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Volume 21 February, 1962 Number 2

## TRACKDOWN ON IOWA WILDLIFE

Denny Rehder

### GROWING IOWA TIMBER

John Stokes

Assistant State Forester

A question often asked of Conservation Commission foresters by land owners is "How fast will timber grow?" This is a question that is hard to answer with a statement that will apply to Iowa timber types.

In the coming articles we will discuss the different timber types here in Iowa and the growth, set possibilities, and related aspects of Iowa woodlands.

First, we should discuss a few general things that affect timber growth. Just as corn yields vary from yield to yield and section to section so does timber land from section to type and site to site. Site factors include the factors such as soil, moisture, and moisture that affect the growth of a tree. It should be remembered that timber is a crop! In Iowa we find several timber types each with its particular characteristics of seed and growing differences.

The recent Iowa Forest Survey lists four basic timber types as follows:

1. Elm-Ash-Cottonwood
2. Oak-Hickory
3. Bur Oak
4. Northern Hardwoods

These woodland types make up 16 million acres of Iowa forest land.

For this series, we will not consider native or planted evergreen stands of pine, spruce, red pine, and fir but only our hardwood timber types. In classifying hardwood species we can use broad classes of hardwood and softwoods based on weight, density and hardness. The oaks and hickories are hard hardwoods and soft maple, elms, cottonwoods and willows are soft hardwoods.

The hardwoods and softwoods are important to Iowa sawmills, wood processors, veneer and pulp mills. Today Iowa sawmilling industries utilize over 100 million trees growing in Iowa. It should be pointed out that the forest land for the most part is growing on the poorer class



Jim Sherman Photo.

Quail tracks in the snow. Tracking wildlife and being familiar with the tracks left by the many Iowa animals can become an absorbing pastime with little or no expense.

land. This is as it should be with the most productive lands being used for food crops and improved pastures. Timber products including veneer logs, lumber logs, posts, pulpwood, stave bolts, and nuts should provide periodic income to the woodland owner.

In any timber type the first step in management is to get the desired number of good growing trees spaced on each acre so as to get the maximum growth. The mature and excessively crowded trees should be harvested for sale. This leaves trees of higher quality to put on growth at a rapid rate.

In this article we shall discuss the elm-ash-cottonwood timber

type often called bottomland hardwoods. This timber type includes species such as cottonwood, green ash, white elm, basswood, willow, soft maple and birch. These species are classed as the soft hardwoods.

Generally the elm-ash-cottonwood type is found along our major river bottoms and smaller stream beds and on the moist lower slopes. These bottomland areas are some of our most productive timberlands in the state. This timber type covers more acreage than any other type in Iowa. Of the 2.6 million acres of timberland in Iowa, 1.2 million acres or 47 per

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Ever been walking along a little stream on a lazy day and find yourself attracted to the tracks crisscrossing along the bank? If you have, you're not alone; tracking and track identification is popular with many people who spend any time in the outdoors. It's easy, inexpensive, and you don't need any particular materials, unless you carry a guide to wildlife tracks.

Iowa has a wonderful variety of wildlife, all of which leave the stories of their day in the mud of streambanks, the soft dirt of fields, or the winter snow. Ranging from tiny shrews and mice to larger beaver, coyote, or deer, these tracks offer a fascinating insight into the habits of those who leave them.

Last week, while in the Yellow River country of northeast Iowa, I saw two sets of tracks I had never before encountered. The first was the bold, unmistakable imprint of the wild turkey, which because of its size separates it from the bird-life in that area. The second was the snowshoe-like track of the ruffed grouse. The grouse has horny growths clustered around its feet that help to support it in light snow and the imprint is a unique fuzzy impression.

I trailed a fox for awhile watching his day unfold. Here was a place where he ambushed a cottontail and ate it hair and all. A little further on, he dug out a mouse, killed it, and buried it in the snow. A fox will trot all day killing mice and moles it may dig out of the snow. If the fox isn't too hungry, he'll bury them in a drift and never eat them. Another place he tried stalking a ruffed grouse. You can see the faint marks left by the wings as the grouse flew away, probably perching in a tree till the fox left. Finally the tracks wavered along the path as the fox looked for a place to curl up and take a snooze. He found it on the lee side of a snow drift. Other days you might see where a fox has jumped upon a stump to take a survey of the surrounding countryside. A

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CIRCULATION THIS ISSUE.....50,500

**COMMISSION MINUTES**

Travel was authorized for two people to attend Aquatic Weed Control Society meeting in Chicago, February 13-14.

Travel was authorized for five people to attend the Great Lakes Park Training Institute at Angola, Indiana, February 19-23.

Three people were authorized to attend the State Foresters Meeting in Milwaukee in January.

A report was given on the possibility of future acquisition of lake shore property on Clear Lake.

The Commission met with Mr. Baer of the Board of Control to discuss the construction of a permanent prison camp on the Yellow River Area.

**WATERS**

The Commission asked for an Attorney General's opinion as to the ownership of certain sand and gravel areas on the Cedar River in Cedar Rapids.

The Commission instructed that a letter be sent to Washington, D. C., U. S. Coast Guard Public Hearing, informing them of our new boating laws.

A request was approved for a construction permit allowing a Sportsman's Club to clean behind a low head dam on the Turkey River.

**COUNTY CONSERVATION BOARDS**

Grundy County received approval for the acquisition of one acre for \$200 for use as a school arboretum called the Meester Area.

Wright County received approval for the acquisition of .54 acre to be called the Eldridge Park as a gift located on the southwest side of Lake Cornelia for use as a picnic area.

Wright County received approval for the acquisition of 12 acres by gift of an area called Bingham Park to be used as a school-county forest.

Wright County received approval for the management of Troy Roadside Park on Highway 60, four and one-half miles south of Eagle Grove.

Hancock County received ap-

**THINGS YOU MAY NOT KNOW**

The throat and ears of the beaver are equipped with valves which voluntarily close when the animal dives and open when it comes to the surface.

A female fly can lay its first batch of eggs in less than a week after its birth.

It is not necessary to slit the tongues of birds in order to teach them to talk. Birds produce vocal sounds with the syrinx, a voice-box structure in the throat.

A bird's two eyes often weigh more than its brain. The ostrich's eyes often weigh more than twice the weight of its brain.

The raccoon's Latin name, *Lotor*, means the "washer." The animal is noted for washing its food.

Approval for the acquisition of 20 acres of forest area on the west shore of Eagle Lake at a price of \$3,500 to be used as a school-county forest and outdoor classroom.

Mills County received approval for development plan for the Emerson Roadside Park located three miles west of Emerson on Highway 34.

Cedar County received approval for a revised development plan for Massillon Park in that county.

Jackson County received approval for a development plan for Horseshoe Pond Area to be used as a service headquarters, a winter sports area and picnicking.

Approval was given for a management agreement with Black Hawk County for the Childs Access Area on the Wapsipicon River for use as a fishing access area and other development.

The Commission refused to transfer by deed the Del Rio Access Area to Polk County which now is managing that area.

**PARKS**

An option was approved for \$8,000 for the purchase of an access road to Lizard Lake in Pocahontas County.

The Commission met with a delegation from Delhi which requested fill dirt for the school district to be taken from lands adjacent to Silver Lake and approval was given for the project with the stipulation that top soil should be returned to the area.

Three options for land purchase on the Lake Anita area in Cass County were approved for 80 acres for \$8,000, 40 acres for \$5,000 and 80 acres for \$14,000.

**FORESTRY**

The Commission accepted a gift of five acres of land adjacent to the Cedar Creek Unit of the Stephens Forest Area from James Brown on the condition that the abstract cost would not be prohibitive.

**THE GRASS IS GREENER**

James R. Sherman

Recently a letter was written to the Conservation Commission Office by a native of a western state that is justly famous as a vacation area. The letter was written to praise Iowa as a vacation state.

This letter should surprise many Iowans who are so complacent about the physical wealth of their state. The letter began, "Never in my whole life have I ever enjoyed such a vacation as I have enjoyed in the State of Iowa. The sunshine that you have there is so healthful and penetrating it does a lot of good for me. Our summers are so short that we do not get much sunshine!" A surprising thought. Actually, we in Iowa have a variety of weather that is conducive to vigor and enjoyment of living, and we certainly do have much weather that is truly beautiful.

"I have fished all my life for trout. For a change it was different fishing the way you folks do. I really enjoyed it very much." At first glance many Iowans would question this statement, but certainly not the fisherman who is familiar with Iowa's more than five thousand miles of catfishing water or the fisherman who has experienced the thrills of winter fishing on Spirit Lake and the Mississippi River or the fisherman who delights in bluegilling some of Iowa's 23,000 farm ponds to mention only a few.

"The trees, shrubbery, rolling hills and level fields are beautiful. The farms that I have seen are clean, beautiful and well kept." The Iowan who vacations in the mountains is rightly impressed by the beauty of the pines. But for a steady diet, can anything equal the beauty and variety of Iowa's hardwood forests, our prairie plants, and the lush growth that is so typical of our state?

"Your parks are beautiful and as I fish your rivers and lakes I have met some real sportsmen." Ninety state parks and preserves in Iowa make up one of the outstanding park systems in this country and many Iowans are acquainted with their state parks. Six hundred fifty thousand hunters and fishermen in Iowa enjoy their recreation at hand.

Outdoor recreation in Iowa does have variety and richness that is found in few other states. In this instance, the grass is greener on this side.

**TRACKDOWN—**

(Continued from page 9)

fox will sit up on its hind legs just like a dog begging for food.

It's a lot of fun in the winter to go where you know there are hazelnuts. Here you might find the track of the white-footed mouse. These mice will sometimes gather a gallon of hazelnuts into caches in the snow. If you track the mouse you may bring home a sack of hazelnuts. Granted this is the lazy way of gathering nuts, but it's fun.

Pheasants and quail can show you a few tricks too. Have you ever seen a pheasant run pell-mell right into a snowdrift? They'll do it and so will quail. People who think that snow cover immediately cuts pheasants and quail from their food supply have never watched these birds closely. I've seen pheasants land in a corn field, with many of the birds disappearing from view. In a few moments there would be a flurry of snow and out would pop a pheasant. I've also seen places where pheasants have dug an area 18 inches down in the snow where corn has been spilled during the harvest.

Many times you will be following a mouse track to find it end under the wing marks of a hawk or owl that found a winter meal.

Tracking is a year-round sport. In the winter, the snow makes it very easy to pick up small mammal tracks you would normally miss, but in the summer you have tracks of larger animals that are rarely seen in winter.

Along streambanks and riverbanks you will often find tracks of

mink, 'coon, muskrat, beaver, squirrel, opossum (though rare in winter), waterfowl, great blue herons, sandpipers and killdeer (sandbars), turtles, and frogs.

In woodlands and open country you can find fox tracks, coyote, chipmunks, rabbits, squirrels, mice and shrews.

Deer tracks are easily seen, but don't get fooled. I've heard of hounds tell of following tracks until the tracks showed the animal bounding off in a very "un-l-ike" manner.

The 'possum track might confuse you unless you remember to look for the unusual thumb on the front feet. This thumb helps a 'possum grasp tree branches when climbing.

The weasel can give you trouble in the snow, because when he bounds the rear feet will leave an impression made by front feet showing only one of imprints per bound.

Some people make plaster Paris casts of the tracks they find and start a collection. If you are one of those inveterate collectors (like me!) you might enjoy this.

I have one track that I'm waiting to cast in Iowa, but I may have to wait many years before I do it. I'm waiting for the day I can track home a cast of a certain mammal from northeast Iowa—made by a bear!

The polar bear is a powerful swimmer and has been seen swimming in the Arctic seas miles from land.

## WINTER BLOSSOMS AND VAGABOND SEEDS

Carol Buckmann



Witch Hazel Blossoms.

Jack Kirstein Photos.

washed off their feet in some other pond and the birds unconsciously deposit seeds. Such birds on long migratory flights carry seeds encased in their muddy feet for thousands of miles. Thus African plants may find themselves in Europe and European plants may end up in Africa.

Hickory nuts, walnuts and acorns gathered by squirrels are buried in widely separated caches for future feasts. These little fellows often forget or don't use all they hoard, the uneaten nut sprouts and a tree begins to grow in a new locality.

Squirrels and other nut-storing animals will bury nuts at distances from the source equal to at least the diameter of the tree crown. In this way, the new tree does not interfere with the parent tree growth nor does the parent tree cut light from the younger.

Still other plants have different means of seed distribution. Thousands of seeds rely on wings as a means for dispersal, such as maples and elms. These wings slow the fall of seeds enabling the wind to carry them a considerable distance. Silken parachutes carry dandelion, cattail, cottonwood and milkweed seeds for miles. These invade New York City every year from the cattail marshes of New Jersey; businessmen and stenographers are amazed by these mysterious invaders.

Beggarlice and spanishneedles have backwardly placed prongs on

their seeds like little pitchforks. As anyone knows who frequently visits the out-of-doors, these little barbs stay where they penetrate and are picked off with difficulty from the area where they "plant" themselves. Burdock and nightshade seeds have the same effect but with hooked prickles on their fruit which decorate clothing in late summer and fall.

Apples, cherries and a multitude of berries dress their seeds in flashy mantles to attract birds and animals to eat the fruit. Ever notice how many trees, shrubs, bushes, vines and herbs growing along old fences and hedgerows have fruit eaten by birds?

The seeds are not injured by digestive juices in animal stomachs and are passed from the animal's body unchanged. After eating the fruits somewhere else, the birds perch along old fences and telephone wires paralleling hedges and roads and drop the undigested seeds. Thus hedgerows of native shrubs, bushes and trees are planted by birds.

Some grasses and hedges depend on birds to scatter their seeds. As the bird snaps a seed in his bill the highly polished, slippery seed often slips out much like a fresh watermelon seed slips from one's fingers and is taken by the wind.

Most of these plants produce an astronomical number of seeds but only one or two of the entire yearly crop is deposited in a suitable spot

Historically Speaking  
THE YELLOW RIVER  
FORESTA Wonderful Wilderness  
Stan Widney

"Someday the people of Iowa will wake up to the knowledge that there is a wonderful trackless forest within our state!"

This emphatic statement was written in 1919 by a *Des Moines Register* reporter after a trip to the Yellow River Forest where he foresaw the recreational possibilities of an area now being made ready for that purpose.

"The land is worthless for farming," he continued, "but priceless for scenery. They (the State Board of Conservation) can buy it cheap now in all its native beauty and save it for Iowa people for all time.

"Up to the present (April 10, 1919) it is safe to say that not more than a few hundred Iowa people all told have trod the Yellow River country in the 70 years the prairies round about have been settled. Even the natural scientists who have made brave attempts to follow the wilds of the river from its sources in springs near Postville to its mouth at the Mississippi four miles above McGregor admit

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Witch Hazel—19 Feet.

for growth. In one season, an aster plant produces 16,000 seeds, a cattail stalk 2,000,000 seeds and an orchid capsule 3,770,000. It is easily seen that if all the seeds a plant produces would germinate, one species would cover the earth's available surface.

In all these cases a very small proportion get placed sufficiently for successful growth. This wise provision in nature sees to it that the balance of nature is well served.

## WINTER PLANTINGS TO ATTRACT BIRDS

Carol Buckmann

You may have had experience with artificially created bird attractions like bird baths, feeders, houses and perches but here's a natural method to attract the feathered clan.

Install plantings on your grounds to attract the winged concert givers. This serves the needs of birds with a two-fold purpose. First, there are certain plants favored by birds for perching, nesting, hiding, singing, eating, courting, resting and generally just being a bird. By installing your own plantings, you help serve these purposes.

Second, and possibly the best of all—you get a landscaping job done with the same stroke. Planting trees and shrubs appealing from a bird's-eye-view are also pleasing to the human eye. Take berries, for example: "berried treasures" preferred by the feathered songsters are usually bright-hued, ornamental, and attractive to humans. Their needs for shelter are met by hedges and other shrubbery fitting attractively into the backyard picture.

Winter is a critical period for many wildlife species and the winter values of planting should be carefully weighed. At this time, available food supplies diminish and coverts grow small, devoid of foliage and afford less protection.

By midwinter these birds and animals are often crowded into restricted cover patches feeding on scanty, undependable foods. As a result, starvation claims many and weakens them so they become easy victims to predators and susceptible to cold, disease and other misfortunes not affecting well-nourished individuals.

During excessive cold, sleet, deep snows and blizzards, it's especially hard for birds to find food. In such cases, man can come to the rescue in winter feeding.

The two main things to think of when planting to attract winter birds are food and cover values. If birds are well-fed, cold temperatures are no problem, but they need shelter from draft or a place where they can roost and get out of the wind. Here is where the conifers, spruce, juniper and pine are of particular importance.

The red cedar as well as being a potential for cover and protection from wind, holds a record among trees as a feeder of birds. Sixty-eight bird species are known to eat the berries. The dense spiky needles provide good shelter from winter weather and safe nesting places. This plant makes rapid growth when young and reaches about 50 feet at maturity. White cedar and arborvitae are popular among the bird clan and are free from rust often associated with red cedar.

The chief natural winter foods for our wild feathered friends are



Denny Rehder Photo.

This rabbit provided a good target when it ran up the bank. Curt nailed it as the bowhunters took home three rabbits. The wind made careful sighting difficult and the cover was heavy. Rabbit drives are a regular feature of this club's year.

weed seeds, dried fruits and berries, and to some extent buds and persistent green foliage. They like to feed on aspen, birch and alder buds subsisting through the winter.

For roosting, trees such as the pin and white oak are favored since they keep their leaves. Any ornamental plant around the home is good for birds throughout the winter. The hibush cranberry with its red berries lends itself well for food while its thick bush gives good cover. Cedar waxwings are especially fond of this plant.

Japanese barberry, ornamental crab and hawthorn give both food and cover. The coralberry, a low-growing plant, spreads rapidly and its red berries are good for cardinals and purple finch.

Birds seek any place where there is a temperature change such as around windows, garages and eaves or areas where they can get out of the wind. By leaving bird boxes in the winter, the little songsters have shelter from the wind and a place to roost. A dead stump here and there gives shelter and cover. Thickets of any type are used by birds and they use the rapidly growing weeping willow for dense cover.

When considering vines, grape and bittersweet are good food and cover for cardinals and other song birds. Perhaps the best of the vines for all-round use, the Virginia creeper, holds its blue, grape-like berries well into the winter provided they are not consumed earlier by the 20-odd birds that eat them. Vivid red fall foliage makes this vine an attractive addition to the landscape. Plant it along fences, hedgerows or walls, preferably in rich, moist soil.

Herbs for birds in the winter are

scarce but partridge pea stays green. Sweet clover and chickweed stand up well against cold in protected places. Acorns, black locust, beechnuts, and hazelnuts are available as long as they last and some remain until spring unless consumed earlier.

If there is a robin, catbird, cedar waxwing or a dozen other species in the vicinity, the ripe, red twin fruits of the bush honeysuckle will be a drawing card. This plant is widely adapted to various soil conditions. Specimen plants of this 12-foot shrub can be used about the yard or clumps and hedges can be planted in more spacious areas.

The persistent orange-red berries of mountain ash provide winter food for evening grosbeaks and other winter birds. The beauty of the white flower clusters and foliage, as well as the fruits, make this small tree a favorite ornamental. Cool, fertile, moist soils are preferred for the planting of these specimen trees.

Juniper, greenbrier, chokeberry, sumac, Virginia creeper, bayberry, privet, cranberrybush are fruits that hang on throughout the winter. Other seeds available in the winter include coniferous trees, hophornbeam, birch, alder, partridge pea, black locust, ragweed, sunflower, bittersweet, bachelor button and wahoo.

Among the weed seeds, ragweed is of great importance to birds but the supply of this noxious weed is often limited. Frequently, the seeds are buried under the snow or out of reach. Grass seeds and giant ragweed used in clumps in suitable places is good winter cover and food.

Dried fruits and berries are scarce in the winter and frequently

## RABBITS THE HARD WAY

Denny Rehder

Ever been rabbit hunting? Sure you have. But let me rephrase that—ever been rabbit hunting with a bow? Well, that's a different story now, isn't it?

Not so, however, to a group of archers near Gladbrook in central Iowa. During the winter they regularly stage rabbit drives for members of their local archery club. It's a real show the way some of those fellows can hit when the rabbit is on the dead run.

Last week I had an opportunity to join about six of these fellows on a hunt one Sunday afternoon. They got three rabbits and would have had four if that one hadn't run under a woodshed before anyone got a good shot.

It was cold and the wind made careful sighting on the target difficult. We started along some brush and worked our way along the creek. Kenny Storjohann scored first as he hit one sitting. There was some good natured ribbing from the fellows about his long shot and fast-moving target but about that time we hit the rabbits and the action picked up.

Curt Ohrt got his at about fifteen yards running away from him. The rabbits were all over, but the heavy cover made it difficult to hit and a lot of arrows were lost.

We started for an old sandpile with a lot of cover hoping to get some easier shooting. Don Storjohann under even cover.

(Continued on page 13)

covered up or out of reach. For the benefit of birds it is desirable to have extensive hedgerows of wild fruit and seed producing plants.

Birds need thickets to escape the wind and feel safe and secure. Multiflora rose is always good in any situation as well as the wild rose hips for food.

The gray-stemmed dogwood is an aggressive thicket-forming shrub. You can also use silky red osier dogwood if you prefer. These plants usually have white flowers and blue, white, or red fruit clusters becoming ripe in September. At least 30 species of birds feed on dogwood berries while they make good specimen or hedgerow plants.

Variety is the watchword to be in mind when planting for the feathered crew. Lay out plantings in varied patterns with an intermingling of species, sizes and shapes. Give them a wide variety of places to choose from to conduct their business—from crowns of trees to low, shelter giving vines. But most of all, keep the winter birds in mind when planning a landscape.

A design to include birds outside your windows in the winter gives a number of options as to having woods, conifers, vines, shrubs, trees, grasses, and even weeds create a landscape design and meet the challenge of nature's winter scarcity.

## RABBIT—

(Continued from page 12)

John was walking through some standing corn when someone holler- for one coming his way. Don wasn't coming but when he took his foot a cornstalk got in the way. He used an old fluff-fluff, but it broke in two places and didn't break the frozen stalk. Since it was almost impossible to hit in the standing corn, it was only natural that all the rabbits for miles around headed through that spot. Carrying to the sandpit with its gentle hills and valleys we saw a rabbit sneaking along the edge of the ice. Everyone took off running to head it onto the open ice. When the rabbit found it had no chance it struck out across the sand pond and a rain of arrows reminiscent of Indian days fell around the hardy rabbit, but there were no hits. Br'er Rabbit continued on his way and we headed for the cars.

Walking across some open fields Don got the best shot of the day. A rabbit had slipped out of cover and started across the field. Don rolled it at about twenty yards. Grinning in the face of the inevitable onslaught of "Praise be to Allah" and "O, Great White Hunter" he retrieved his prize.

When we were almost to the cars, some of the arrows were in the quivers, with everyone ready for a hot coffee when the biggest of the day came. Right out from under everyone popped a fat rabbit. Pandemonium broke loose. Everyone was running along trying to check their arrows. Someone fell in the snow and Br'er Rabbit kept going straight for an old woodshed. Someone finally got a shot as the rabbit dove under the

shed. Well, he didn't lose the arrow, he pulled off the point getting it out of the side of that shed. The rabbit at last sighting was fine catching his breath in relative safety.

We adjourned for coffee and talked over every shot taken as the hunters are wont to do. It was a show, but you'll want your gun sharpened and your legs ready when you attempt this colder sport.

## HISTORICALLY SPEAKING—

(Continued from page 11)

They have not penetrated a large part of the region and are familiar with but a fraction of the natural landscape. Get out on your high boots and get with us. We'll show you, not only a bit of nature's solitudes, but a whole river valley so wild that only the outer fringes of its mile length have ever echoed the foot of a locomotive or the puff of a motorboat.

Here is everything to be found in a jungle land except monkeys. You can get through some of the wilderness with a perfectly safe Dobbin, providing you want to put your neck on trails of rocks,



Denny Rehder Photo.

Don looks for some sitting rabbit to kick out. Warm dress and strong legs are needed for this sport. It helps, too, if you have a bunch of old arrows to lose.

gullies, sidings and steeps so narrow that only once in about a mile is there a place to pass. We'll wager though, the second time you ride, you'll walk.

"It's a naturalist's paradise, say the botanists, geologists and zoologists of Iowa who are earnestly advocating the purchase of the country of the Yellow River in Allamakee County as a state park.

"From source to mouth the river swirls around capes, past rocky coves at the base of increasingly high, rugged bluffs, crowned and covered with oaks, elms, birches, maples, walnut, butternut and hickory trees, all tangled with grape vines, ivies, wild plum, cherry and crabapple trees, hazel and wild cherry bushes. The ground is lush with wild flowers and ferns.

"There is one bluff covered with balsam firs, a northern species found nowhere else so far south. From the bare rock faces of another cliff a great spring breaks out and pours in a waterfall to the river. The whole region is vocal with birds and alive with the smaller animals. A few big ones too, for the teacher of the one school in the wilderness threatened to give up her job because the howling of wolves kept her awake at night.

"At one place there is a beautiful green slope to the river, a natural amphitheater in the hills. Here stood the old stone house where President Zachary Taylor and his family used often to visit. Another president, Andrew Jackson, recommended it to his personal friends as one spot in the nation where true

rest could be achieved. The stone house was built in 1834 to teach Indians the art of agriculture.

"Someday a Longfellow or Washington Irving will arise to weave the romance of this ancient abode in the wilderness into immortal lines."

Today, in 1962, the Yellow River Forest is much the same as our 1919 reporter described it, with a few notable exceptions. The State Conservation Commission now owns over 5,000 acres of beautiful forest land in the area. Buildings and camps of a prison labor battalion are there and the prisoners are building new roads, camp sites, picnic areas, and other facilities.

Where President (Old Rough and Ready) Taylor once brought a setting of turkey eggs to a school teacher friend, the Conservation Commission has stocked thirty wild turkeys live-trapped in Texas in November of 1960. At latest report they are doing well in their new home.

The people of Iowa have "awakened to the knowledge that there is a wonderful wilderness in our state" and the State Conservation Commission is well on the road to making the Yellow River Forest Area one of the finest vacation spots in the land.

Some kinds of fish have a strongly developed sense of smell to help them find food. If they like the smell of an object, they go after it. If not, they avoid it. Strangely enough, catfish are pleased by smells that other fish and animals find objectionable.

## HAIR, HIDES AND TALLOW

Mann and Thompson

Since prehistoric times, especially in cold and temperate climates, mankind has depended upon hairy mammals for food and for materials to fashion clothing, shelters, weapons, implements and ornaments. Some of our American Indians had not progressed much beyond that when the white man came. They were Stone Age people.

For example, the Dakota or Sioux were nomads who roamed the Great Plains, attempted no agriculture, and depended entirely upon the millions of bison. Their only domestic animal and beast of burden was the dog. Their portable teepee was a conical framework of slender poles covered with hides of the buffalo. Its flesh was their chief food. Surplus meat was dried into "jerky" to be eaten in emergencies, or—pulverized and mixed with tallow, marrow, and berries—to make pemmican.

They used every part of the animal, including its horns, bones, sinews and hoofs. Brains and tallow were used in preparing skins for robes, shirts, moccasins, leggings, pouches, parfleches, etcetera. Raw hides were stretched over the frames of shields, saddles, and the tub-like bullboats for crossing streams. Buffalo droppings or "chips" were the only fuel on these treeless plains.

The pioneer explorers, hunters and settlers in Kentucky, Ohio, Indiana and Illinois found a country teaming with buffalo, elk, bear, deer and the smaller furbearers, as well as wild turkeys and other game birds. Men like Daniel Boone, Abraham Hanks, and George Rogers Clark adopted the Indian's dress and many of his skills. The early settlers copied them.

A pioneer wore moccasins of deer or buffalo skin, thigh-length buckskin leggings, a long fringed buckskin shirt, and a broad leather belt which held his powder horn, bullet bag, skinning knife and tomahawk. Only the coonskin cap was his own design. Not until the early part of the 19th century was leather generally discarded for textile clothing.

The settler used game and, later, domestic animals, for many purposes other than food and clothing. Frequently, in building a cabin, rawhide thongs were used to secure the rafters and tie down the ends of the clapboards or "shakes" on the roof. The door might be hung on rawhide hinges. On his bed, stretched thongs supported a bearskin mattress or a straw tick, and bearskins or buffalo hides, with the hair on, covered him.

Tallow from buffalo and deer was used to convert deer hides into buckskin. Bits of it were scrupulously saved for use in "grease lamps"—a gourd or scraped out turnip.

**IOWA TIMBER—**

(Continued from page 9)

cent of the state forest area is classed as elm-ash-cottonwood timberland. Dividing Iowa in three sections, as shown in the map, the southeastern section has 396,000 acres. The northeastern and western sections have 248,000 and 186,000 acres respectively of this type.

They contain approximately 2,838 million board feet of saw timber or 56 per cent of the total footage of saw timber in Iowa. In the bottomland timber type, elm makes up 30 per cent of the total; while cottonwood and soft maple make up 21 and 16 per cent respectively. The American or white elm is about three times as abundant as the slippery or red elm. According to recently published bulletins, American elm is the most important bottomland tree in Iowa in terms of existing volumes. In today's markets both soft maple and cottonwood are in greater demand than elm. The red elms have more market demand than the white elms. In the complex bottomland forests, elm often seeds in cutover areas in association with ash. When cottonwood and soft maple are cut, elm usually succeeds these species. Other important bottomland trees which make up approximately 20 per cent of the sawtimber volume are basswood 6 per cent, hickory 5 per cent, willow 5 per cent, and black walnut 4 per cent.

Fortunately, this timber type has a majority of the stands stocked with sawtimber size trees and good existing acreages of pole size and sapling size trees.

Vigorous bottomland stands on good sites may grow more than 1½ cords per acre per year, or 700 bd. ft. per acre per year. Many acres of Iowa bottomland timber approach or exceed this growth rate. Several factors make such excellent growth rates possible. The better the site or growing area is in productivity the faster the trees will add volume growth.

The average volume per acre for timber type is 2,300 bd. ft.; however the best sites may support as high as 4 times this average.

Of the three major bottomland species, cottonwood reaches its maximum annual growth at about 35 years of age in unmanaged stands. Soft maple and elm reach their maximum annual growth at about 55 years and 70 years, respectively.

Cottonwood will yield considerably more volume per tree due to



having far greater usable log length than other species growing with it. Cottonwood frequently has 40 feet of merchantable log length while ash has 30 feet, soft maple 24 feet and elm 17 feet. Under management, bottomland stands can be made to provide maximum growth at the earliest possible age. This is done by growing the proper number of trees on an area, considering the site conditions. Growth is put on good quality trees left after the initial cut is made.

All bottomland species have ready markets except possibly hickory. Elm is used principally for veneer in boxes, crates and baskets. It also finds uses in furniture, vehicle parts and car blocking. Iowa's pulpmills find elm to be an excellent tree for pulpwood. Red elm is valued for veneer and is used on the farm for construction where a tough, hard wood is required.

Cottonwood is the principal wood used for crating and blocking supplied to Iowa industries. It also is most important as a pulpwood species.

Soft maple has had an increasing demand in recent years. Logs are used for veneer and lumber. It is also important as a pulpwood species.

Basswood is in demand for use in the veneer industry. One other important bottomland species is black walnut, which is Iowa's most valuable species. It will be covered in another article.

Your Conservation Commission district foresters located at Adel, Anamosa, Chariton, Fairfield, Denison and McGregor, will assist land owners with timber management programs and offer marketing assistance.

**WILDLIFE'S WINTER DIET**

David H. Thompson

Anyone who regularly feeds wild birds, and counts up the amount of food that they eat in the course of a winter, often wonders how they could get along without his help. In one day of freezing weather two or three dozen small birds commonly clean up a half pound of food—suet, sunflower seed, cracked corn or small grain. This does not take into account raids by squirrels and rabbits.

Winter in this region is a time of food crisis for all warm-blooded wildlife. Most of our summer song birds, especially the insect eaters, avoid cold by migrating to warm climates until spring. Likewise, most waterfowl and shorebirds go south during the months when our waters are locked in ice.

A few native mammals such as woodchucks and ground squirrels are true hibernators. They prepare for winter by putting on extra fat which they can draw on slowly during the cold months. In autumn they hide away underground beyond the danger of freezing and "sleep" until spring. Among these winter sleepers body temperatures often drop to 40 degrees Fahrenheit and their life processes are slowed to a crawl. In dormant woodchucks, for example, the heartbeat can drop from 80 per minute to four, and breathing from 25 per minute to once in five minutes.

The raccoon, opossum and skunk commonly hole up and stay quiet for a few days or even weeks during extremely cold weather. Then they live on their fat reserves but do not become cold-blooded. On

(Continued on page 15)

**INDIAN MISSION AT YELLOW RIVER FOREST**

Denny Rehder

An Indian mission to teach the Winnebagos the art of agriculture was built in the Yellow River area in 1834. At this time most of Allamakee County was located in a neutral strip established as a buffer zone between the Sioux on the north and the Sac and Fox on the south. When the Winnebagos were moved from Wisconsin into the area, the soldiers from Fort Crawford in Prairie du Chien built the stone mission.

Zachary Taylor was the commander at Fort Crawford and Jefferson Davis was his lieutenant. A sawmill was built downstream to provide lumber for the building.

Fort Atkinson was later built further west to protect the Winnebagos from the warring tribes around them. In 1835 the school was opened by Rev. David Lowrey, the teacher, and a Colonel Thomas as farmer. The school was located on the banks of the Yellow River overlooking a beautiful valley. When Indian Agent Joseph Street visited the school on April 30, 1836, he found only six pupils, but more and more were being attracted.

Governor Henry Dodge visited the school in February of 1837 and was delighted with its progress. In December of that year there were 41 students.

1839 was the peak year for the mission with 79 pupils enrolled—40 boys and 36 girls. But it was difficult to keep the Indians from eating the seed and killing the work oxen.

Whiskey dealers preyed on the Indians from just outside the jurisdiction of the military officer and sub-agent. In 1841, 39 Indians died in drunken brawls, the liquor furnished them by the unscrupulous traders.

Finally in 1840 the mission on Yellow River was abandoned and moved to Fort Atkinson on the Turkey River. Reverend Lowrey and Colonel Thomas moved there to carry on their work.

The mission house was then traded back and forth between different families who used it as a residence. It claimed several firsts in the history of Allamakee County. It was the first recorded permanent white settlement in the county; it is believed the first white child in the county was born there; and the first election in the county was held there.

President Zachary Taylor and his family used to visit the mission in the summer and Andrew Jackson recommended the area to his friends.

The mission house is long gone with only the foundation to show its location. The land is now part of the Yellow River State Forest, an area under development by the State Conservation Commission. Only memories and old records are left to those who delight in such things.

Forest Type	Northeastern		Southeastern		Western		Total	
	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent
Oak-Hickory.....	364	43.0	567	50.3	105	16.9	1,036	39.0
Northern Hardwoods..	66	7.8	5	.5	7	1.1	78	3.0
Elm-Ash-Cottonwood..	346	40.9	503	44.6	370	59.5	1,219	47.0
Aspen-Birch.....	15	1.8	...	...	5	.8	20	.8
Bur Oak.....	36	4.3	37	3.3	129	20.7	202	7.8
Hardwood-Red Cedar..	19	2.2	15	1.3	6	1.0	40	1.5
Total.....	846	100.0	1,127	100.0	622	100.0	2,595	100.00

Commercial forest area by forest type and geographic region, Iowa, 1954

# TKING INVENTORY OF OUR FORESTS

Denny Rehder

Inventory is being taken on all state-owned forest areas to determine what we have. Just as a business must take inventory of its stock, so must the foresters of the State Conservation Commission cruise its woodland areas.

Particular interest is the being done at the Yellow River State Forest in Allamakee County. Here we find forestry personnel carrying on a logging operation concentrated on salvaging the waste material in the poorer timber of the area.

This timber is "poorer" because its rate of growth is just balancing its rate of deterioration. Since the land has come under the state's control fairly recently, the foresters must cull the timber to bring it to a higher level of quality. Much of this timber has suffered from grazing, over-cutting, and uncontrolled fire due to poor management practice in the past.

Foresters hope that in 15 to 20 years another such salvage operation can be implemented so that the quality of the remaining timber will be such that private concerns will be willing to come in and purchase timber on the stump.

However, as part of the future plan for the multiple use of this forest, den trees essential for some wildlife are being left untouched. Located at the 3,000-acre Paint Creek Unit of the Yellow River Forest is the only state-owned sawmill. The purpose of this sawmill is not solely for demonstration and exhibition. It is an example of the over-all attention to sound forest management as applied by the forestry section.

The mill turns out a variety of lumber which is used mainly for commission buildings around the state.

There is a great deal of lumber also used for picnic tables, paving posts, bridge planking, and general repair.

It takes about 15 men for the operation at Yellow River to roll logs at capacity. Two men felling, one skidding, and all the men needed to load the logs to the mill and run the mill, add up to a sizeable work force. The extensiveness of the operation is made possible by the presence of a labor camp now located at the Paint Creek Unit. Given a chance to work out-of-doors, these men help in all phases of the logging operation and are vital to the development of the area.

Running at its peak the sawmill can turn out about three thousand feet of lumber a day! Although there is some logging going on with the inventory cruises at state forest areas, none is so intensive as that at the Yellow River Forest.

A moose track is nearest to the elk track in size and shape, though it is larger and more rounded.



Denny Rehder Photo.

Timber! and this big basswood comes down in the snow-covered bluffs of the Yellow River country. Basswood is used principally for veneer; this one will be taken to the state-owned sawmill in the valley. The chain saw makes short work of cutting.

## WILDLIFE DIET—

(Continued from page 14)

warmer nights they come out and forage actively even in midwinter. The raccoon feeds on waste corn in farmers' fields, acorns and wild fruits, or searches the shallows of unfrozen streams for crayfish. In addition to scavenging for any kind of animal matter, the opossum eats wild fruit. The skunk hunts meadow mice, ground-roosting birds and digs among grass and fallen leaves for hibernating insects.

Some animals hoard food for winter use. In autumn, chipmunks and deer mice gather large quantities of nuts, wild cherry, basswood, dogwood and other seeds which they store in their burrows. The fox squirrel and gray squirrel bury nuts and acorns in the ground near their den trees. In winter these are dug up and eaten, even through inches of snow.

Before freezing weather sets in, the beaver gnaws down cottonwood, aspen and willow trees, then cuts the branches into convenient lengths and sinks them underwater for winter use. The muskrat feeds under the ice on the roots and stems of cattails and other aquatic plants but it also piles up special mounds of plants in early autumn which are eaten in winter.

The meat-eaters—hawks, owls, foxes, weasels and mink—catch a few birds but their mainstay is meadow mice and an occasional cottontail rabbit.

## 1961 HUNTER CASUALTIES IN IOWA

### Intentional Firing

Victim out of sight of shooter .....	17
Victim caught by shooter swinging on game ...	9
Ricocheting bullets or stray bullets .....	6
Victim moved into line of fire .....	4
Victim mistaken for game .....	1

### Unintentional Firing

Gun discharged while handling .....	19
Shooter stumbled and fell .....	13
Loading or unloading weapon .....	12

Trigger caught on brush or other object .....	12
Weapon fell from insecure rest .....	9
Horseplay or practicing fast draw .....	8
Dropped gun .....	7
Defective weapon exploding .....	6
Riding in vehicle with loaded weapon .....	3
Crossing fence or other obstacle .....	3
Removing loaded gun from case or rack .....	3
Other or unclassified .....	2
Removing loaded weapon from vehicle .....	1
Unkown .....	1

Total.....136

### Casualties by Month

January .....	19	April .....	6	July .....	6	October .....	17
February .....	9	May .....	4	August .....	2	November .....	34
March .....	2	June .....	5	September .....	12	December .....	20

### By Weapon Used

Rifle .....	69
Shotgun .....	47
Handgun .....	19
Bow and Arrow .....	1

### By Game Hunted

Rabbits .....	38	Target .....	30
Pheasants .....	23	None .....	18
Squirrels .....	13	Fox .....	6
Deer .....	3	Trapping .....	3
Ducks .....	2		

### Cause of Casualties Resulting in Fatalities

Victim out of sight of shooter .....	3	Shooter stumbled and fell .....	1
Trigger caught on brush or other object .....	2	Removing loaded weapon from vehicle .....	1
Victim covered by shooter swinging on game ...	1	Gun discharged while handling .....	1
Victim moved into line of fire .....	1	Shooter loading or unloading weapon .....	1

Total.....11

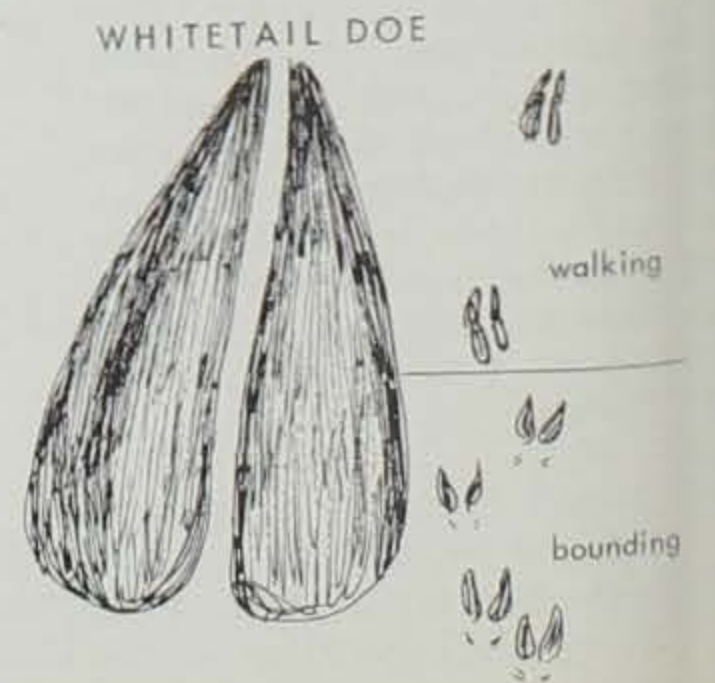
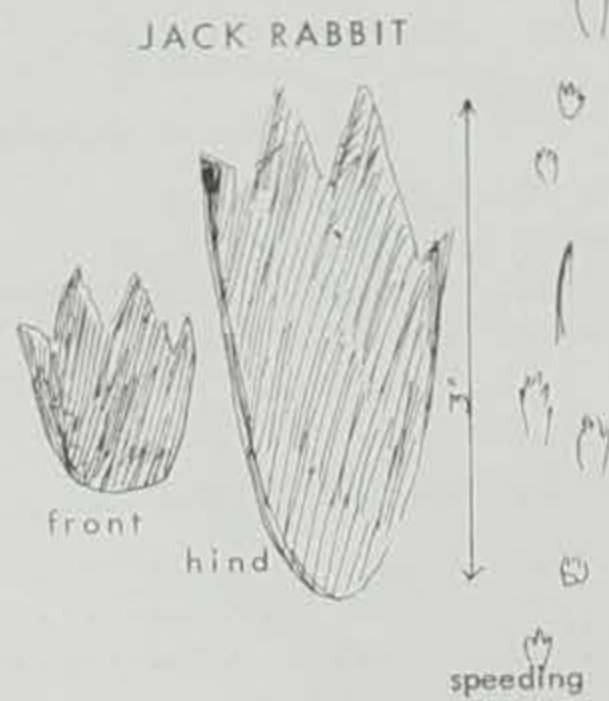
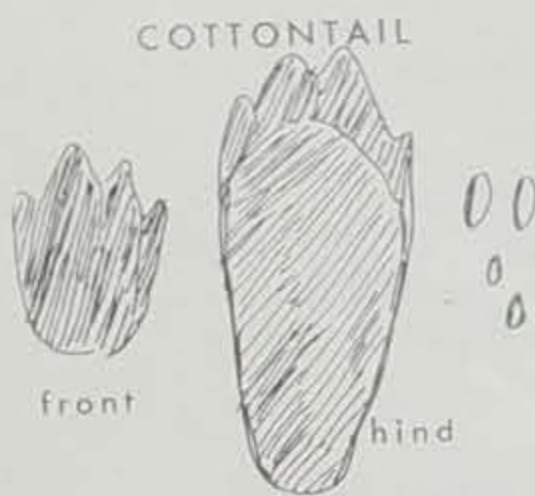
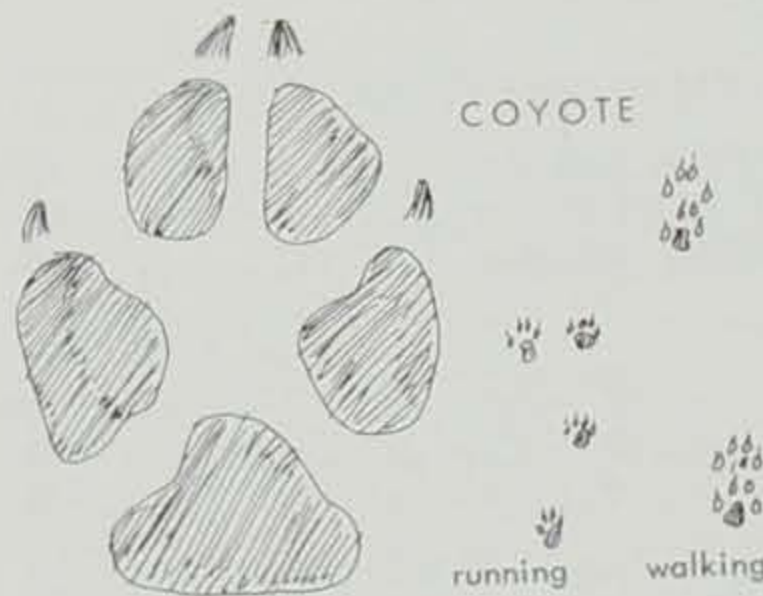
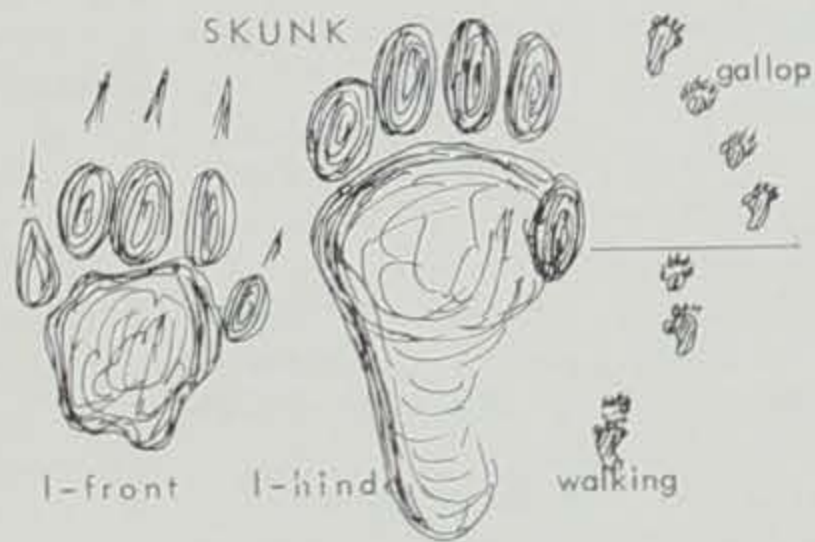
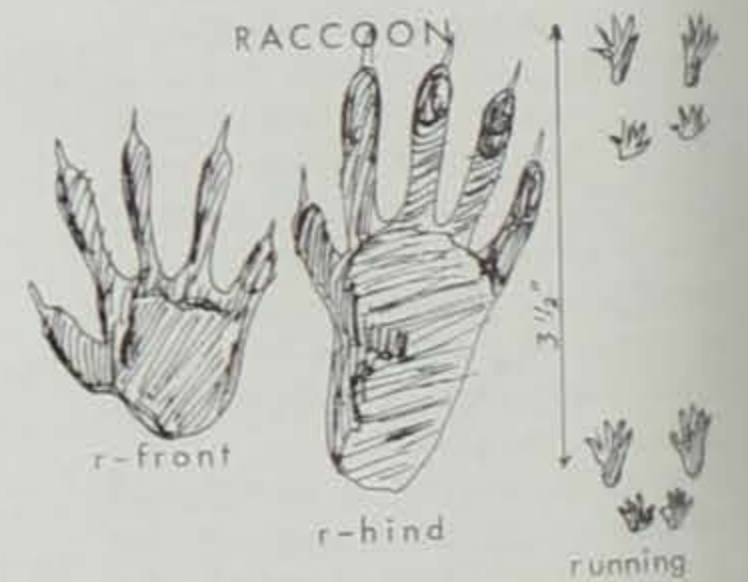
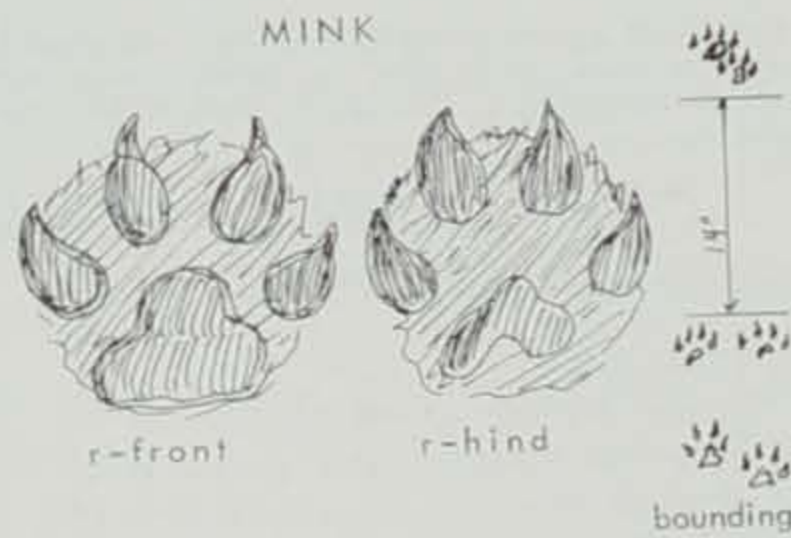
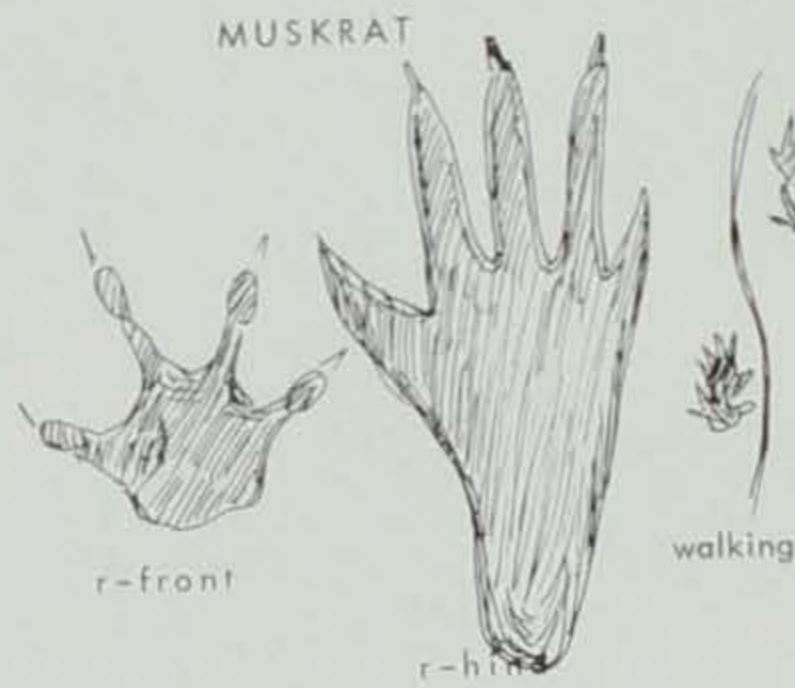
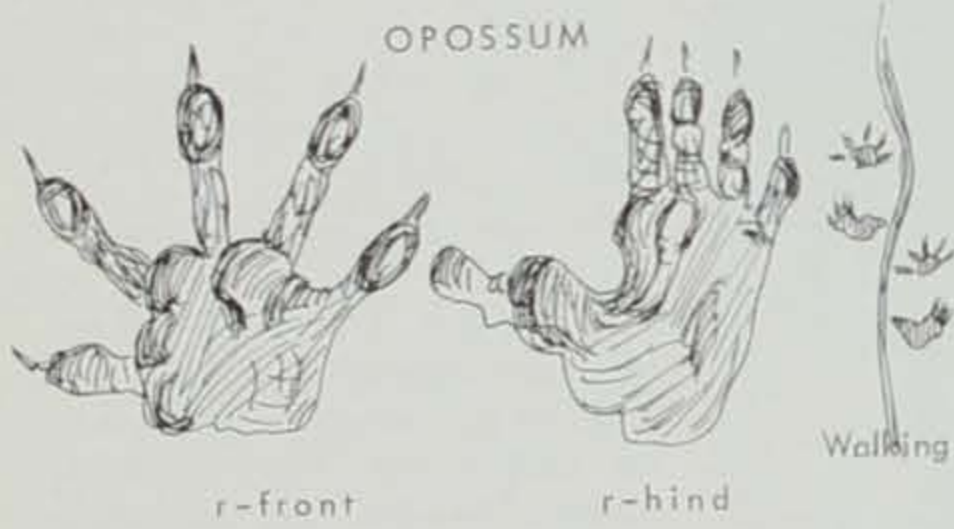
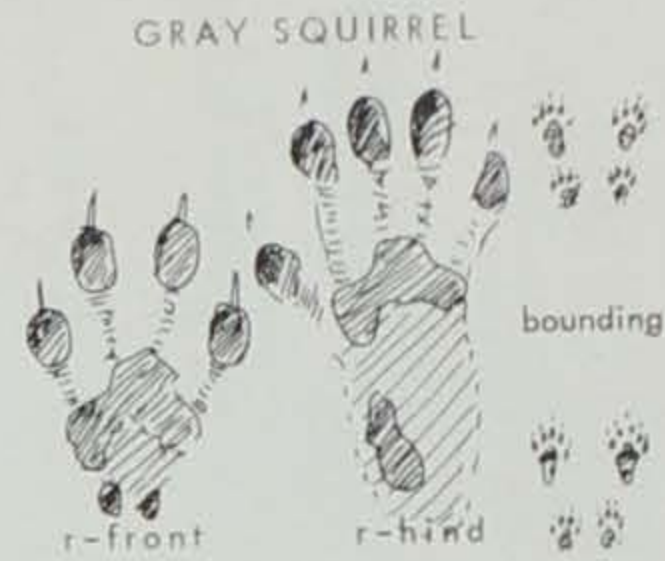
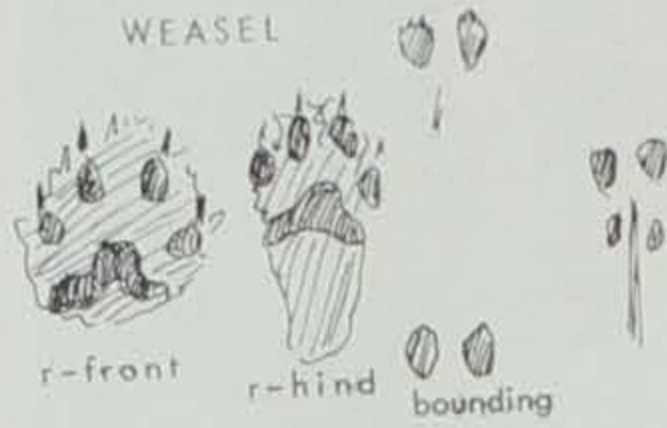
### Fatalities by Weapon Used

Rifle .....	7
Shotgun .....	3
Handgun .....	1

### By Game Hunted

Rabbits .....	3	None .....	2
Pheasants .....	2	Deer .....	1
Target .....	2	Fox .....	1

# COMMON IOWA WILDLIFE TRACKS



*C. Buckmann*

Approximately two-thirds life-size except raccoon, badger, beaver, Jack rabbit.

June 21

MYST

Carol Buckmann  
Jack Musgrave  
State Historian

Along the brook  
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