



Volume 22

November, 1963

Number 11

# RINGNECKS CAN TAKE IT!



Unaffected by snow and cold, the ringneck pheasant is Iowa's number one game bird.

Jim Sherman Photo.

## 37 Hunting Seasons Prove It!

Dick Nomsen

Pheasant Biologist

Amazing Mr. Ringneck continues to thrive and provide choice game shooting in Iowa's fertile fields. Modern agriculture has brought tremendous changes in this state's rolling countryside during the last century. Native prairie species were unable to flourish as they have in the past, but during the same period, the ringneck pheasant thrived. In addition, he has astounded conservation officials and hunters with his uncanny ability to withstand greatly increased hunting pressure.

The first hunting season was established in 1925 to harvest the pheasants. By 1930, shooting was permitted in 24 counties for half-days—a total of 13.5 hours. It was soon realized that this game bird could more than hold his own against the increasing number of hunters. Total hunting time allowed in 1940 was 31.5 hours, more than double the 1930 season. It was also during this decade that the use of mechanical corn pickers greatly increased, reducing field cover and favoring the hunter. Pheasants continued to thrive and expand their range.

Pheasant populations fluctuated a great deal during the forties. Favorable nesting conditions in 1940-41-42 resulted in extremely high pheasant numbers. However, by 1947, populations had decreased considerably following several poor hatching years caused by adverse spring weather conditions.

Good years or bad, there were always more than enough roosters the following spring to insure egg fertility. By 1950, hunters were allowed 25 half-days to try their skill.

### More Birds to Shoot

Improved census techniques and intensive studies during the past twelve years continued to show surplus cocks remaining after each season. Iowa hunters were able to harvest an average of 65 per cent of the roosters; sometimes going as high as 75 per cent in local areas of high pheasant populations and heavy hunting pressure.

It is an established fact that up to 90 per cent of the cocks may be shot without harm to the brood stock. Results from these studies encouraged the lengthening of the hunting season to allow Iowa hunters greater opportunity to enjoy this excellent sport. Although shooting hours have been more than doubled in the past six years, the percentage of cocks harvested has remained essentially the same.

(Continued on page 87)



**Iowa Conservationist**

Vol. 22 November, 1963 No. 11  
Published monthly by the State Conservation Commission, East 7th and Court Avenue, Des Moines, Iowa. Address all mail (subscriptions, change of address, Form 3579, manuscripts, mail items) to street address above.

Subscription price: two years at \$1.00

Second class postage paid at  
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## COMMISSION MINUTES

### JOINT IOWA-NEBRASKA MEETING

A joint meeting of the Iowa State Conservation Commission and the Nebraska Game, Forestation and Parks Commission was held at Wilson Island Game Headquarters near Missouri Valley September 28, 1963. The two Commissions held a discussion of the problems involved with the acquisition and development of various recreational and hunting areas on the joint boundary formed by the Missouri River and adjacent areas. They also heard various reports on the present status of those areas.

The Superintendent of Engineering was authorized to negotiate a contract for the construction and repair of the 3.2 miles of road near Black Hawk Lake.

### STATE CONSERVATION COMMISSION MEETING

#### Bellevue, Iowa, October 8

**LANDS AND WATERS**

Approval was given the 1964 price list for nursery stock from the Ames Forest Nursery to be established the same as last year.

Options were approved for three areas adjacent to the White Breast Forest Unit consisting of 310 acres at \$30 per acre, 20 acres at \$15 per acre and 35 acres at \$15 per acre.

A report was given on the state park roads program and a priority list approved to extend through 1968.

A design for a bath house at Rock Creek State Park was approved and authorization was given to advertise for bids.

Approval was given to plans and specifications for a construction program on Lake Anita in Cass County.

A bid of \$17,982 was accepted for road repair work adjacent to Black Hawk Lake and authorization was given to negotiate for further work on 1.3 miles of road in that area if weather permits.

Approval was given for the installation of a boat ramp on Lake Manawa.

The Commission took no action on a proposed gift of 137 acres of land on the Wapsipinicon River

near Anamosa which would be given contingent on the Commission's purchase of 900 acres adjacent at a cost of \$187,000.

The Superintendent of Engineering was authorized to make preliminary negotiations for construction of a bath house at Rock Creek State Park.

A request from Fanning to construct a boat house and ramp on East Okoboji was denied.

**FISH AND GAME**

Approval was given for the purchase of a flowage easement on the Miami Lake site in Monroe County for \$400.

An option for purchase of an area near the Clear Lake Fish Hatchery for use as a parking lot at a cost of \$10,000 was approved.

Approval was given to an option for an access area on the Turkey River near the Big Springs Trout Hatchery comprising 17 acres at a cost of \$650.

Approval was given for the transfer of maintenance and management of Rush Lake in Palo Alto County and Lizard Lake in Pocahontas County to the Fish and Game Division.

Approval was given to plans for the development of a rifle range on the Flint Access area in Polk County in cooperation with the sheriff and police departments.

A report was given on the pumping operation at Elm Lake in Wright County.

Approval was given for the cancellation of the present eligibility list for Conservation Officers, with a school to be held this fall to create a new eligibility list.

### COUNTY CONSERVATION ACTIVITIES

Cerro Gordo County received approval for the acquisition of 32,736 acres of land as an addition to a wildlife marsh in the northwest part of that county at a total cost of \$5,629.

Chickasaw County received approval for the acquisition of 80 acres of land in the southeastern part of that county at a total cost of \$12,800 to be used as a multiple-use recreation area.

Floyd County received approval for the acquisition of 4.36 acres of land as an addition to their Ellis Park area with a total cost of \$436 to be used as public access to the Little Cedar River.

Jones County received approval to enter into a management agreement with the Iowa State Highway Commission for one acre of land at no cost to develop a highway safety rest area located 7½ miles east of the town of Anamosa on Highway No. 64.

Buchanan County received approval for a development plan for Cutshaw Park, consisting of a 35-acre tract in the northwest part of the county on the Wapsipinicon River, to be used for picnicking, camping, nature study and river access for fishing.

Jones County received approval

**A Code for Young Hunters**

John Madson and Ed Koziacky

If the hunter is asked to explain his sport, he can no more rational hunting than he can describe emotion. His hunting is and has always been, a conditioned instinct that is largely emotional.

The careers of many hunters exhibit a strange evolution. As we often hunt with a single purpose: to kill game and prove ourselves men. A sure sign of youth is hunting solely for the sake of killing. While young, we have stark, black-and-white values: a gun is to shoot a bird is to be shot, and the measure of a man is the weight of game bag.

If a boy begins hunting early enough and hunts long enough, the old red hunting urge may undergo a subtle change. The veteran hunter never loses his love of hunting, but it becomes tempered with an almost mystic respect for the creatures he pursues. This is the hunter's greatest reward, and can usually be earned only by long years of rich experience.

Part of the hunter's deep attachment to wildlife may stem from the fact that he sees wild creatures at their best—when they are being hunted. It is then that they are strongest, freest, and sharpest. A completely safe, "protected" wild creature is something of a vegetable and somewhat the same thing might be said of man. Hunting is a game of intense concentration, and a dedicated hunter is more carefully attuned to his environment—and is far more receptive of nature than most other men.

**Eating Those Quail**

A necessary first step in preparing quail for the table is early cleaning of the game. Store in the coldest part of the refrigerator and, if they are to be kept more than a few days, freeze the birds.

There is a long list of recipes for preparing birds to eat. Some recipes call for only stewing with a bit of seasoning. Other instructions involve pre-soaking, addition of herbs, spices, or other condiments; in other words smothering the naturally luscious flavor.

A very simple recipe, and one of the best, is as follows: skin or pluck the birds, wash and split along backbone and breastbone. This gives two halves which lie nearly flat in a skillet. Allow one or two birds per serving.

Brown the quail halves in a hot pan with a quarter inch of butter or oil and pepper to taste.

When the birds are nicely browned and the aroma tempts to eat the lot right then and there place the birds in a flat baking dish. Add milk and cream to your taste. Now bake in a medium hot oven.

Ladle the liquid over the birds a few times while they are finishing. Serve hot with homemade rolls or bread, and plum or berry sauce. A good complement to quail is baked potato and pumpkin pie. Invite either friends or enemies—you will have no regrets after a meal like that!

on a development plan for a rest area on Highway No. 64.

Keokuk County received approval for a development plan for Griffin Park, which consists of 40 acres and will be used for camping, picnicking, and fishing, with one-third of the area devoted to reforestation and wildlife cover.

Linn County received approval for a plan to increase the water area of two existing ponds on the Palo Marsh Wildlife Area by blasting channels with ditching dynamite on low-lying land.

Black Hawk County received approval for a management agreement covering the 20-acre Childs Access area owned by the Conservation Commission, subject to Executive Council approval.

Howard County received approval for a management agreement for the 72-acre Turkey River Access area which is also owned by the State Conservation Commission.

Jackson County received approval for the cooperative development of a new road access to the U. S. Corps of Engineers' Pleasant Creek area on the Mississippi

River south of Bellevue.

**GENERAL**

Travel was approved to Midwest Wildlife Conference at St. Louis in December; to Fisheries Aquarium at Yan South Dakota; and permission given to land state aircraft within limited distance across state boundary lines where facilities are desirable and in case of conflict with weather.

A report on planning work given by Glen Powers.

The Commission reaffirmed resolution to appoint a joint mission with Nebraska for planning and development work on Missouri River, and suggested two Commissioners be on committee.

The Director announced the appointment of Mans Ellerho Chief of Lands and Waters, Stokes as State Forester, I Harrison as Superintendent of Biology, Eugene Klonglar Assistant Superintendent of Biology, Rex Weddle as Pers Director, Gene Goecke as v fowl biologist, and Keith Lars deer biologist.





Jim Sherman Photo.

## Joint Resolution on Missouri River Development

The Iowa Conservation Commission and the Nebraska Game, Forestation and Parks Commission met jointly September 28 at Iowa's Island Headquarters near the Missouri River. This joint meeting was held to discuss mutual problems concerning the development of the Missouri River. The discussions culminated in the following resolution reaffirmed by both Commissions at regular meetings: A Joint Resolution the Nebraska Game, Forestation and Parks Commission and the Iowa State Conservation Commission hereby direct their respective Directors, M. O. Steen and E. B. Speaker, to appoint a Committee to plan jointly the development and operation of Missouri River areas and to authorize this Committee to act in the interest of the two states in the planning of various phases of the program."

## THE WILDE WAPSI

*Med, Muddy, Treacherous, the River Looks to be Straight From the Jungle*

In tradition, the Wapsi is the best, cussedest, ugliest river in eastern Iowa. It is habitually muddy; it harbors rattlesnakes, watersnakes; it has mosquitoes as big as bumble bees and snappers the size of washtubs. Its banks are invariably a snarl of wild grape, swamp birch and willow thickets, and where there is vegetation you will see rot-stumps or gnarled roots or sandbars that come and go at the Wapsi's whim.

Most rivers spawn the growth of cities, but not the Wapsi in the Quad-City region. South of Ankeny, the Wapsipinicon is almost unknown to any communities.

Even in the flatlands of Minnesota the Wapsi is a pretty little river with shelves of limestone and groves of pines in its upper reaches. But by the time it reaches the Mississippi it is a tired, abused, run-out river. This may explain its untamable, often treacherous moods.

One day you may walk a mile along its sandy shores in water no deeper than your ankles. Twenty hours later, that mile may lay

covered with a half-dozen feet of swirling, muddy water. As rivers go, it has a violent temper. It has been known to rise eight feet in a day of heavy rain or spring runoff.

The Wapsi is treacherous, littered with hidden logs and snags, and you had best not navigate it with any more than a five-horsepower motor. Its treachery is often a clever ruse to trap the unwary. Where there was no hole yesterday, there may be a 25-foot-deep pit today. You may walk along its bank, feeling totally safe, and then drop abruptly into a pit of muck. This is a favorite Wapsi trick: to undercut its banks and

send hunters and fishermen sprawling.

Its bottoms are jungle-like, and in the words of Fred Lorenzen, outdoor writer for the Sunday Times-Democrat, "It is nature's own paradise because so few people will go into that kind of country."

Float quietly downstream in a big flatboat and hear the shrill, high-pitched alarm call of a wood duck up ahead, and on that dead willow stump, a great horned owl clicks and snaps his bill at your intrusion. A beaver will slap his tail in the water, and at twilight, if you're lucky, you may see a doe quietly bring her fawn to the water's edge.

There are wild turkeys, herons and graceful egrets, and the Wapsi is a favorite migratory river for ducks and Canadian geese. The woodcock, too, migrates along the Wapsi bottoms in its fall stopovers to Louisiana or Mississippi. It has a tremendous population of 'possum and raccoon.

It also has rattlesnakes.

"You don't have to worry about those Wapsi snakes unless one of them bites you," laughs the bartender at a McCausland tavern, as he consoles some worried fishermen.

There are obvious reasons why the Quad-City Wapsi region is so much like a Noah's Ark for wildlife. Look down upon the Wapsipinicon from the air and you see its winding, wooded path is a natural refuge in a sea of corn, oats and soybeans. The land has been cultivated close to its wooded bottoms, thus chasing wildlife into its protected perimeter. The close-in cultivation is a major factor for its muddy appearance.

Despite its evils, its mud and its rain-to-rain changes, there are many who love it still. The Wapsi is beautiful in the fall, and in the very early spring its water can be gin clear. Some persons have cottages rimming its banks, and for certain types of fishing, the Wapsi can't be beat. The Iowa Conservation Commission says it's the finest spot in the state for channel cat fishing. It also has an abundance of yellow-bellied bullheads, flatheads, carp, crappie, walleyes and even pike.—*Davenport Times*.

### Statement of Ownership, Management and Circulation

As required by Act of October 23, 1962  
Section 4369 Title 39 U. S. Code  
Filed September 20, 1963

#### IOWA CONSERVATIONIST

The *Iowa Conservationist* is a monthly publication of the State Conservation Commission, East 7th and Court, Des Moines, Iowa. **Publisher:** State Conservation Commission, East 7th and Court, Des Moines, Iowa. **Editor:** James R. Sherman, 4418 Urbandale Avenue, Des Moines, Iowa. **Managing Editor:** Dennis L. Rehder, 2517 46th Street, Des Moines, Iowa. **Owner:** State Conservation Commission, East 7th and Court, Des Moines, Iowa.

	Average No. Copies Each Issue During Preceding 12 Months	Single Issue Nearest to Filing Date
Total Copies (Net Press Run)	58,000	59,000
Paid Circulation	44,610	45,981
Free Distribution	10,813	10,729
Total Distribution	55,423	56,710

DENNIS L. REHDER  
Managing Editor

## THE SEaweeds

David H. Thompson

As the number of people in the world increases and the number of acres of fertile soil to produce food for them decreases, man looks more and more hopefully at the huge expanses of ocean for relief from hunger. For ages, fish and other sea foods—including seaweeds—have been mainstays in the diet of seafaring peoples, islanders and coast dwellers. Even in the Middle West we are accustomed to eating saltwater fish and shellfish. Seaweeds, however, are not seen on the vegetable counters of our stores but, unsuspected by most of us, products of seaweeds are found in many of our foods, medicines and articles in daily use.

Most seaweeds grow attached to underwater rocks, reefs and the sea bottom down to depths of 100 feet or more. Although many of them vaguely resemble flowering plants in size and shape, they do not have true roots, stems, leaves or flowers. Instead, they are members of that great group of lower plants called the Algae and should not be confused with the submersed vegetation in fresh waters, which is sometimes mistakenly called "seaweed."

The Kelps, largest of the Brown Algae, thrive best in cold water. The Giant or Vine Kelp with a slender stem anchored to a hold-fast in deep water is reported to reach lengths as great as 1,500 feet, making it the longest plant in the world. Along this stem are many yard-long leaf-like blades buoyed up by egg-sized floats like stockings hung on a clothesline. Other kinds of kelp, each with its distinctive shape and habit of growth, have such colorful names as Devil's Apron, Fan Kelp, Bull Kelp and Ribbon Kelp.

### Varied Use

The Sea Mosses, members of the large group of Red Algae, are delicate cylinders, sheets, ribbons or feathers seldom larger than a man's hand. Many are found in deep water where their red pigment enables them to grow in dim light. The Japanese cultivate certain kinds on bundles of bamboo in underwater farms. Others are the source of agar used as a laxative and to make the jelly on which bacteria are grown in laboratories. Puddings are made from Irish Moss and St. Patrick's soup from another kind called Dulse.

Seaweeds are rich in many minerals and vitamins necessary for human health. They add bulk to the diet but are rather poor in fats, carbohydrates and proteins. Formerly, they were an essential source of iodine and potassium. More recently an industry in California, using mechanical harvesters mounted on barges, processes kelp into a number of useful products. Among these is a substance called

(Continued on page 85)



## MAMMALS IN WINTER

Carol Buckmann

When the word hibernation is mentioned we usually think of the famous winter sleepers, bears and woodchucks. Comparatively few animals actually do hibernate. Woodchucks, ground squirrels, bats and jumping mice are nature's only true hibernators.

True hibernation is said to be when an animal is inactive, heart-beat, breathing and digestion slowed and body temperature close to the surroundings. Animals such as bears, skunks, raccoons, badgers and opossums sleep away part of the winter but will venture from their winter quarters during mild periods. Their body temperatures remain higher than the surroundings.

The majority including mink, weasels, wildcats, field mice, muskrats and rabbits are active all winter facing winter's hardships squarely. Many of these mammals hunt food from day to day making no attempt to store food.

Many do rely on stored food supplies such as field mice and squirrels. Field mice store caches of seeds and nuts or establish runways beneath the snow feeding on left-over grass and seeds. Squirrels are natural collectors storing seeds and nuts for winter use and becoming fat in the fall. Red squirrels gather food all summer, increasing the supply in autumn. Most mammals consume large

quantities of food in the fall to safeguard their lives by heat production.

Chipmunks differ from squirrels in that they spend the entire winter in hibernation when it's severely cold. In the fall, they carry acorns, hickory, beech and hazel nuts, seeds and grasses to their underground storage chambers connected to nests and located to the lee side of a log or stone. The hole is plugged and litter and grass cover it completely isolating chipmunks for their winter naps. Here they sleep singly or with several pairs sharing the same chamber.

Red, fox and gray squirrels don't hibernate but reds make small winter tree holes or larger shelters of grass and twigs in trees. These serve as shelters for use in severe weather. They store shelled nuts and seeds here but caches of fungi are found in knotholes.

The hardy little flying squirrels use hollow trees for winter homes or woodpecker holes. Even at the Arctic Circle, flying squirrels don't hibernate.

Woodchucks play a vital role in the lives of wintering animals. Their burrows not only serve as places to hibernate but also as homes or refuges for other animals such as raccoons, opossums and skunks. Rabbits and small rodents may use the dens for temporary shelter to escape dogs and foxes.

To prepare for winter, woodchucks feed in summer and get



Jack Kirslein

The ground squirrel is one of nature's true hibernators.

very fat. Then in September or October, they go into their winter quarters. The large amount of fat under their skin, which provides winter nourishment is their only food supply. The burrow is four or five feet below the ground and 20 feet long. While active, their normal body temperature is 98 degrees F but during hibernation, it drops to 37 degrees F. While dormant they respire an average of once per minute contrasting to from 20 to 30 times per minute when active.

Bats prefer places with little temperature variation usually in fairly large caverns with small entrances. With the first chilly September nights, they become less frequent and, by October, they disappear. Bats either hibernate within their summer regions or migrate to warmer areas but have definite winter resorts in caves any direction from their summer haunts.

Bats rely on body fat for nourishment but, following several days of torpor, will spend a day fluttering around and eating a little.

The fox spends most of his time in open areas where his main winter supply of rabbits and mice are found. Following his tracks from stump to stump or along fences reveals his persistent efforts to find mice under the snow. A fox's best fur coat is in November and December when the tail brush is one-third as large around as his body. He puts this brushy tail to good winter use. When sleeping in cold weather, he lies with his body closely curled and tail brush across his feet and nose.

In winter, foxes hunt chiefly at dusk but, when food is scarce, they hunt at any hour scratching in the snow to uncover field mice or an occasional partridge.

The weasel, too, lives on mice and other small animals during his winter, hunting in open areas. In the north, where winters are long and hard, his coat becomes pure white except for a black-tipped tail. This pure white coat

matches the snow and is known as ermine.

Mink also are active all year foraging along frozen brook banks ice edges and dodging in and out of the water in a winter territory considerably larger than his summer territory.

Most mice remain active year as do moles and shrews. These small mammals occasionally run about on top of the snow, frequently using runways under the snow. Field mice remain active and even raise a family in winter months. One can easily find their nests and runways under the snow where grass grew in the summer.

Jumping mice have a thick blanket under their skin and hibernate in burrows a safe distance from deep water. They are only mouse to hibernate and remain in the dormant stage until warmer weather arrives.

Raccoons have irregular hibernations, sleeping if the temperature remains low and coming out if the temperature rises. Often 20-degree weather they are moving about in temperatures enough to normally drive into hibernation. These ordinarily nocturnal animals begin making daytime weather checks in March—if not to their liking, back to sleep they go.

Skunks are also semi-hibernators, accumulating fat from eating insects and other small animals. When cold becomes severe, they take to their dens which are ground chambers one foot below the ground. Here they lie curled up and inactive unless the temperature rises. Several skunks den together in these chambers filled with bulky hay or lined with grass or leaves. Female skunks are confirmed hibernators; males are active throughout winter.

When snow comes, all things leave a map of their den for all to read. Take a winter excursion and learn how animals when winter grips the land.





## Notes On Quail Hunting

M. E. Stempel

Game Biologist

Quail hunting time is when summer is only a memory. The brown leaves fall, the hunter's gun sends the red fox searching the hills.

We buy some quail loads along with a few number 6's for the times when we are fortunate enough to hunt where there are quail. The open-bored gun is best for quail, but if we have an all-purpose shotgun we can use the special brush loads for the choked barrel, being careful of the pattern that gun just in case it does not shoot dead center.

When you hunt, a falling barometer means restless quail. Further, if chickens in farm lots are scattered all over the place, chances are that quail will be there.

And most important, before you go into the field, get permission to shoot there.

During the hunt we all want to be where the cover appears best.

Learn whether the place has been recently hunted; if so, the quail may run like scared hares instead of holding as quail should.

You may wish to move on to another place, or you can hunt the open ground on the chance that birds will flush within range. Hunt slowly, remember that as a hunter you are aiding the quail in skimming off the weaker birds. Be sure to leave at least a few quail in an area. Only 30 percent of the breeders bring off quail.

Quail always leave signs of their presence. Look for feathers, dust, places, droppings and tracks.

Do not make the hunt a walk-and-shoot affair; instead, enjoy the dog. If you have no dog, hunt carefully for the most promising places.

If you want to, deliberate shooting, stay in the open—for fast shooting, hunt the brush. If you knock a bird down, look for it at once and if it is not found immediately, go to another spot for a quarter of an hour. Return, take another look on where the quail fell and you'll likely walk right up to it.

After the shoot, memorize where you found the quail and recall how it flushed and alighted. Next you'll use that information.

If you are not near home you wish to dress the birds, especially if it is warm. To do this quickly, cut off the neck of the body, take off the wings and use one of these to your conservation officer as we record the dates by examining wings).

Remove tail and legs. Now turn the quail on its back; split the skin across the abdomen; pull the skin both ways from the incision. The delicate meat comes out like a ear of corn when you pull the husks. Now remove the quail. With a little practice, you can clean your four or five quail in five minutes.



A good dog adds immeasurably to the sport of quail hunting. This year's season should be one of the best in recent years.

Jim Sherman Photo.

## Don't By-Pass the Hun

Northwest Iowa hunters are often unnerved by the shock of a covey burst while pheasant hunting. The birds are often "over the hill" before anyone thinks to take a shot. This is not considered quail country, but the covey burst is a reality for many hunters. The little bombshell with the rufous tail is a Hungarian partridge—an introduced species now doing quite well in the Iowa northwest.

Huns appear to have been gradually spreading south. In view of this, Ida and Sac counties were added to the other fourteen northwest Iowa counties open to hunting for the partridge.

Most people do not take to the field with the intent of taking Huns. These birds are usually taken as a "bonus" when pheasant hunting.

For most hunters it is a matter of pursuit after the initial covey burst leaves them wondering if the birds might not be young pheasants. Huns tend to hold as a covey after their first rise differing from the usual scattering of quail after

being flushed. Marking a covey drop might offer some shooting for the uncertain hunter who missed his first chance.

Huns are about midway in size between the quail and the pheasant. They are a relatively plump bird best identified by the rufous patch on the tail when they are flushed at close range. They are hardy birds preferring open country over the farm grove cover so popular with pheasants in this part of the state. Coveys will be seen in the middle of a field on the coldest winter days apparently quite comfortable and contented. If it gets too blustery, they may move to the lee side of a hill to escape the brunt of the wind.

The open season on Huns is the same as the pheasant season, November 9 through January 1. Shooting hours are 8:30 to 5:00 p.m. with a bag limit of two and a possession limit of four. The open counties are Buena Vista, Cherokee, Clay, Dickinson, Emmet, Hancock, Ida, Kossuth, Lyon, O'Brien, Osceola, Palo Alto, Plymouth, Sac, Sioux and Winnebago.

## SEAWEEDS—

(Continued from page 83)

"algin" which gives body to other substances. It prevents the chocolate from dropping to the bottom of your chocolate milk and keeps your ice cream from rapidly melting into a puddle. It is used in shaving cream, shoe polish, lipstick, shampoo, cosmetics, lubricating jellies and as sizing in cloth.

### Often a Food

Kombu is a food prepared from seaweed by the Japanese for use in soups, on meat and rice, or nibbled after crisping over a fire. As a result, because of its iodine content, goiter is almost unknown there. In the Scandinavian countries and the British Isles, herdsman near the coast feed seaweed to their cattle or graze their sheep on it at low tide. In Ireland potato fields are fertilized with kelp.

In 1492 Columbus sailed into a vast expanse of floating seaweed, much to the terror of his men who imagined that this was the legendary graveyard of becalmed ships. This Sargasso Sea, with its unattached Gulf Weed, covers an area as large as the United States, extending half way across the Atlantic east of Florida and the West Indies.

Some sea serpents may be nothing more than large kelp seen in dim light by sailors after a night in port.

## Did You Know?

Mammals are vertebrates or backboned animals, and the word "mammal" comes from the Latin mamma meaning breast.

The varying hare's long hind legs carry it over the ground at 30 and more miles an hour.

The voles are a populous group of small rodents of which the meadow mouse is the most numerous and widely distributed.

Wood rats live alone except when mating or rearing offspring. They occupy one home throughout the year and generally for a lifetime.

The flying squirrels "wings" are actually folds of skin covered with fine, close-lying fur.

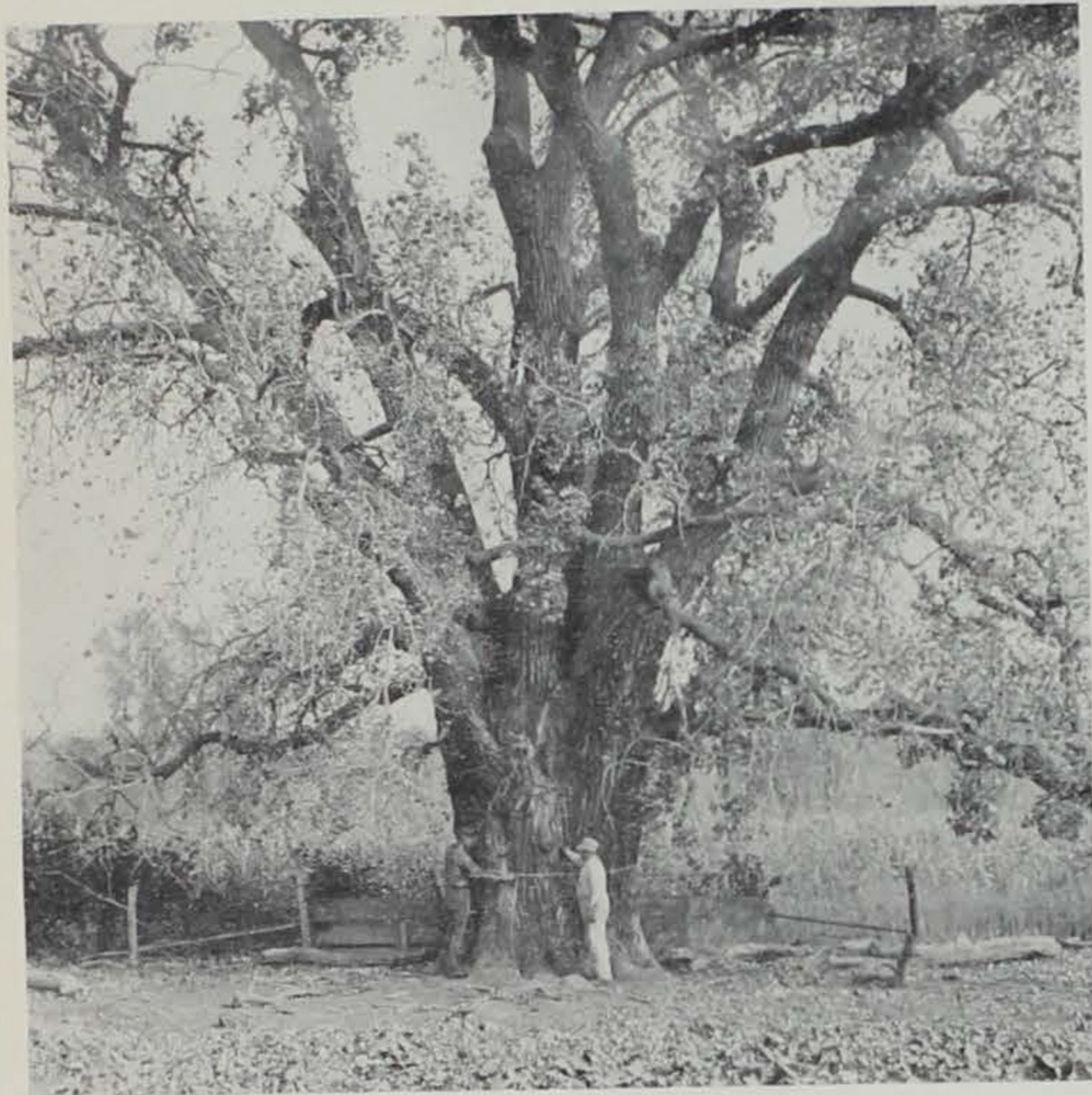
Prairie dogs drink when showers leave puddles but between times do without water, like other dwellers of arid places.

Although the hair seal measures only five feet long, it might weigh over 250 pounds.

So dependent is the lynx on the snowshoe rabbit for food that a great die-off of the large hare is followed by starvation among lynxes.



## A National Record?



Iowa may have a national record cottonwood in this giant located on the Harold Byers farm a mile-and-a-half east of Carson in southwest Iowa. The tree is on the north side of Iowa 92 east of Carson.

## 31-Foot Cottonwood



David Bathurst of Greenfield found the tree to culminate a search begun last spring by the Conservation Commission. Nebraska had claimed the national record of thirty feet in circumference until the tree was disqualified as a double tree.

## IOWA SQUIRRELS

Carol Buckmann

The nut-planting habit of squirrels is unwittingly responsible for producing many of our finest trees. These tree planters often fail to uncover buried food treasures or forget where they buried them—result, the nut or acorn sprouts and a new tree takes root.

Squirrels differ from their close relatives, woodchucks and ground squirrels, in that they don't hibernate. They busily bury nuts and acorns in shallow holes near their den or home tree for winter use. Most buried treasures are uncovered again with the aid of their keen sense of smell.

Watch them scamper under trees searching for food. Nose to the earth like a dog following an animal scent, they sniff around until the right place is found. Then, with a few quick front foot strokes, the nut or acorn is uncovered. These are retrieved even through inches of snow.

Iowa has four varieties of these bushy-tailed tree planters commonly known as fox, northern red, gray and flying squirrels.

### Fox Squirrel

All Iowans are familiar with the fox squirrel. Far the largest of the four, he's a common inhabitant of city trees and a familiar visitor in yards both town and country. Unlike the gray squirrel, he's not limited to forests and often makes his home on a farm lot with a few bordering trees.

He's a slower, more deliberate walker, sometimes a compara-

tively awkward climber waving rather than flicking his tail. Rising early is not his character but he doesn't cease foraging until after dark, hoarding items buried in separate holes such as nuts, berries, fruits, buds, twigs and bark, mushrooms and corn.

Most of us familiar with the color of our big fox squirrels would be surprised to see their shades from the normal. In some parts of the country, they have big black bodies with white ears and noses. Others are black above with buffy or orange bellies or an overlay of white on their tails.

In some areas, there are buff and gray phases while some are uniformly tinted with black upper parts and cinnamon feet. Intermediates occur between all variations. Fox squirrels are said to have more different coats than any other North American animal family.

### Gray Squirrels

The gray squirrel is much less abundant and not often seen except in woods. They're partial to hardwood forests of northeastern Iowa where acorns, hickory nuts, and beechnuts are available. Occasionally a black or melanistic phase is seen with white ears and nose.

According to old reports, they were so plentiful during colonial days that they caused serious damage to the settler's corn and other crops. This damage is believed to have been caused when early colonists pushed westward and cleared forests for farm land. Swarms of gray squirrels were

left homeless and retreated to cornfields as an easy source of food.

Bounties were offered and farmers organized huge hunts to destroy them. In 1749, a bounty of three pence yielded a toll of 640,000 grays in Pennsylvania. In 1840, two teams of six Kentuckians each killed more than 9,000 in a week. They are still common, however, throughout most of their original range.

### Red Squirrels

The northern red squirrel is smaller than the preceding two. While abundant farther north, it is seldom seen south of Bremer County or out of the old white pine forest range.

The ears are somewhat tufted in winter and there is usually a blackish line on the sides in summer. Red squirrels are curious, full of activity and noisy. They are active by day and moonlit nights. They swim readily and well. All are great hoarders, often storing eight to ten bushels of cones in one ground cache.

### Flying Squirrels

Most people, even hunters, have never seen the fourth member of this tree-squirrel quartet, the flying squirrel. Although he's not often seen, this doesn't mean he is uncommon. The tiny, flat-tailed, large-eyed fellow may live in trees in your own yard, but chances are you won't see him—he's a night flyer. Flying squirrels don't actually fly, they glide by means of an extensive fold of skin along both sides of their bodies.



The Iowa giant measures 31 feet, 3/4 in circumference. The tree will be entered with the American Forestry Association's big tree list.

Before taking off, they swing head and body from side to side several times evidently to their range. They land with audible thump, a common sound on woodland camp roofs. They climb to a higher point, glide again, swinging upward alight.

Of the four species, only fox and gray are hunted as game animals with few hunters going and eating the northern. Although just two are hunted by man, all four are hunted and voured by other predators including hawks, horned owls, coyotes and tree-climbing snakes. The night-hunting owl is a natural predator to flying squirrels and a terrifying enemy of all four species.



## Where Do They Go?

Roberts Mann

Walking through the meadows, and prairies on a balmy morn day we hear the chirps, buzz and humming of innumerable insects. Many kinds have been multiplying since spring and their populations are beyond comprehension.

Butterflies dance in the air and flit from flower to flower. Bees busily gathering nectar and pollen. Swarms of startled grasshoppers and crickets leap and scurry ahead of us. The ground is alive with myriads of ants, beetles, caterpillars and other forms of insect life. In the wetlands, great companies of snails creep down from trees to their winter homes in weeds or the mud and humus beneath fallen leaves.

Eventually there comes a night when the temperature drops much below the freezing point and the vegetation is thickly coated with frost. On the following day no insects are seen or heard. Where do they go?

Grasshoppers died. So did a few species of butterflies, bees, and the adults of many other kinds of insects whose young, however, pass through winter in egg stage or hibernate as larva, pupae, or nymphs. The ants creep in their burrows. The bees huddle in their hives. The bumblebee queens and the wasps of colonies of social wasps have crept into protected places where they hibernate until spring. The males and workers died.

Of the male mosquitoes died. The fertilized females of the common house mosquito (*Culex pipiens*), and of the *Anopheles* mosquito which transmits malaria, congregated in cellars, catchbasins, holes in trees and other protected places where they hibernate. The

woodland and floodwater mosquitoes winter over as eggs.

Housewives are unpleasantly familiar with the adults of insects which, seeking places to hibernate, manage to creep through cracks and invade our homes: houseflies, the bluebottle and greenbottle blowflies, wasps, lady beetles, and that harmless nuisance—the boxelder bug.

A few species of butterflies and moths migrated southward earlier in autumn: notably the Monarch butterfly—sometimes in vast flocks, sometimes as far as the West Indies—and some of them, tattered and torn, return in spring to lay eggs on young milkweeds. Adult angle-winged butterflies, such as the Mourning Cloak and Red Admiral, hibernate in out-buildings or hollow trees and become torpid but, on balmy winter days, may emerge and flutter aimlessly about.

Some kinds of adult insects can endure long periods of extreme cold while hibernating if those

periods are continuous—not interrupted by warm thawing days—and some, believe it or not, survive being frozen.

The Viceroy, the fritillaries, and the little skippers, are butterflies that hibernate as caterpillars. The swallowtails and the white cabbage butterfly are some of those that hibernate as pupae—naked chrysalids not protected by cocoons.

Some of the moths—especially the tent caterpillar, bagworm, cankerworm, gypsy moth and other injurious kinds—pass through winter as masses of eggs. The woolly bear caterpillar, larva of the Isabella tiger moth, is a familiar example of those which hibernate in the larval stage. The caterpillars of many kinds of moths, however, spin silken cocoons around them and change into pupae before winter comes. Most youngsters are familiar with and collect cocoons of the big silk moths—the Cecropia, Prometheus, and Luna species.

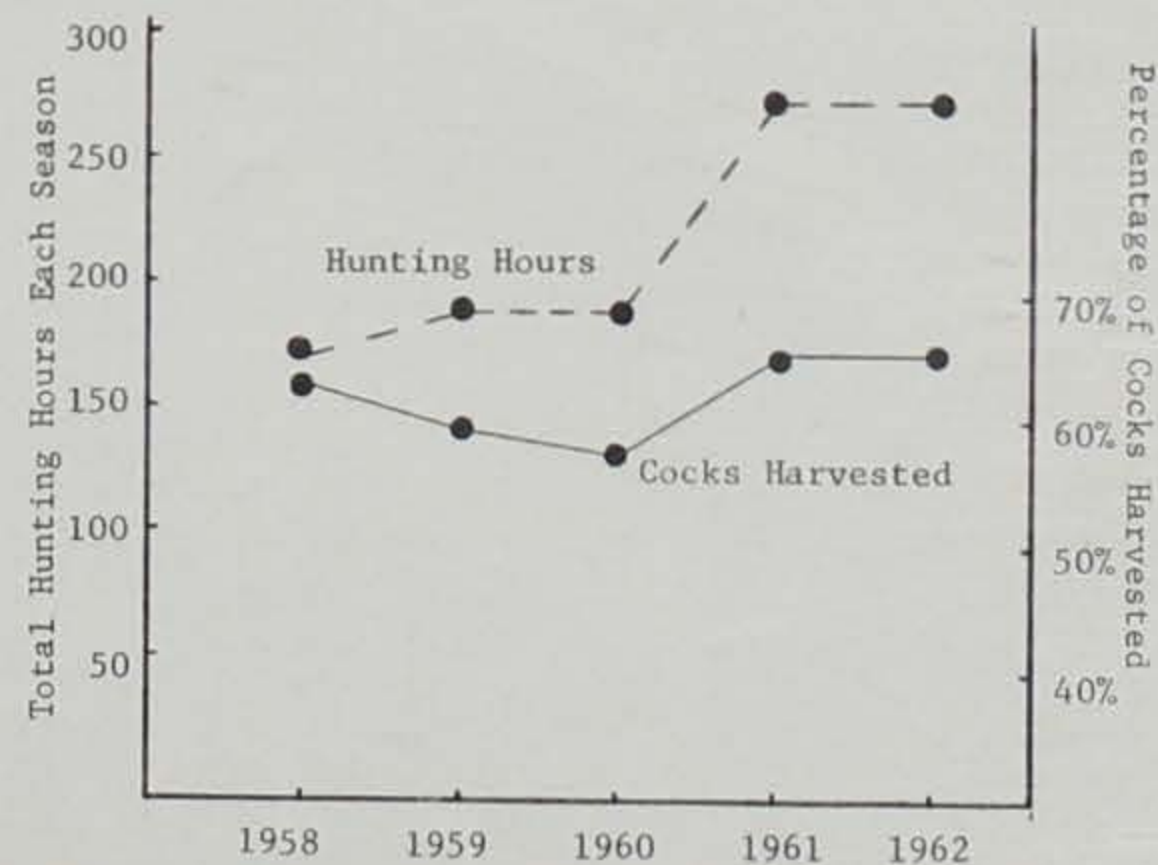
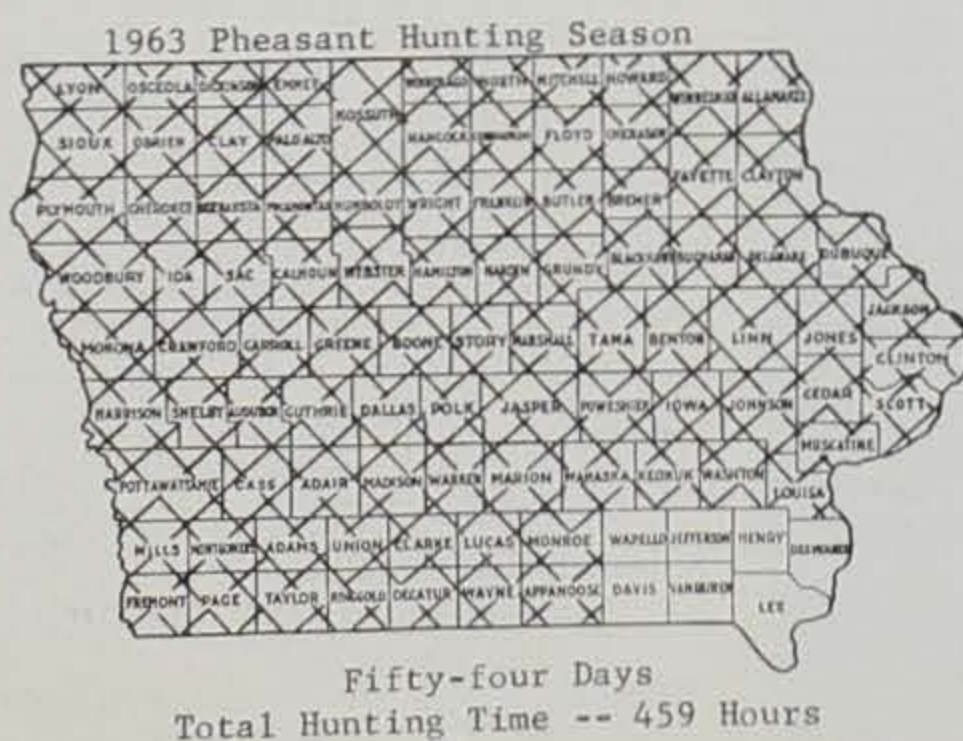
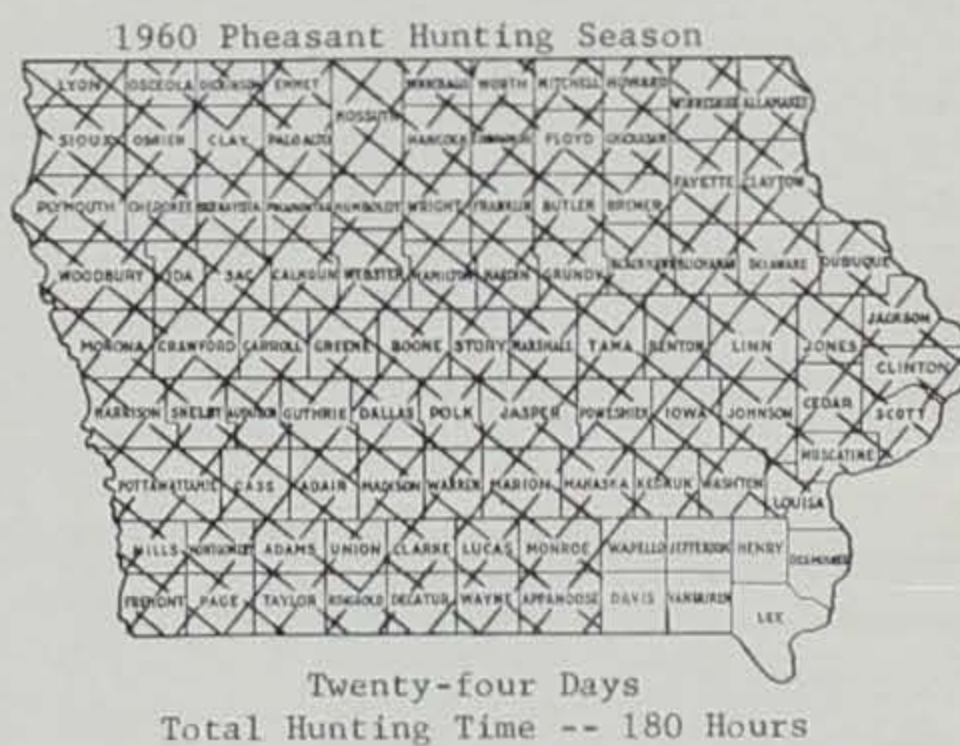
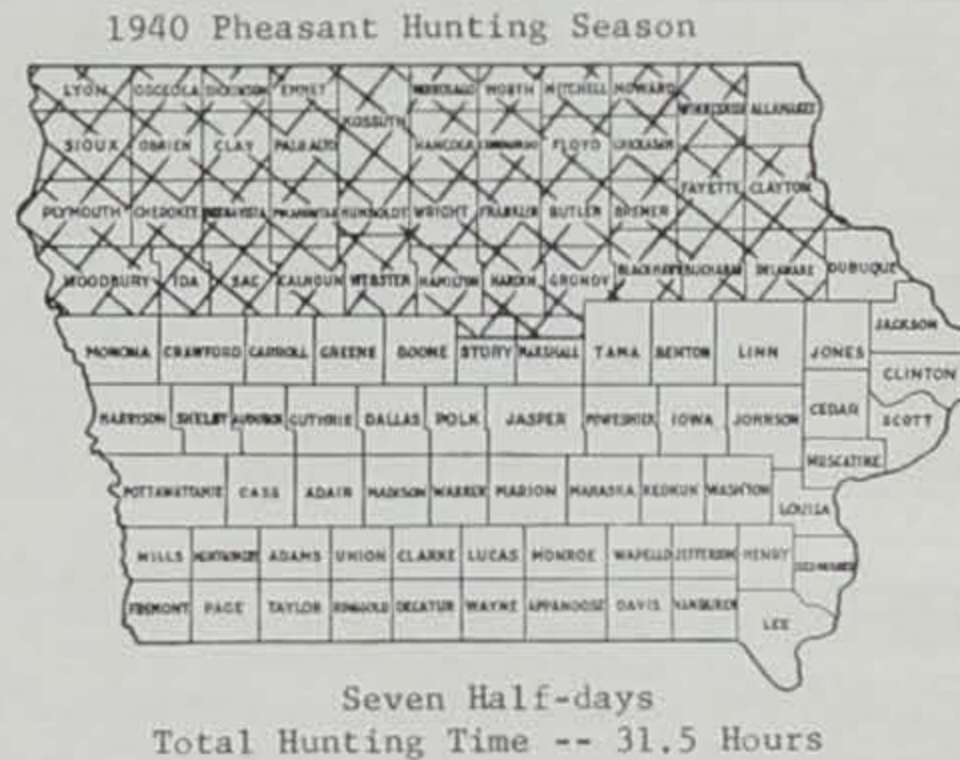
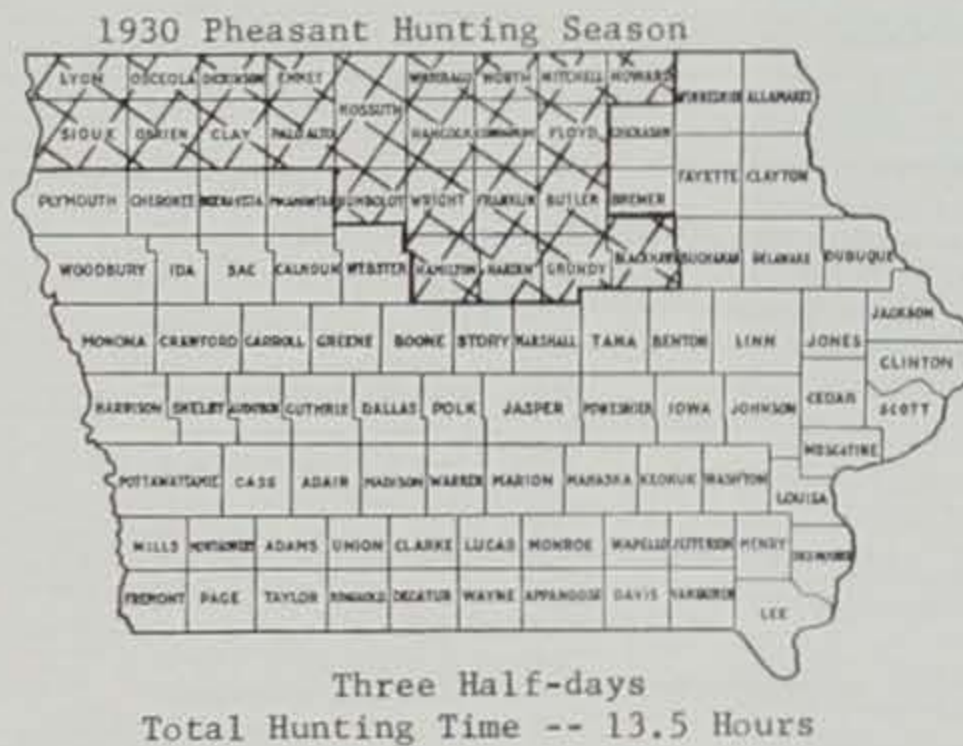
In winter, if you turn over a rotting log, you may find a mouse's nest, a torpid snake or a salamander, a woolly bear caterpillar curled up tightly, and the pupae of beetles or other insects. Please put the log back as it was.

You may learn far more about "Where Do They Go" from the Field Book of Animals in Winter, by Dr. Ann Morgan, published by G. P. Putnam's Sons.

A single square yard of earth can support 10,000 or more individual insects while it requires nearly 21 acres to support one human.

Distributed throughout the world are nine forms of swans of which three are found regularly in North America.

A number of nations have issued stamps with engraved images of mosquitoes and other insects.



## NECKS—

(Continued from page 81)

This year the season has been extended to 54 days, from November 9 through January 1, 1964. Hunting hours have been extended one-half hour each way—from 4 a.m. to 5:00 p.m. The daily limit remains at three cock birds, but the possession limit has expanded from six to nine birds. The Iowa hunter is encouraged to take more of the available cocks than he has in the past.

3, pheasants can take it. We have learned from 37 pre-season hunters will eagerly tramp the fields this fall in pursuit of this creature. They usually make four hunting trips and take six birds for the season. But an bet that more than 500,000 veterans of the cornfields still be crowing "Happy New Year" come January 2, 1964.





Jack Kirstein Photos.

## Kentucky Bass In Iowa

Kentucky or spotted bass have been stocked in three Iowa streams on an experimental basis. Kentucky bass are a stream fish similar in appearance to our largemouth and smallmouth bass. Their natural stream habitat falls between that of the largemouth and the smallmouth.

These fish tend to school more than do smallmouth or largemouth, and they are generally smaller than either fish.

In 1961, fingerling fish from Missouri were brought to the Wap-

ello Fish Hatchery as brood stock for future stocking. The hatch from this year furnished fish for limited stocking. These fish were stocked in the White Breast River near Knoxville, Sugar Creek near West Point, and the Middle Racoon River above Coon Rapids.

The stocking of Kentucky bass in Iowa is an experiment. It will take time and probably additional stocking before the success or failure of this venture can be evaluated. The Kentucky bass could offer some fine angling possibilities in many marginal Iowa streams.



## YOUR CONSERVATION OFFICERS

Bob Rollins, Enforcement Superintendent

Here is a current listing of Iowa's Conservation Officers with their territories, addresses and phone numbers. This list is offered to provide Iowa sportsmen information helpful in contacting these men who are locally responsible for Commission programs.

Name, Territory, Address, Zip Code	Area Code	Telephone
ANDERSON, MAURICE (Mickey)—Clinton 523 Second Avenue, Clinton (52732)	319	242-6956
ANGELL, GLEN—Bremer and Chickasaw 307 N. Locust Avenue, New Hampton (50659)	319	394-2037
ASHBY, WESLEY—Fayette Fayette (52142)	319	425-4001
BALDWIN, JIM—Clay and O'Brien 121 W. Tenth, Spencer (51301)	713	262-3001
BASLER, BILL—Dickinson Box 625, Lake Park (51347)	712	5821
BASLER, DICK—Woodbury Box 154, Lawton (51030)	712	872-6633
BECKER, JIM—Buchanan and Delaware 512 Fourth, Independence (50644)	319	DE 4-2197
BEEBE, BILL—Scott 2611 W. Locust, Davenport (52804)	319	326-5851
BEECHER, WESLEY—Jackson 300 High Street, Bellevue (52031)	319	872-3391
BUTLER, RICHARD—Black Hawk Box 531, Cedar Falls (50613)	319	266-5973
CARTER, HAROLD—Clarke and Decatur 830 S. Park, Osceola (50213)	515	FI 2-3221
CMELIK, RAY—Crawford and Monona 807 Courtright, Mapleton (51034)	712	441
DAVIS, BEN—Floyd and Mitchell 732 Pine, Osage (50461)	515	732-5312
DOWNING, BERL—Jefferson and Washington 306 E. Briggs, Fairfield (52556)	515	472-5248
EDWARDS, LEO (Jack)—Hancock and Wright 714 First Avenue S.E., Clarion (50525)	515	532-3353
EMERSON, REX—Cass and Audubon Route 3, Atlantic (50022)	712	243-5368
GREGORY, JIM—Butler and Franklin Box 236, Geneva (50633)	515	211
HANDELAND, ORLAN—Linn Central City (52214)	319	438-6319
HARRIS, GLEN—Marion and Warren 302 S. Third, Indianola (50125)	515	CH 7-3366
HARVEY, WALT—Grundy and Marshall 6 N. Second, Marshalltown (50158)	515	753-8886
HEIN, CHRISTIE—Mills and Montgomery 7 Elm Street, Box 329, Glenwood (51534)	712	527-4188
HEINKEL, GALEN—Des Moines and Henry Danville (52623)	319	392-3065
HLAVKA, GENE—Jasper and Poweshiek Route 2, Kellogg (50135)	515	598-8251
HOILIN, JERRY—Lee 1821 Avenue F, Fort Madison (52627)	319	DR 2-5101
HOLMES, VERL—Palo Alto and S. ½ Kossuth 103 Call Street, Emmetsburg (50536)	712	852-4969
HOTH, JOHN—Harrison and Shelby Box 147, Missouri Valley (51555)	712	2-2452
HORTON, JOHN—Clayton Box 181, Garnaville (52049)	319	2231
HUFF, LLOYD—Polk 2604 37th Street, Des Moines (50310)	515	277-9233
JENNINGS, ERMIN—Benton and Tama 103 Avenue G, Vinton (52349)	319	472-4494
JOHNSTON, MELVIN—Lucas and Wayne Route 3, Chariton (50049)	515	PR 4-5666
KAKAC, KENNETH—Allamakee 106 11th N.W., Route 3, Waukon (52172)	319	568-3708
KING, DUANE—Pottawattamie Route 3, Council Bluffs (51502)	712	328-2786
LEMKE, LESTER—Adams and Taylor Route 2, Bedford (50833)	515	6F14
LEMKE, LOUIS—Dallas and Madison DeSoto (50069)	515	36R6
MACHEAK, WILFRID—Worth and Winnebago Forest City (50436)	515	582-3553
MEGGERS, JACK—Cerro Gordo Box 175, Ventura (50482)	515	VA 9-292
MINECK, BOB—Cedar and Jones 211 13th Street, Box 29, Tipton (52772)	319	886-6725
MOATS, BOB—Emmet and N. ½ Kossuth Box 115, Estherville (51334)	712	362-4232
NEWEL, GENE—Plymouth and Sioux 176 S. Main, Sioux Center (51250)	712	2-3961
NICHOLS, DAN—Lousia and Muscatine 819 Cedar, Box 202, Muscatine (52761)	319	AM 3-391
OLOFSON, CHARLES (Butch)—Keokuk and Mahaska 202 K Avenue W., Box 381, Oskaloosa (52577)	515	OR 3-670
RAY, MARLOWE—Adair and Guthrie 509 N. 12th, Guthrie Center (50115)	515	747-3002
ROEMIG, ALAN—Wapello Route 5, Ottumwa (52501)	515	684-7966
ROKENBRODT, FLOYD—Humboldt and Pocahontas 402 6th Avenue N., Humboldt (50548)	515	664
RUNYAN, MIKE—Dubuque 1740 Key Way Drive, Dubuque (52002)	319	588-2577
SHIPLEY, JIM—Fremont and Page 301 Fremont, Route 2, Shenandoah (51601)	712	246-2370
SIMONSON, WENDELL—Johnson and Iowa Oxford (52322)	319	MA 8-44
SMITH, CURTIS—Howard and Winneshiek 609 E. Fifth, Cresco (52136)	319	KI 7-268
SPEER, MYRON—Davis and Van Buren Route 3, Bloomfield (52537)	515	664-3074
STARGELL, HOWARD—Carroll and Greene (Newly assigned—no address yet)		
STARR, FRANK—Buena Vista and Cherokee 802 W. 6th, Box 402, Storm Lake (50588)	712	RE 2-546
TELLIER, FRANK—Lyon and Osceola Box 139, Doon (51235)	515	2821
TELLIER, GEORGE (Dick)—Calhoun and Webster Box 410, Fort Dodge (50502)	515	573-2508
TILLEY, ARCHIE—Ringgold and Union 1101 Orchard Drive, Creston (50801)	515	782-5068
UHLLENHAK, MARK—Monroe and Appanoose 203 W. Francis, Centerville (52544)	319	856-6216
WALLACE, JIM—Ida and Sac Box 32, Lake View (51450)	712	657-3241
WILSON, DUANE—Hardin and Hamilton Alden (50006)	515	10J
WILSON, WARREN—Boone and Story 121 Cedar, Boone (50036)	515	432-5581