields, or even keep the numbers we now have. We must take many more steps before our fertile soil will stop washing away.

## A BRIEF GUIDE TO THE TRAVELING EXHIBIT

Many different kinds, or species, of wildlife are found in Iowa's fields, streams, and woods. Only a few of these species can be shown with the traveling exhibit. The list of these changes from time to time.

### IOWA MAMMALS

All Iowa animals which have hair and which feed their young from milk glands are called mammals.

Many millions of dollars are spent for guns, traps, dogs, and other sporting goods used in pursuing game and fur mammals. Our wild mammals provide tons of meat each year. We cannot count in dollars and cents the value of out-of-doors fun and exercise. Tramping through the fields hunting, fishing, trapping, or "just looking" makes all of us feel better, think better, and act better.

Mammals help keep other animals and plants under control and thus aid in keeping nature "in balance."

Mammals and other kinds of wildlife are a valuable, living resource. Each year the trappers in Iowa harvest a fur crop worth about \$2,000,000.

In order to make certain that this resource is protected for continuous use, we must learn more about mammals and other wildlife.

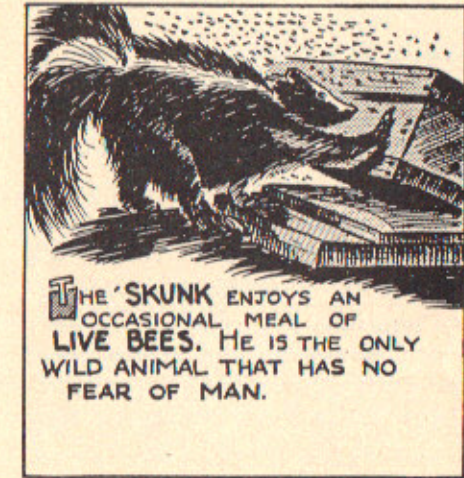


We must know what they eat, where they live, and how they depend upon soil and water for their food and shelter. Only after we

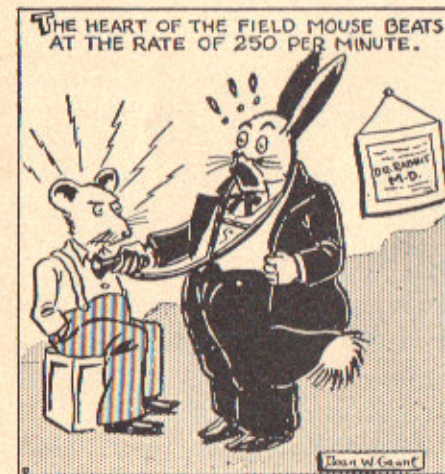


know what wildlife needs can we understand how to manage our land so that those needs are met.

There are 56 kinds of wild mammals in Iowa. The smallest is the little-known pigmy shrew, about  $3\frac{1}{3}$  inches long from the tip of the nose to the end of the tail. The largest is the white-tailed deer. The opossum is the only Iowa mammal which carries its young in a pouch. There are seven species of moles and shrews. There are seven kinds of bats. Moles, shrews, and bats are insect eaters. The carnivores, or meat eaters, are 13 in number. The rodents, including mice, rats, beaver, and their relatives, number 25. There are two kinds of rabbits, cottontails and jack-rabbits.



THE RED SQUIRREL, or chickaree, is not considered as a game animal. It is found mainly in northeastern Iowa. He "rules the roost" with noisy, weasel-like viciousness. Sometimes he makes uncalled-for attacks on his bigger cousins and drives them away. The red squirrel has a reputation for stealing bird eggs. He has often been accused of killing and eating young birds. The fox squirrels so common in town and woods are often incorrectly called "red squirrels."



GAME AND FUR ANIMALS. The deer is our only wild "hoofed mammal." Three tree squirrels, the two rabbits, and deer are termed game animals. The fur-bearing animals are opossum, raccoon, weasel, mink, otter, spotted

THE FLYING SQUIRREL is not seen very often, but he lives in nearly all of our woodlands and cities. The reason we do not see him often is that he "flies" only at night.

Flying squirrels do not really fly. They glide from tree to tree. Their

"wings" are loose folds of skin between front and hind legs on either side. Their tails are flat. The tails serve as "rudders" to guide them.

BEAVERS were very rare in Iowa from about 1880 until 1931. About that time a colony made their home on the Missouri River near the mouth of the Big Sioux River. Beavers have now spread throughout the state. There are thousands of them and in some places they have become bothersome. The main food of beavers is the bark of cottonwoods and willows. When foods are scarce, they may raid some nearby cornfield.

Most Iowa beavers live in dens in the banks of streams. They enter their dens from an under-

water tunnel. In the smaller streams beavers often build dams. They do this to back up a pool of water to cover the den entrance.

Beavers are valuable fur animals. Their value is sometimes partly cancelled by their destruction of corn crops. Also they may dam up dredge ditches and drainage outlets, causing flooded fields.

THE WEASEL is a small cousin of the mink. He has a savage disposition. He does not care for water areas but is more often found on higher ground. He feeds on small mammals and birds. The brown coat of the weasel changes to white (except for a black tip on the end of its tail) in winter. There are three species of weasel in Iowa: Bonaparte's weasel, the long-tailed weasel, and the least weasel.

### MAMMALS WHICH MAY APPEAR WITH THE EXHIBIT

OPOSSUM. The opossum is found everywhere in Iowa. He is a stupid animal with scavenger habits (that is, he will eat animals killed by disease or other causes). He may be found high in a tree eating grapes from a wild grapevine, or in a city dump, pawing through the garbage. The fur is coarse.

The opossum is the only member of the marsupials in North America. Marsupials carry their young in a pouch. The young, sometimes 15 in number, are tiny (about half an inch long) when born. They find their way into the

mother's pouch where they stay several weeks before venturing out to clamber over her back. They cling to her fur like little hitchhikers. Mrs. Opossum usually has two families each year.

Opossums stay in a tree den or in a hole in the ground during very cold weather. Their tracks show that they come out to look for food during mild winter weather.

'Possums are famous for playing dead. It seems strange that such stupid animals would have such a clever way of protecting themselves. Some people say that opossums "faint" from fright and

shock—that they really can't keep from playing dead. There are a lot of things we don't understand about our wild neighbors.

Opossum hunting with dogs is a popular sport. The dogs trail and tree the 'possum. More people should learn to eat opossum meat. It is delicious when properly cooked.

RACCOON. Raccoons live in every county in Iowa. They are most numerous along forested streams. They are popular for fur and game. Many people use them for food and more people should. Raccoons eat many kinds of food—both animals and plants. They like to play in water and are good swimmers.

About five baby raccoons are born to Mrs. Raccoon in April or May. The young are playful and mischievous. They begin to follow their mother as she hunts for food when they are about two months old.

One way to make certain that raccoons live in your woods is to leave enough big trees. These large trees may have one or more hollow branches. The 'coons use these hollows for homes.

MINK. The mink is one of nature's most graceful and interesting children. He is also a very valuable fur bearer. He is an excellent swimmer and diver and spends much of his time near water. He is able to catch small fish, crayfish, and frogs almost as he pleases. He eats small birds and mammals up to the size of cotton-

tails and muskrats. Sometimes certain single minks develop a liking for poultry and become very damaging.

The mink has scent glands similar to those of skunks. However, he depends on his fighting ability for protection more than his scent.

Minks make their homes along stream banks covered with brush or high grass. Their fur is short, glossy brown, with a thick, waterproof inner layer.

Mink pelts bring a high price (\$30 to \$40 for prize pelts) and are much desired by trappers. Destruction of shelter along stream banks may cause minks and other fur animals to become scarce. Trappers should remember that too many cattle grazing on the banks of a creek may be a reason for fewer valuable furs.

SPOTTED SKUNK (Civet Cat). The spotted skunk is smaller and more weasel-like than its striped cousin. It is one of the best rat



and mouse catchers in nature. Often it lives entirely on rats, mice, and insects. Farmers should be thankful for the help of these animals. We can help "civets" to help us by following these simple rules:

1. Do no trapping around farm buildings if civets are known to live there.
2. Kill or trap civets around poultry houses only when you are *certain* that a civet is the "criminal."
3. Control your dog. Dogs usually learn to leave these little "stinkers" alone unless they are urged on by their masters.

A litter of three or four young is born in early summer. The den may be in a rock pile, hollow log, straw stack, or under a building.

Both spotted and striped skunks have an interesting habit of stamping their front feet when they are angry or annoyed. Civets carry the foot-stamping habit a bit farther than striped skunks. Civets may raise the rear end of their bodies and actually walk on their front feet for a few steps.

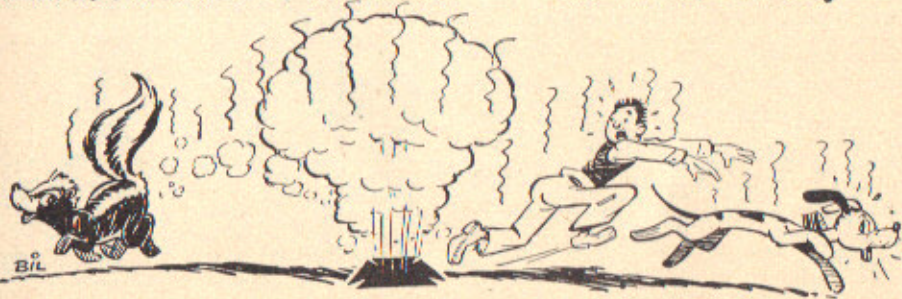
**STRIPED SKUNK.** The striped skunk is famous for its "stench guns." Fortunately it will often stand quite a bit of abuse before using its weapon. Skunk scent is a clear yellow liquid. It is sprayed from two muscular sacs or glands just inside the anal opening. Skunk scent has no real connection with the excretory or waste system of the skunk's body.

Skunks often dig their own dens. They may use an old ground hog hole. During the winter, large groups of skunks may use the same den. The females usually do not leave the den all winter, but males move about except during very cold weather.

There is a state law which prohibits digging out the dens of animals except in certain rare cases. When a person disobeys this law and digs out a den of skunks, he is almost certain to find only females. Destroying these females is likely to ruin skunk trapping in that area.

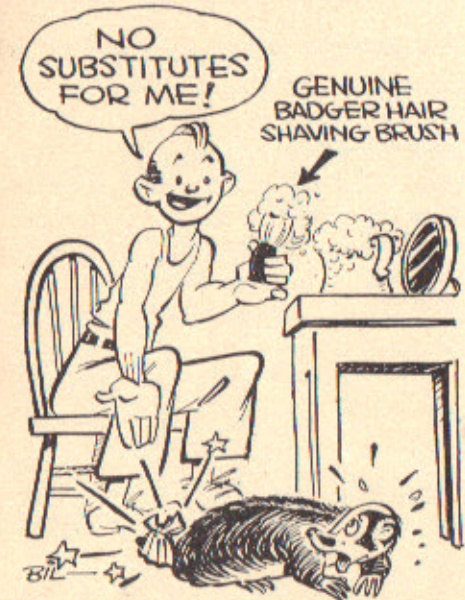
Skunks eat mice, large meals of insects, and other small animals. They have been accused of stealing the eggs of ground-nesting birds.

### LEARNING ABOUT ANIMALS . . . THE HARD WAY!



We eat eggs. Probably skunks do, too.

**BADGER.** Badgers look somewhat like large ground hogs. Badgers are the strongest diggers of all our native animals. They are not very common in Iowa. They



are most often found in large grazed pastures where there are plenty of ground squirrels. Ground squirrels are their favorite food. They also dig out mice and rabbits. All this digging leaves large holes in pastureland, so badgers are considered a nuisance when too abundant.

A badger is a fierce fighter with a hissing, growling attack.

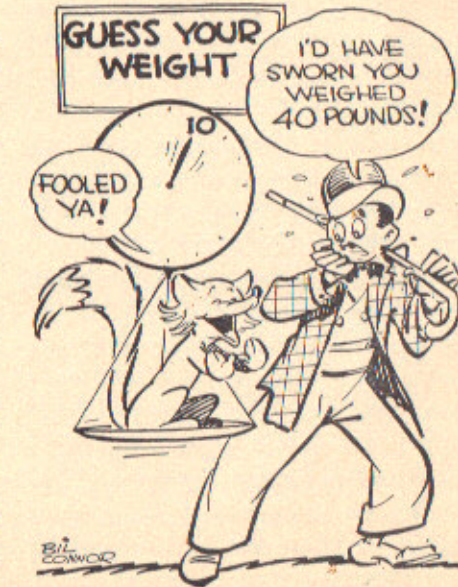
Badger babies (about three in a litter) are born in May or June in a den deep under the ground.

Badger hair is sometimes used for high quality shaving brush bristles.

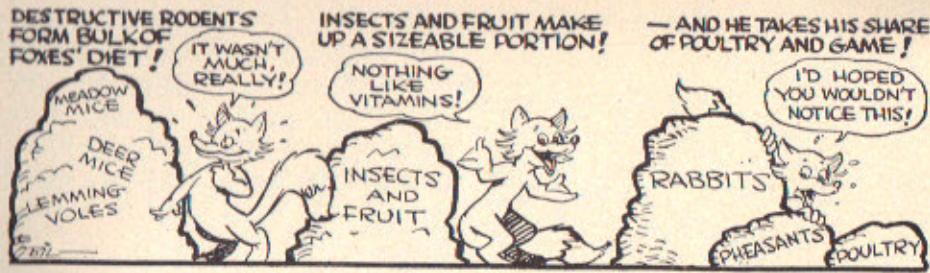
**FOXES.** The fox has good and bad habits. We all know that some foxes kill poultry. They also destroy some game birds and their nests. On the other hand, we know that their principal foods are mice, rabbits, and miscellaneous insects, fruits, and vegetation.

Here are a few interesting and little-known facts about foxes:

1. They are smaller than most people think. Red or gray foxes seldom weigh over 12 pounds. A good-sized house cat is usually a more vicious and powerful killer than a fox.
2. Foxes catch their victim by "sneaking up" on it, then rushing or leaping the final few feet.
3. One pound of meat is a good meal for one fox. (A full-grown cottontail rabbit will weight two to four pounds.)







4. Four to nine young are born in a ground den in March or April.
5. The bushy tail is used as a nose- and toe-warmer in cold weather.
6. The tail is used as a shield and decoy when fighting.

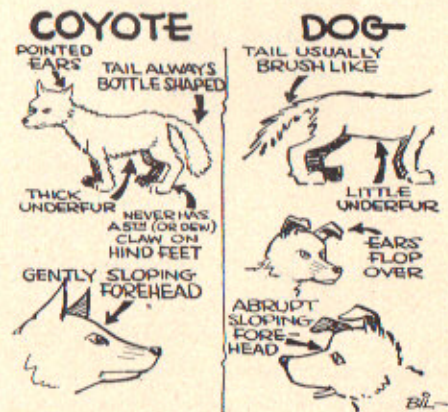
**BOBCAT (Wildcat, Bay Lynx).** Bobcats are becoming more plentiful in Iowa. Seldom seen except by hunters, this big "tabby" is not dangerous to humans unless cornered. He hunts mainly at night. Rabbits make up most of his meals. The bobcat, or bay lynx, is much smaller than his big cousin, the Canada lynx, which does not occur in Iowa.

In spite of his long legs and big feet, this fellow is not a rapid runner. He depends on surprise and sudden leaps to capture his food.

Bobcats, along with other meat-eaters like foxes, coyotes, and minks, are important links in nature's food chain (soil→plants→plant eaters→meat eaters). They use surplus small animals for food, and thus prevent these from becoming too numerous. Ordinarily they more than pay for the poultry they steal.

**COYOTE.** Coyotes are also mistakenly called "wolves" or "brush wolves." Our ways of using Iowa land must agree with them, for they are about as plentiful as ever. Mr. and Mrs. Coyote like to live in hilly, brushy pastureland. They are close relatives of dogs. What do you suppose your dog would do if he had to find his food out in the fields? He would eat rabbits, mice, and maybe a lamb, or any food he could find. This is what coyotes do.

Some people say coyotes look like dogs. Coyotes have a bottle-



shaped tail, narrow at the base and wider near the end. Dogs' tails are usually the same thickness all along their length, or taper toward

the end. The ears of a coyote are always "perked up," or erect; the ears of most dogs lop over. Dogs have a higher forehead than coyotes. Coyotes have heavier underfur than most dogs. These ways of telling the two apart do not always work. Sometimes coyotes and dogs interbreed and their pups may look like either or both parents.

**GROUND HOG.** Ground hogs, or woodchucks, are found in every part of Iowa. They dig their dens along the edges of woods, ditches, and embankments. Their food is grasses, hay crops, and other green plants. Generally they feed in the morning before the sun is bright and again in the late afternoon.

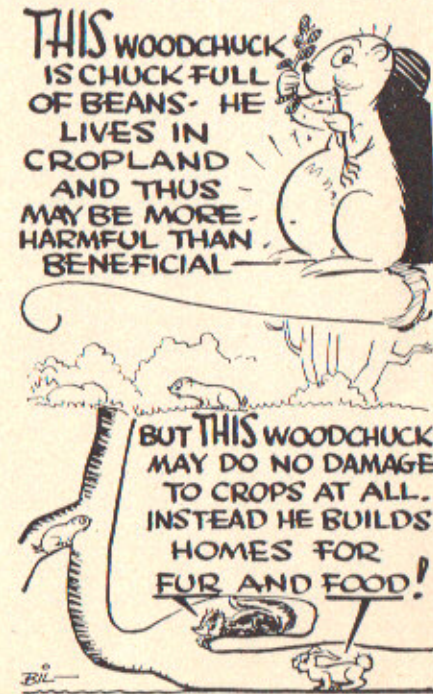
Young ground hogs are born about April or May. There are usually four in a litter.

Before the first cold weather, ground hogs go into their winter den to hibernate. They usually do not come out of the den again until the warming rays of the spring sun call them back to wakefulness.

It does no harm to believe that the ground hog is an expert at telling future weather. However, it is not likely that the weather on Ground Hog Day has much effect on the weather during the rest of the winter.

Ground hogs should not be killed without reason. Their dens provide homes for mammals not so well suited to digging. Ground hog dens are of great value to cottontail rabbits for shelter during cold

weather. Only those "whistle pigs" that are actually causing



damage should be destroyed. (Why are ground hogs called "whistle pigs"?)

**SQUIRRELS.** The two common game squirrels are the fox squirrel and gray squirrel. The fox squirrel is found all over Iowa and likes the more open wooded areas. The gray squirrel is found more often along the Mississippi River and through the heavily timbered areas of the south and southeast part of the state. The black squirrel is a dark-colored gray squirrel.

Gray and fox squirrels eat nuts, acorns, fruits and seeds, tree buds, and sometimes tree bark. Squirrels, like many other mammals and

birds, are fond of corn. They will not often pass up a nest of bird eggs or young birds.

Young squirrels are born in leaf nests or in hollow trees during February or March. Usually there are three to five in the new family. Like most of the gnawing animals, they are naked at birth. Their eyes open when they are about 36 days old.

The mother usually raises two families a year. The second litter is born in late summer.

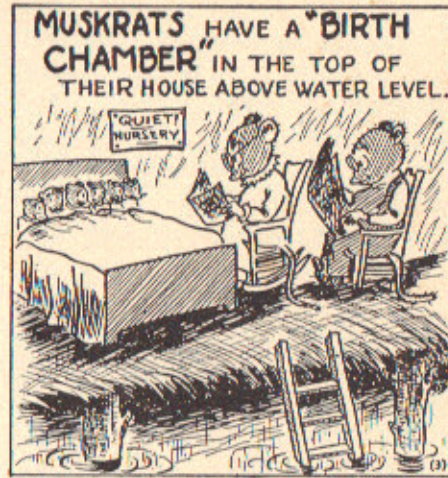
**PRAIRIE DOG.** There is some question as to whether prairie dogs have ever lived in Iowa. A few have been seen, but they were probably escaped pets. Today they are plentiful only on the dry plains of the prairie states west of Iowa. They eat all kinds of plants.

The home of the prairie dog is a deep burrow. The entrance is surrounded by a pile of loose earth. This little animal is called a "dog" because he "barks." Burrowing owls and rattlesnakes often move in with a prairie dog family and feed upon the young prairie dogs.

**MUSKRAT.** The muskrat is our most valuable fur bearer. He is found along nearly all of our water areas. He is most plentiful in the shallow marshes and lakes of northwest Iowa.

Musk rats raise two or three litters each year. There are about six or seven young in each litter. Their favorite food is plant stems

and leaves. Sometimes they eat frogs or other small animals.



As many as a half million muskrats have been trapped in a single season in Iowa. Their pelts bring trappers up to \$3.50 each. Few people realize the value of the fur crop. Many of our marshes have been drained and put into plant crops. They would have produced much more valuable crops of fur. Also, their value as duck nesting grounds would have been saved.



Most people would be pleasantly surprised if they would try eating muskrats. The meat is dark and tender, with an excellent "gamy" flavor.

## IOWA FISH

Nearly 150 species of fish live in Iowa. The largest ones are the giant rock sturgeons, paddlefish, and flathead catfish. They may weigh 100 pounds or more. The smallest full-grown Iowa fishes are the tiny inch-long darters.

**PRIMITIVE FISHES.** Some of our fishes have not changed in structure for countless thousands of years. These are known as primitive (first) fishes. They include the lampreys, paddlefish, sturgeons, gar, and dogfish. Some of this group have skeletons of cartilage or gristle.

**TROUT.** In northeast Iowa there are three species of trout. The brook trout is native. That is, it was here when America was settled. The brown and rainbow have both been introduced in our trout waters.

**CATFISH.** There are nine kinds of catfish in Iowa. These are the flathead, channel cat, blue cat, three species of bullheads, and three species of stone cats (commonly called "Mad Toms"). Stone cats are seldom over three or four inches long.

**PIKE.** The true pikes are the northern pike, muskellunge, and mud pickerel. The mud pickerel is small, seldom exceeding 12 inches. He is found only on the lower Mississippi River and sometimes in the downstream parts of its tributaries. The muskellunge, or "muskie," is *very* rare in Iowa, if it lives here at all. The northern

pike is the best known member of the family.

**BASS.** The true bass are two in number. They are the yellow bass and the white bass.

**PERCH** are represented by 21 species. The most common are the yellow perch found in our major north Iowa lakes; the walleye pike, or yellow pike-perch; and the sauger pike. The rest of the perch family are very small minnow-like fish called darters. Many darters are very brilliantly colored with red, blue, green, and yellow.

**SUNFISHES.** One of our most important fish families is the sunfish group, with 12 members. The smallmouth and largemouth bass (two of the finest of our game fish), along with the black and the white crappie and rock bass, are in this group. Other members of the sunfish family are warmouth bass, green sunfish, long-eared sunfish, pumpkinseed, bluegill, and orange-spotted sunfish.

**SUCKERS.** There are 16 members in the sucker family. Among these are three species of buffalo fish which may grow to weigh 50 pounds. There are three kinds of quillbacks, five true suckers, and five redhorses. The redhorses include the black, silver, and golden mullet, also the river and northern redhorse.

**MINNOWS.** The minnow group is a large group. There are 53 kinds

of minnows in Iowa. The carp is the only minnow which reaches large size. The carp was brought to American waters from Europe about 1870. Goldfish are minnows, too. They were brought from other lands.

**MISCELLANEOUS.** Other groups of fish have only one species living in Iowa. For example, the American eel, the sheepshead (fresh water drum), and the burbot. There are a number of miscellaneous small fish that are of primary interest only to ichthyologists (men who study fish). These include top minnows, two miller's thumbs, a mud minnow, a trout perch, a pirate perch, brook silver-side, and stickleback.

Fishing provides healthful outdoor sport for some 400,000 people in Iowa each year. In addition to this some fishes are important be-

### FISHES WHICH MAY APPEAR WITH THE EXHIBIT

**CHANNEL CATFISH.** Fishing for channel catfish is different from any other form of fishing. Successful catfishermen are in a special class by themselves. Certainly those persons who can catch the "cats" day after day when others come home empty-handed deserve much credit. It is hard work and takes more "know-how" than most of us have, but it is a thrilling and satisfying sport. Few Iowa fishes provide finer eating.

Channel cats are found in nearly all Iowa waters. They stay in

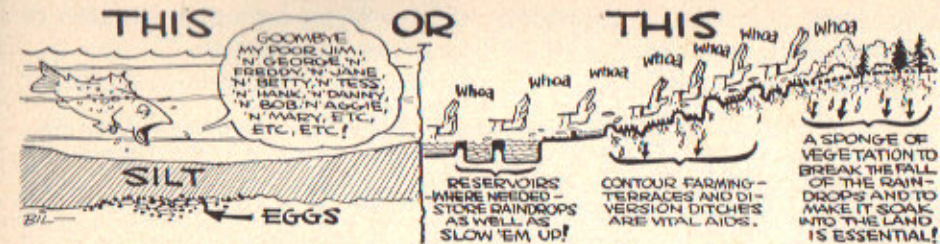
cause of their sale value. Three million pounds of buffalo, carp, sheepshead, catfish, and other commercial species are taken and sold by professional fishermen each year. These are harvested mainly from the Missouri and Mississippi rivers. Nearly two million pounds of carp and buffalo are taken from inland waters each year by rough fish removal crews employed by the state. These are removed to improve inland waters for more desirable kinds of fish.

Over one-fourth of all the money spent for sporting goods in the United States is spent for fishing tackle.

Fish, like mammals, are important in keeping a natural balance between soil, water, plants, and animals. Fish use insect and plant food produced in fertile water. Man and other animals use fish for food and sport.

sheltered places (drift piles, undercut banks, etc.) during most of the day. During the late evening and night they move into the channel and into shallow water to feed. They begin to spawn (lay eggs) in Iowa in late May or early June.

Although channel cats are often found in muddy waters, they prefer the cleaner streams. Careful use of our fields will prevent erosion which muddies our streams. Clearer, cleaner streams mean better fishing.



**BULLHEAD.** Bullheads are well known. They can live in almost any kind of stream, pond, or lake and will probably not be driven out by careless use of our land.

Bullheads are catfish. There are several different kinds — brown, black, and yellow. They feed on small plants, insects, and water animals found on the bottom. Eggs are laid on sand or mud in shallow water. The young are "herded" about by one or both parents until they are able to shift for themselves. These families may darken the water in a spot several feet across.

**NORTHERN PIKE.** Fishermen enjoy hooking a northern because of the vicious fight which is certain to follow.

Other common (though incorrect) names for this fine game fish are: pickerel, grass pike, snake, and tiger.

These fellows live mostly on the flesh of smaller fishes, frogs, crayfish, and insects. They lay their eggs in weedy sloughs or shallow ditches leading from the larger lakes and streams. Draining of these sloughs and low water levels in our lakes have left them without spawning grounds in many areas.

Northern pike are good food fish. The meat is sweet and flaky but contains numerous small bones.

**WHITE BASS.** This fish is also called silver bass, striped bass, streaker (incorrect), or perch bass. They are a popular game and food fish in our northern lakes and large streams. Like the crappies, these fish feed in schools. They bite viciously and rapidly when a lucky fisherman finds a feeding school.

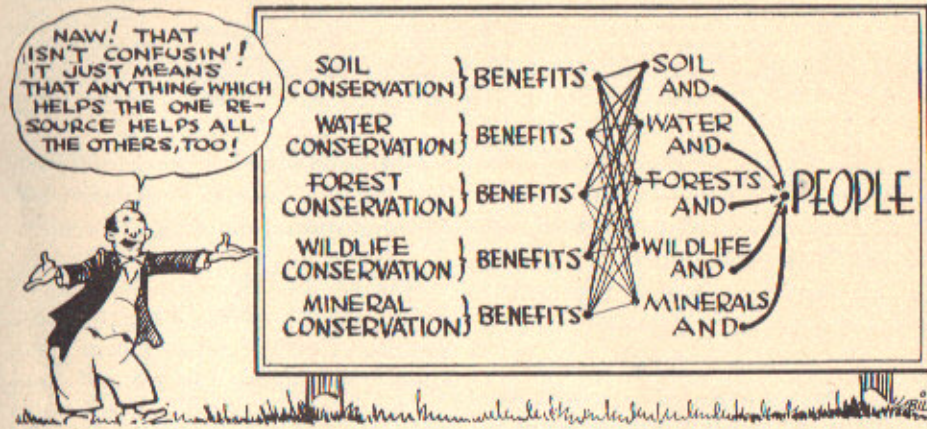
Silting in of the favorite streams or lakes of this and other fishes has caused them to become scarce. We must learn to use our fields carefully so as to prevent soil washing. Too many Iowans do not understand why **BETTER FARMING MEANS BETTER FISHING.**

We do not need to do one thing to save soil and something else to bring back fish and other kinds of wildlife. The practices that conserve soil and water are exactly the same as we must use to increase food and shelter for wild creatures. For example, using our fields carefully causes our streams to have an even flow. Using our fields carefully stops silting. Clear, even-flowing streams are better for fish life. Our natural resources are soil, water, forests and other plants, minerals, and wildlife. They are

very closely connected. Anything which benefits any one of them benefits all the others.

sides. These bars give the idea of rings around the fish.

In early April yellow perch lay



**YELLOW BASS.** Yellow bass feed in schools. They generally bite most freely in the middle of the afternoon and to a lesser extent at night.

The food and spawning habits of yellow bass are very much like those of silver bass. They are not as plentiful as white bass in Iowa, being found only in a few natural lakes (Clear, Hartwick, Pine) and a few city lakes. They are also caught from the Mississippi River.

**YELLOW PERCH.** Do you like to fish during the heat of the afternoon? Yellow perch will often give you wonderful sport during that time of day. In fact, they seldom bite during early morning or at night.

Other names for this prized food fish are ring-perch and raccoon perch. We can guess that both of these names come from the seven dusky up-and-down bars on the

their eggs in long ribbon-like strands. These strands are often draped over underwater plants. Soon after they are spawned the ribbons swell until they are many times their original size.

Fishermen use all sorts of bait for the yellow perch. Small live minnows are usually good bait.

**WALLEYE PIKE.** These fine fish need help to keep up their numbers. State Conservation Commission workers catch adult walleyes in nets. They collect eggs from the females and milt from the males. The adult fish are then released. State fish hatcheries hatch the eggs and release the fry (newly-hatched fish) in lakes suited for them. This prevents a great loss of eggs and young which would otherwise occur.

You may call him anything you like—pike-perch, walleye, jack salmon, yellow pike-perch—but no matter what name you prefer, he's

a champion food and game fish. His flesh is solid, sweet, and nearly free of small bones. Walleyes are caught on many kinds of baits, but minnows are common favorites. Many walleyes are caught on artificial baits.

Another member of the perch family, the sauger or sand pike, looks like the walleye at first glance. The front dorsal (top) fin of the sauger has a number of black dots on it. The same fin on the walleye has a rather even color with a dark spot at the back of the fin. The lower part of the walleye's tail fin is white. Saugers are a smaller fish, usually not exceeding 14 to 16 inches in length.

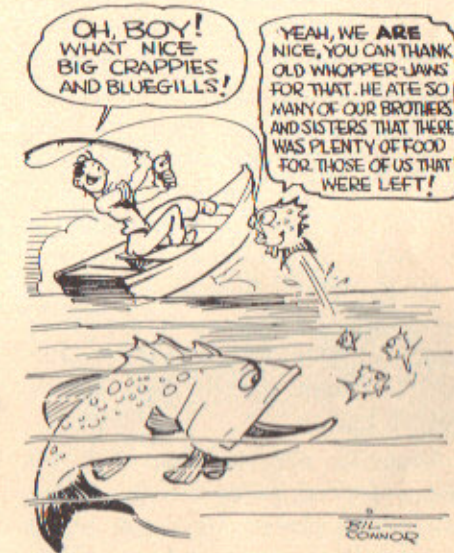
**LARGEMOUTH BASS.** Largemouth bass spawn in late April and May. The male builds a nest in shallow water by fanning the bottom with rapid movements of his tail. This clears away the silt and plant material. Mrs. Bass lays the eggs in the nesting. After making the eggs fertile, the male guards them until they hatch. While guarding the nest, he will strike fiercely at anything which annoys him.

The largemouth is the bass of our slower, warmer streams and of our lakes and ponds. He may be told from other fish by his heavy greenish body and the large mouth. The mouth reaches backward beyond the eye.

Largemouth bass are a favorite fish of the rod-and-reel fisherman. They are often caught on "plugs" and other kinds of artificial lures.

Many bass fishermen use live bait such as minnows and worms.

Largemouth bass have large appetites. They eat smaller fishes, crayfish, insects, frogs, etc. They are often placed in lakes or ponds to keep other fishes from becoming too numerous.



**SMALLMOUTH BASS.** If there were prizes given in the fish world for fighting ability the smallmouth bass would have many of them. He seldom grows to weigh more than five or six pounds, but these pounds are packed with sport and good eating.

Smallmouths are "choosy" about where they live. They like clear, cool, fast-running streams. Some are found in cold water lakes. When polluted waters move in, smallmouth bass move out. Poisons from sewage or industries may ruin a stream.

The smallmouth bass has a solid, blocky body. His mouth never ex-

tends *behind* the eye. He has five olive-green bars on his head behind the eye. He eats small fish, insect larvae, crayfish, and other small water animals.

**BLUEGILL.** It has been said, "Ounce for ounce, the battling bluegill is the most concentrated package of fun in the entire fish family."

This brightly colored sunfish never gets very large. Eight inches long and a half or three-quarters pound will be about average. However, don't let his size fool you. He'll strike at a worm, grasshopper or feather fly with as much vigor as a bass. When hooked, he battles fiercely. And then—put 'em in the pan, brown 'em well, and treat yourself to some of the best eating you've known.

Bluegills are excellent fish for clean, fenced farm ponds. They are often placed in these ponds along with largemouth bass. While they are young they feed the bass. After they grow up they feed the fisherman.

**WHITE CRAPPIE.** Crappies raise so many young that they are

likely to become too numerous, especially in small bodies of water. When there are too many fish for the food in the water, all the fish (not just the most plentiful kind) are apt to become stunted and thin.

The white crappie is a favorite fish of the still fisherman. A good place to find this tasty fish is around underwater brush piles, old stumps, and weed beds. The most common bait used is small minnows. Since the flesh around the mouth is tender, one must be careful not to tear the hook out while lifting the fish from his home.

**BLACK CRAPPIE.** The black crappie can usually be told from the white crappie because of the many *blackish* spots on the body and fins. There are seven or eight stiff spines in the top fin, whereas the white crappie has only five or six spines in the top fin.

Black crappies are much like white crappies in their habits. The eggs are laid on muddy or sandy bottoms in shallow waters in May or June. The food of crappies is mostly made up of small fishes, minnows, and water insects.

## IOWA BIRDS

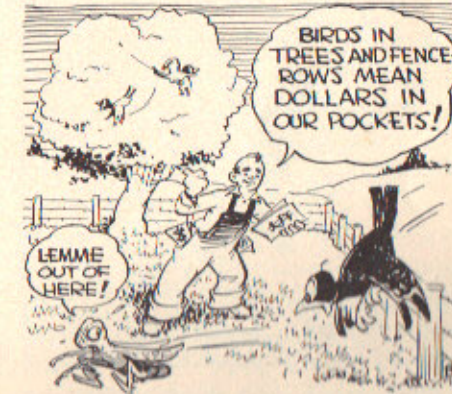
Iowa is in the heart of a great north-south bird highway. During the fall and spring migration, as many as a billion birds may visit us or fly over our state.

The smallest Iowa bird is the tiny ruby-throated hummingbird. He is about 3½ inches long and weighs about as much as a dime. The largest wild bird found in Iowa is the whistling swan. This swan is 4½ feet long from the tip of the bill to the end of the tail and weighs 12 to 18 pounds.

There are at least 373 different kinds of birds that may be seen in Iowa. Twenty-nine kinds (winter residents) are here in the winter only. One hundred and forty-eight kinds (migrants) come through in the spring and fall. Forty-seven kinds (permanent residents) stay with us the year around. Thirty-six kinds are accidental visitors that are very rarely seen. One hundred and fifty different kinds of

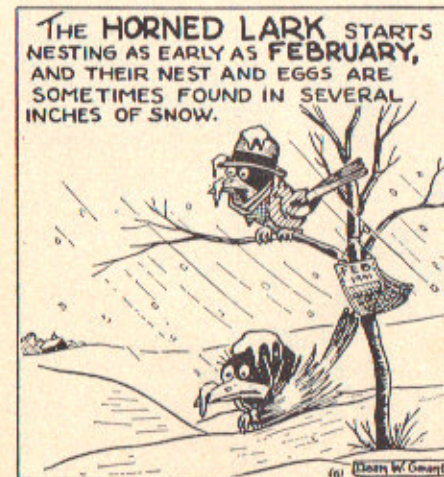
birds nest and rear their young in the state.

Birds cannot be valued in dollars and cents alone. Of course, we know their value as insect and weed-seed eaters is worth millions of dollars each year. Birds are



worth more than that. Everyone enjoys the return of birds in spring. More and more people are taking part in bird study as an outdoor hobby. The hunting of game birds during the open season is among the most popular of all sports. Hunting is healthful and relaxing.

Certain birds, such as quail and pheasants, are termed game birds by state law. These game birds may be hunted during open seasons under the rules set up by the State Conservation Commission. A few birds are *not* protected by state law. These are the sharp-shinned and Cooper's hawks, great horned owl, crow, starling, blackbird, and English sparrow. (Even though Iowa does not protect blackbirds, the Federal law *does* and so we are



prohibited from destroying them.) These birds are thought to do more harm than good. All other wild birds, including hawks and owls, are protected throughout the entire year.



Birds need more food, protection and nesting cover. These things will come naturally if we do a better job of caring for soil, water, and forests in our state. It is quite possible that the number of beneficial birds would be double what it is now.

Pheasants and quail are called upland game birds. There is a hunting season for them where there are enough birds. These birds fit in with good modern farming and are also called farm game birds. The ring-necked pheasant is the most numerous upland game bird in the central and northern counties. The bobwhite quail is the most abundant game bird in the southern counties.

Ruffed grouse are found in very small numbers in the timber areas

of the northeast. Hungarian partridge are usually found only in the prairie counties of the northwest. Prairie chickens still nest occasionally where there are large areas of grass. They do not like to be disturbed by man or livestock. In some years many prairie chickens move into Iowa during the winter.

We are farming so much of our Iowa land that we do not leave much for nesting places, feeding grounds, and protecting cover. You can see why we have little chance of bringing back in large numbers the prairie chicken, wild turkey, ruffed grouse, and Hungarian partridge as game birds.

There are 29 kinds of ducks and six kinds of geese found in Iowa during migration. About 40,000 Iowans each year purchase a duck stamp and hunting license to enjoy this great fall hunting sport.



The drainage of countless thousands of small marshes and lakes has destroyed most of the nesting

places for ducks in Iowa. Now most ducks have to go farther north to find nesting grounds. Many of

them nest in southern Canada. Some still nest around Iowa's remaining lakes and marshes.

## BIRDS WHICH MAY APPEAR WITH THE EXHIBIT

**BOBWHITE QUAIL.** We may expect to meet Mr. and Mrs. Bobwhite any place in our state. Since this fine game bird must have plenty of shelter in which to feed and raise his brood, he is most plentiful in southern Iowa. Here he finds more wooded pastures and brushy areas. Bob likes this. He would like to spread into the northern counties, but here most of the land is heavily farmed. Very little land is left for plants which provide food and shelter for game birds. There may be other reasons why quail are less plentiful in northern Iowa, but the lack of enough shelter is probably the most important.

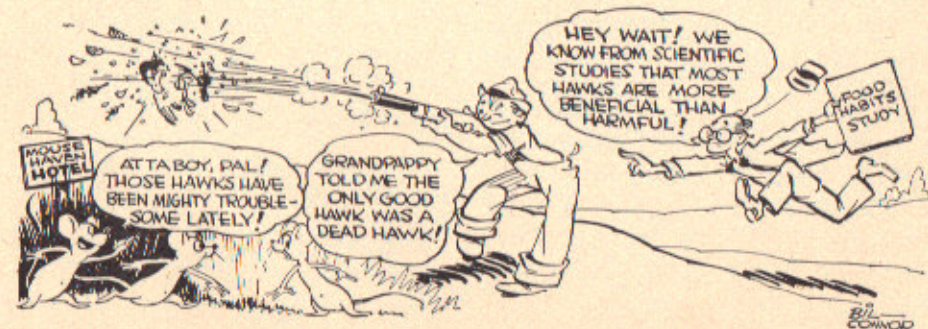
Quail are among the most beneficial of Iowa's birds. They live almost entirely on weed seeds and harmful insects. It is too bad that their value as game birds and pest destroyers is limited by lack of shelter on many farms.

**RED-TAILED HAWK.** The large hawks which are often seen

perched on dead limbs of trees in open fields are usually either red-tailed or rough-legged hawks. The big fellows are often shot by hunters and others who think that all hawks are bad. We need to change our thinking about hawks.

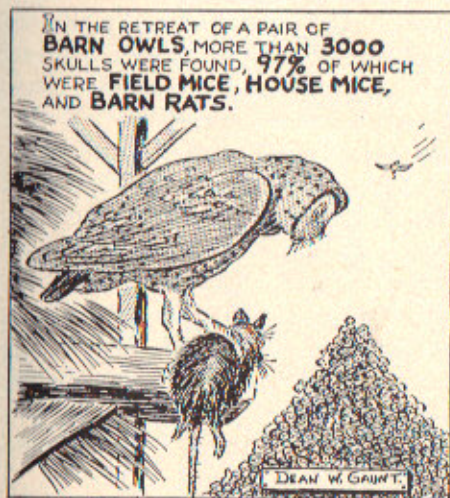
Just because one person robs a bank, we don't put everyone in jail. That's a silly idea. Yet, just because a few hawks steal a chicken once in a while, some of us declare war on all hawks. For every person who robs a bank or commits other crimes, there are thousands of people who are "good citizens." In the same way, for every hawk which has become a "criminal" and steals chickens, there are hundreds which have never tasted chicken and never will. They are the "good citizens." They live on mice, rats, and insects which eat our crops. Shooting them does much more harm than good. Shoot only those hawks which are known to be harmful.

Red-tailed and rough-legged



hawks are about the same size. The upper surface of the tail is reddish-brown on the adult red-tail. When flying overhead the rough-legged appears to have dark bands across its belly and tail tip. The underparts of the red-tail are whitish marked with small brown spots.

**BARN OWL.** Because of the odd "mask" on its face this valuable bird is also called the "monkey-faced owl." It hunts only at night when farmers' poultry is safely sheltered. It is one of our most valuable wild neighbors.



Barn owls nest in deserted buildings, towers, and holes in trees or banks.

Young barn owls are difficult to raise in captivity. They have to be taught to eat raw meat by moving the meat in a lifelike manner until the youngsters develop a liking for it.

**GREAT HORNED OWL.** The great horned owl is the largest Iowa owl. He measures nearly two feet from head to tail when full grown. You may expect to hear his low, short "hoo-hoo, hoo-hoo" at night any place in our state.

This big fellow hunts at night. He feeds on rabbits, birds, mice, and rats. He glides through the air without making a sound. His wing feathers are soft and fringed. This allows his wings to pass through the air quietly.

Eggs are laid in a hollow tree or an old hawk, crow, or squirrel nest in February or March.

Owls swallow all parts of their prey—feathers, fur, and bones. The parts which they cannot digest are later cast out of their mouths. A pile of these owl "pellets" often shows where the birds roost. Have you ever found any owl pellets?

A stuffed owl makes a good crow decoy.

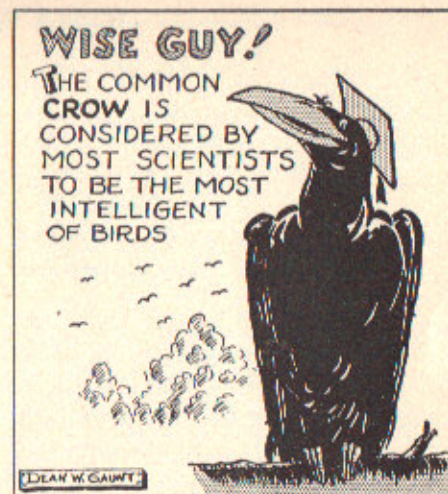
**BARRED OWL.** If you ever hear a couple of barred owls talking over the latest woods news you will never forget it. Loud and startling, their chorus of owl music makes the deep woods ring. "Whoo-who-who whoo, whoo-who-who ta whoowah" is their standard call. They are jokingly called "eight-hooters."

Eggs are laid in hollow trees or old nests of crow, hawk, or squirrel.

The name "barred" owl comes from the heavy cream and brown bars on the breast.

Barred owls are often shot by hunters who believe that they harm poultry and game. This is wrong, for there is no question but that barred owls are beneficial. Their main food is mice. They also eat small birds, snakes, frogs, and insects.

**CROW.** Everyone knows the crow. He is one of our best known birds, and probably one of our wisest. For hundreds of years man has quarreled with the "black rascal" over the corn kernels stolen from behind the planter. He destroys some bird nests. We shoot him, we swear at him, but when we are done he is more plentiful than before. He seems to have learned all our tricks and made up a few of his own. We say we hate him, but we'd miss him if he were gone.



You might think from his color that Mr. Crow was a member of the blackbird family. His calls and habits are the best hint as to his relatives. His closest "kin" are the jays and magpies.

## IOWA REPTILES

INTERESTING AND IMPORTANT FACTS ABOUT SNAKES. Among Iowa's most valuable snakes are the bull-snake, fox-snake, milk-snake, black-snake, and blue racer. They are valuable because their food consists mainly of rats, mice, ground squirrels, and pocket gophers.

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

The snakes commonly known as "water moccasins" are not the poisonous moccasin of the South. They are "common water-snakes" and are *not poisonous*, even though their looks and actions are savage.

The snakes so commonly reported as "copperheads" are usually either the hog-nosed snake or the milk-snake. Both of them are harmless and non-poisonous. The copperheads are dangerous relatives of the rattlesnakes. A few copperheads have been found here, but they are *very rare*.

The puffing adder or hog-nosed snake does not blow poisonous powder or spray from its mouth, as is generally believed. He is entirely harmless.

Milk-snakes do not steal milk from dairies. They are not fond of milk. Black-snakes do *not* milk cows.

The fact that a snake rattles does not prove that it is a rattlesnake. Many snakes, such as the fox-snake and bull-snake, vibrate their tail violently when they are excited. In this way they produce a very lifelike rattle when their tail is in contact with a board or among

dry leaves or on the sand. A rattlesnake alone has rattles on its tail.

There is no such thing as a "hoop-snake." This snake is said to put its tail in its mouth, make a wheel of itself and roll along. No snakes in Iowa or any other place act that way.

A rattlesnake's age does not always agree with the number of rattles it bears. More than one rattle may be formed each year. The older rattles break off after a time.

The tips of a snake's tongue are not poison fangs. The tongue is a sense organ of touch, smell, and perhaps hearing.

People who know snakes best do not believe the stories of young snakes running down the mother's throat for protection.

The mysterious power of "charming" which snakes are supposed to have is an overworked myth or fairy tale. A brave bird or animal in defending its nest or young may be struck by a snake. A cowardly bird or animal may be overcome with fear and unable to move. A person should not call this being "charmed."

You *cannot* always tell a poisonous snake by the shape of its head, or by whether or not it coils before striking.

Whisky is not a cure for poisonous snake bites. When taken in large quantities it is very dangerous to the injured person.

The young of the following kinds of Iowa snakes are hatched from eggs: hog-nosed snake, blue racer,

pilot black-snake, fox-snake, bull-snake, and milk-snake.

These Iowa snakes bear their young alive: garter-snake, Graham's water-snake, common water-snake, massasauga, and timber rattlesnake.

## TURTLES WHICH MAY APPEAR WITH THE EXHIBIT

SNAPPING TURTLE. The "snapper" may be dangerous if handled carelessly. His jaws are powerful and able to inflict a bad wound. The speed with which he strikes is deceiving. The bite is not poisonous, but may cause infection.

Large snappers may be over two feet long and weigh up to 50 pounds. These turtles are often used as human food. Their vicious actions and disagreeable appearance do not prevent the flesh from being delicious when properly prepared.

Studies of the foods of snappers have shown that they are not entirely destructive. More than half their food consists of water plants, already dead fish, crayfish, frogs, etc.

Turtles of all kinds fit into Mother Nature's plans in some way or another. They help to keep other plants and animals in check so nature's balance will not be upset. Just because *we* do not like the habits of some animals is no reason for condemning all of them. Their part in nature may be necessary to

our life. We must learn to live *with* nature, not fight against her.

PAINTED TURTLE. The bright red and yellow markings make this small turtle easy to recognize. Painted turtles are seldom over six inches long. They eat water plants, insects, insect larvae, and other small water animals.

Painted turtles usually stay close to water.

BOX TURTLE. Box turtles have a hinge on their lower shell. They can draw in their legs and head and close the lower shell almost completely. This gives them good protection against enemies.

These turtles have high rounded upper shells. They eat plants, insects, snails, earthworms, and other small animals. They do not need to remain near water and are usually found along woods borders or fence rows, although they often choose open fields for their hunting.

SOFT-SHELLED TURTLE. These reptiles are often called "flap-jack turtles" because of their



pancake-like appearance. The long pointed snout hides sharp powerful biting jaws. A soft-shelled turtle may be as dangerous as the snapper. Soft-shells strike viciously and quickly when cornered. They

spend most of their time in the water, but crawl out to sun themselves.

Soft-shells eat fish, insects, crayfish, and other small water animals.

## MISCELLANEOUS ANIMALS WHICH MAY APPEAR WITH THE EXHIBIT

**AMPHIBIANS** (Frogs, Toads, Salamanders). Have you paid the toad in your garden for his help? It has been estimated that a common toad does \$20.00 worth of work each year, eating 10,000 garden pests, such as insects, slugs, etc. Frogs, too, are valuable as insect-eaters.

We have four kinds of toads, four kinds of tree frogs, and five other frogs in Iowa.

The spring song-fest of frogs and toads is a wondrous chorus, if one takes a few moments to listen. Only the males take part in the chorus which advertises the breeding period.

Frogs lay their eggs singly or in masses. Toads lay their eggs in strings. You will find these eggs in shallow water. They are surrounded by a jelly-like substance.

Eggs produce tadpoles which have gills and tail but no legs. The tail gradually disappears, four legs appear, and lungs replace the gills. The bullfrog takes two years to complete this change. All other Iowa frogs and toads complete the change in one year or less.

Frogs and toads hibernate in the ground or in mud at the bottom of streams or lakes. During hibernation they take in oxygen through their skins. Toads have nothing to do with warts on humans.



Salamanders are relatives of toads and frogs, but do not lose their tails during their change from tadpoles. Salamanders are harmless, in spite of their rather ugly appearance. They do not hop like toads or frogs. Salamanders have smooth, moist skins, while lizards, snakes, and other members of the reptile group have scales.

**CRAYFISH.** Crayfish are freshwater relatives of shrimp and lobsters. They are as good to eat as their ocean-dwelling cousins. Crayfish are killed and cooked by dropping them alive into boiling water. Like pork, they should be thoroughly cooked to destroy parasites. The tail muscle is the part to eat. After boiling, the tails may be fried, spiced, or eaten "as is."

Crayfish fill an important place in nature's scheme. They eat min-

nows, small fish, and other small forms of animal life. This helps to control these other animals and keeps the water from being polluted by dead flesh.

**MUSSELS.** Mussels are often called "clams." Mussels once pro-

vided most of the high grade buttons for our clothes. Catching mussels and button-making are still important industries in Iowa. The silt in our streams has nearly destroyed the supply of mussels. Plastic buttons have replaced the "pearl" button for many uses.

## CONSERVATION CAN'T WAIT

THE STATE CONSERVATION COMMISSION'S TRAVELING WILDLIFE EXHIBIT IS DESIGNED TO INTEREST SCHOOL CHILDREN AND OTHER CITIZENS OF IOWA IN THE WELFARE OF NATIVE WILDLIFE.

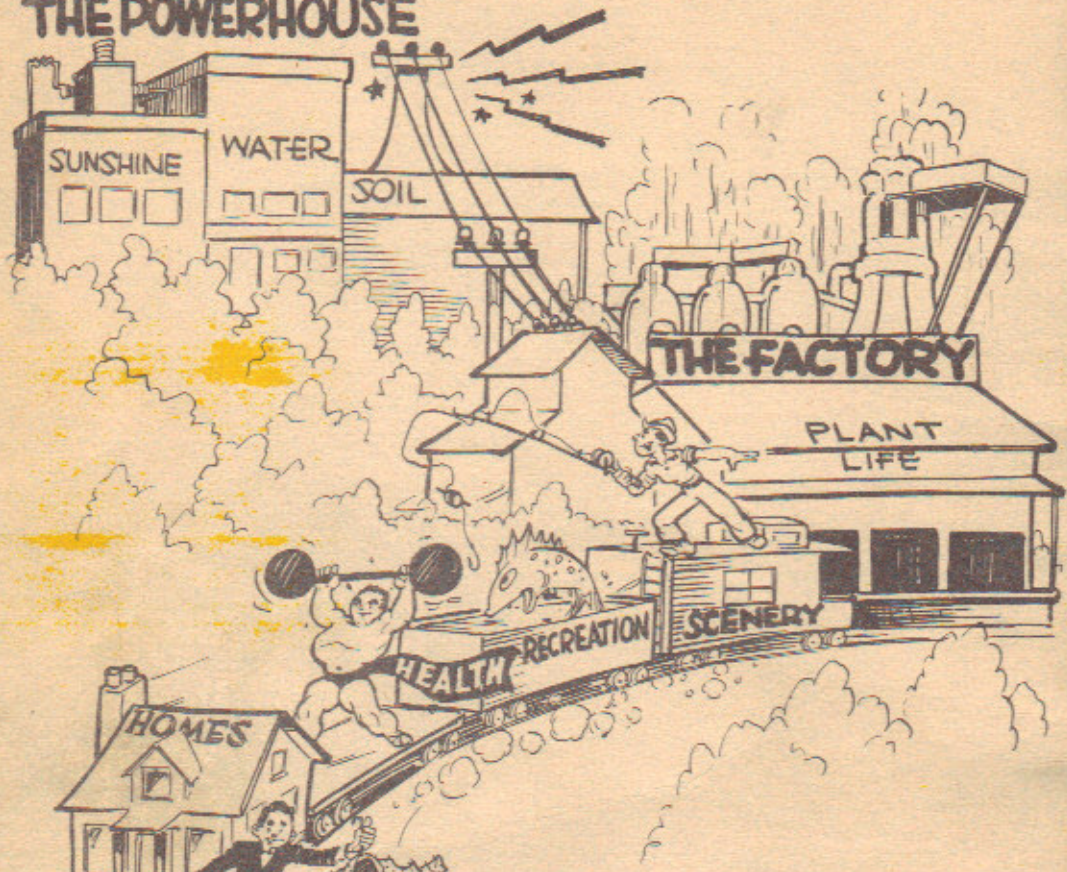
WISE USE OF SOIL, WATER, AND PLANT LIFE IS NECESSARY IF WILDLIFE IS TO PROSPER. THE SAME WISE USE OF SOIL, WATER, AND PLANT LIFE IS NECESSARY IF **PEOPLE** ARE TO PROSPER.

WHEN ALL IOWANS UNDERSTAND THIS BASIC CONSERVATION FACT, THEY WILL DEMAND MORE CONSERVATION ACTIVITY FROM STATE, FEDERAL, AND PRIVATE AGENCIES AND WILL ALSO BE BETTER PREPARED TO GIVE THESE AGENCIES THE COOPERATION AND HELP THEY MUST HAVE.

WE CANNOT CONTINUE TO WASTE OUR GOD-GIVEN SOIL, WATER, FORESTS, MINERALS, AND WILDLIFE AS WE HAVE DURING THE PAST HUNDRED YEARS. IF WE DO WE CANNOT REMAIN A HEALTHY, PROSPEROUS PEOPLE.

**CONSERVATION CAN'T WAIT!**

# THE POWERHOUSE



## THE PRODUCTS!

