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CONSERVATIONIST

Volume 19

October, 1960

Number 10

LET'S TALK FOX TRAPPING

Roger Fliger

When the hickory and maples have turned the woods into works of art and the last deer fly is making lazy circles around your head it is time to fill the pack basket with a number two coil spring and head for fox country. Fox populations have been high for many years and harvesting them offers an excellent source of outdoor recreation.

The fox trapper has a barrel of work-how long before he makes his first set of the season. Not that fox trapping is exceedingly difficult but, like any other sport that one might pursue, the fox enthusiast will be aware of a little more of what goes on between those jet black pointed ears of Mr. Reynard at every turn of the trail.

Spot checks on Sunday afternoon drives, late fall fishing trips or squirrel hunts along with frequent forays out into the fields to look for fox sign (along with the knowledge of how many foxes were dug out the previous spring) will give the trapper a fair idea of index of population.

Fox sign consists primarily of droppings, tracks and occasional remains of a kill. The tracks will resemble a small dog, but with practice the more delicate pointed



A dead furrow in a plowed field provides a natural path for foxes so therefore would be an excellent location for a set. Matching wits with "Ol' Red" is a challenge for both the amateur and expert and now is the time to spot trails and ready your gear.

track with the sharp nail cuts will be distinguishable. A line of single tracks 11 to 12 inches apart and in a straight alignment with the above characteristics tells the tale of Mr. Red's nightly sojourns. Sand bars, sandy knolls, dry plowing, dead furrows and damp or dusty back roads will produce tracks.

Fox droppings will give the trapper an idea of the feeding habits of his quarry. In the fall, fox droppings will contain fruit seeds, rabbit hair and the remains of rodents. They should not be confused with raccoon droppings which will be made up primarily of corn or crayfish. Skunk droppings will have their share of insect remains, mostly hind legs of crickets and grasshoppers.

A note book or a county map should be marked to keep track of all signs found along with good set locations which might show little sign but are natural fox habitat or crossings such as fringe areas of woodlots, pastures and sloughs. High ridges, hay stacks, gravel pits, rock piles and water courses are among the favorite haunts of Bre'er Fox.

Several very excellent articles covering methods of setting traps have appeared in past issues of the CONSERVATIONIST. If you can't find them, a copy of Tom Berkley's "ABC's of Fox Trapping" is available by writing the Conservation

Commission. The dirt hole set and its variations and the scent post sets will catch all of Iowa's fur bearers and with the price of long furred animals on the increase it would certainly be worth while to add raccoon and skunk to the catch after November 10.

This fall the trapping of fox, raccoon and skunk on state-owned wildlife management areas will be encouraged. Quotas will be set to manage harvesting of these animals along with mink and muskrat. Often these animals will be found in extraordinary numbers because of the nesting and young of waterfowl. Later, when the gunning season is in swing, the crippled birds attract predators.

The subject of traps, stakes, trowels, dirt sifter, ground cloth, as well as scents and baits, will vary with individuals and conditions. While one trapper will use extensive methods of removing human scent, another trapper will claim that fox are accustomed to both human sign and scent. Whichever method produces for you is the best. Being careful certainly doesn't lessen your chance of putting an extra pelt on the stretching boards.

The trapper usually sets out his line in a large loop, figure eight or along the predominant water courses so as not to cover the same area twice, or he may run spur

lines or gang sets in areas that have produced good catches in the past or that suit his fancy. He may have just one or two sets in the back forty or three or four hundred sets covering several counties, but whether amateur or professional, there is that same unexplainable excitement one feels as the first rays of the sun turn the frost-covered grass into outdoor jewels and that age-old expectation to hurry up and get over the ridge and see if you've outwitted "old red."



A pair of carefully placed coil spring traps and a dash of fox scent await friend as he runs just below the ridge top waiting for an appetizer or excitement.

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SHOOTING HOURS FOR
DUCKS AND GEESE

Iowa Conservationist

Published Monthly by the
STATE CONSERVATION COMMISSION
East 7th and Court, Des Moines, Iowa
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CIRCULATION THIS ISSUE.....48,500
Two Years \$1.00

Entered as second class matter at the post office in Des Moines, Iowa, September 22, 1947, under the Act of March 24, 1912.

Subscriptions received at Iowa Conservation Commission, East Seventh Street and Court Avenue, Des Moines 19, Iowa. Send cash, check or money order.

SHOOT WITH A CONSCIENCE

Cripple loss is one of the most wasteful aspects of waterfowl shooting. By concentrating on bagging each bird that is hit by shot, hunters could make a sizable contribution to the numerical welfare of the continent's ducks and geese.

Again this year, every single duck is an important duck. By simply cutting down on cripple loss each waterfowler can bag a limit of birds and still save at least one duck per hunt. Each year cripple loss runs into the millions, and it is conservatively figured that 5 to 6 ducks are downed to fill a bag of four birds. Multiply this waste by the army of waterfowl hunters and we arrive at a crippling loss of staggering proportions.

We have heard of the problems on the major waterfowl breeding grounds and the 1960 duck crop is still down. This is the year then for you and for me to make an all-out effort to help save ducks.

Cutting the cripple loss by 10 percent can send a couple of million more ducks back to the nesting grounds next spring. Every cripple we fail to retrieve usually means another duck knocked down to take its place. It's sheer waste to kill five to six birds merely to take four home.

Improved shooting is the best way for a waterfowler to live up to his obligation to help save ducks. Use of a dog is one of the finest means of cutting down cripple loss, but if a retriever is not part of your equipment, it means the exerting of a little extra effort. Now is the time when your help will make a difference next year.

Among ducks, the pintail is one of the strongest and fastest fliers. A flock of 22 pintails landed on Palmyra Island, 1,100 miles south of Hawaii, in 1942 and one wore a band placed on it in Utah 82 days earlier.

A MAN MAY WONDER

Dan Saults

Assistant Director
Missouri Conservation Commission

Even if it does irritate old grads, I'd like to think out loud for a while about football teams and their stadia, basketball squads with their monster field houses, track teams languishing in loneliness before vastly empty stands, and the polo, tennis, golf, lacrosse, boxing, wrestling and cheerleading teams that are an integral part of high school and college life besides filling up sports pages when the baseball season is over.

Of course, these items in the Wonderful World of Sports are part of the American Way of Life and must not be questioned. They prepare Our Young Men and our Fair Womanhood for U. S. Citizenship and teach True Sportsmanship. We could not have won World War II without exhibition boxing matches by champions. And without the football squads of the Armed Services how would the Forces of Truth and Freedom ever have swept to Glorious Victory?

I do not question these virtues. But thinking aloud on a personal basis: I quit playing basketball fifteen years ago and quit dreaming of stardom long before that; I haven't tossed a baseball for five years; I haven't engaged in fist-cuffs since 1944, when an out-ranked second lieutenant decided to see if he should have been out-ranked.

But I still go fishing; I still hunt a little.

Nobody ever really taught me these sports I can practice as a middle-aged man; coaches were busy trying to develop a hook shot or a fast start in the dashes. I wish, now, someone had taught me how to fish a little better, because that sport will be open to me as a participant for a good many years yet, God willing. Gunning or angling, I don't have to confine myself to indulging in what we collitch-cultured journalists call "vicarious participation."

So at the risk of being disloyal to the sports section of the Free American Press, I'm wondering—not suggesting, just wondering—if a course in plug casting or gun handling would not prepare our American Boyhood for life just as adequately as football casting or basketball handling. Seems to me the acquired skill might be more useful after boyhood has become manhood, might even teach a man or a woman to live with themselves better than they would learn by watching matched teams beat each other's collective brains out.

If this be Treason, make the most of it.

You can't draw 50,000 people to a fly-casting contest, nor get Old Siwash's name in headlines with an exhibition of gun safety. But the air is fresher on blue bonnet creek than in Yankee Stadium and

there's more exercise in following a dog across a field than in sitting on a hard board using eyeballs and vocal cords. Techniques of live-bait fishing may not build School Spirit, but it surely wouldn't hurt academic standings any more than a ten-day jaunt in Madison Square Garden. Travel may be educational, but so few people get on basketball squads—someone has to be under seven feet.

It's hard to understand why so many schools resist hunting and fishing as "specialized interests" while paying a football coach more than the dean of men to instruct one-fiftieth of the student body. There are required "gym" classes, of course, but these generally—there are notable exceptions—rate calisthenics more ennobling than plug-flipping. Push-ups may build bodies, but their value in soul therapy is doubtful . . . and how many of you do push-ups now you're at the age to need 'em?

Hunting and fishing aren't particularly virtuous pastimes, but they keep a practitioner in better shape now than he's kept by the memories of boxing he did twenty years ago. Can you honestly name any sport that's useful to you today, unless you are a young professional?

I'm not griping, you understand . . . just wondering if a course in using the outdoors wouldn't be as useful as a class in folk dancing.

—Missouri Conservationist.

IOWA'S NATIVE EVERGREENS THE YEW

Professor George B. Hartman
School of Forestry
State University of Iowa

Excavations which have been made in recent years in the course of carrying on Iowa's road improvement program have exposed forests which were on the land before the approach of the glaciers which invaded Iowa many years ago. The deposits of soil left by the glaciers completely covered the forests which appear to have been chiefly coniferous (evergreen) tree species. The wood structure of trees in these forests can still be identified. Both Doctor W. H. Scholtes and Doctor D. W. Benseid of the Iowa State University staff have studied the structure of wood in these pre-glacial forests. Apparently the principal genus of trees which made up these forests was spruce. These findings lead us to suspect that Iowa may have had dense stands of coniferous forests many, many years ago.

But when the glaciers came the earlier forests were covered with a deep layer of glacial till, the climate changed and our state became clothed with an entirely different kind of vegetation. Today the forest vegetation of Iowa is composed largely of hardwood (deciduous) trees. According to R. B. Campbell there are but five

coniferous species which are considered to be native to Iowa at the present time. None of the five is of great importance from the standpoint of the value of products which they provide.

These five coniferous species belong to four different genera of trees. There are two species of juniper represented in Iowa.

One tree of this group of five is rather inconspicuous and usually is not noticed by persons taking casual walks through the woodlands. It is the low-growing, prostrate American yew also sometimes called the ground hemlock. Botanists and foresters know this tree as *Taxus canadensis* Marsh. The genus *Taxus* includes four species which are found in America. None of the four attains any great height. The American yew (Iowa's species) is the smallest of those growing in this country.

R. B. Campbell in his "Trees of Iowa" describes the American yew as being a low, straggling bush found occasionally in northeastern Iowa. It has needle-type leaves which are flattened, attached to the twig by a short stalk, and are dark yellowish green on the upper surface, turning a reddish brown in winter. This interesting species has a red berrylike fruit about one-quarter inch long and broader than long. The tree thrives in complete shade.

The genus name of *Taxus* is the Greek for yew, probably because this wood was utilized for making bows.

The next time you hike or hunt through the woodlands of northeastern Iowa, watch for this beautiful low-growing shrub, one of Iowa's five native evergreen species.



The yew is the only conifer whose foliage has no odor or flavor of resin. The tree has flattened needles and single seeds that turn red in fall. The whole tree takes on a winter hue of brown.

Snapping turtles are masters of camouflage. As they grow old their shells become so covered with algae that, as they lie among aquatic plants of some pond stream, they look like old green stones.

COMMISSION MINUTES September, 1960

The Commission:

Approved minutes of the August meeting.

Approved a request for travel authorization to St. Louis for Jerry Jauron.

Approved a road easement into Echo Valley State Park.

Approved a land option for an area adjoining Beed's Lake State Park.

Approved construction of a

power line across the north end of Green Valley Lake.
Instructed the Director to advertise for bids and arrange for the release of funds for completion of the dam at Palisades-Kepler State Park.

WATERS

Approved sealing the millrace at the old dam on the Middle Raccoon River near Panora.

Approved a request from Carter Lake to hold a regatta.

Approved a request from Cedar Rapids to hold a regatta on the Cedar River.

Approved a request from the State Highway Commission to build a bridge in Linn County over the Cedar River.

COUNTY CONSERVATION ACTIVITIES

Approved the following: Land acquisition of 12½ acres in Buena Vista County along Little Sioux River, including a dam for picnicking, camping and fishing access. Land acquisition in the Elk Creek area of Delaware County. Land acquisition to add one-half mile of river front to Black Hawk Park in Black Hawk County. Land acquisition of four acres of wooded pasture land for a roadside park east of Hampton in Franklin County. Land acquisition of 56 acres in Hamilton County as an addition to Briggs Woods. The lease of Riverview Park in Lee County. The lease of five acres for access to Silver Lake in Worth County. The lease of three acres (Keays Access) as a fishing access in Polk County. The lease of 14 acres on the east shore of Crystal Lake for an access area in Hancock County. Development of the Buffalo Creek area in Linn County. Development of a gravel pit for picnicking and fishing in Worth County. Development of the roadside park in Franklin County with camping and picnicking facilities. Development of the Keays Access road in Polk County.

FISH AND GAME

Purchase of two areas, 25 and 58 acres, adjoining Elk Creek Marsh in Worth County. Purchase of three acres at the upper and Bays Branch Game Management Area. Purchase of 27.1 acres in Spring Run on the south shore of Lily Lake in Dickinson County. Purchase of 14 acres for shoreline access at Barringer Slough in Clay County. Purchase of two areas in the Otter Creek vicinity in Tama County. An easement for an inlet structure at Big Marsh in Butler County.

Gave permission for Iowa-Illinois Gas and Electric Company to cross Weise Slough with certain stipulations.

Heard a report on Muskies and Trout given by the Superintendent of Fisheries.

The mallard duck is the most abundant wild duck in the world.



Jim Sherman Photo.

On the water of Marble Lake in Dickinson County the distinctive white bills of these coots make them a cinch to identify and make coot hunters drool.

COOT-OLGY

and A Word For The Wise

Malcolm K. Johnson

There's no question about it! The population is down! To the hard duck hunter this means the hours spent in the blind with birds to take home or does. Via the undetectable name, then, draped on the coot by friends of this region, one of their friends goes its fameless way, respected and unharvested.

they but knew . . . other parts of the country member of the rail family is referred to as a "whitebill" or "rice" and deemed better in the bag than mallards unseen. In merry land where tradition and availability demand that great quantities be taken to prepare wild game, this bird is called the "moor" and they are sold on the catessen market. Another obvious feature of coots is their absorbent breast feathers, a thing to remember if you get wet flies. The biggest point to make, however, is that their flavor, when properly prepared, is similar to that of the canvas-back other divers; in other words, it's *tasty!* (For recipe, see page 7.) Their diet is principally juicy bits of plants, which contributes to the good eating quality, plus a insects and small mollusks.

How and Where

Cooting coots can be great sport, especially if you're in a boat in an open water area where they'll raft. Herd them down wind till they reach the end of water and they'll fly. With the wind at your back and the coot's general tendency to take off into the wind, you'll have birds to test your skill over and on either side for 20 to 30 yard shots. If you don't fill on the initial run, wait a spell and they will regroup, a little more orderly, but still available for another try. Be careful where you shoot. Coot shooting is low and by token, dangerous to others nearby. Heavy shot isn't needed; "number sixes" do well and don't fly as far. Oddly enough, coots are faster than you think and most

misses are from shot patterns lacking the air a few feet behind them. Maybe they mistake the late shooters for friends because they never fly far and best of all are nearly always to be found most everywhere during the season. Look for the young ones if you want to bake them—more gray on the head, breast and back than the old black ones that perhaps are best cooked in a pressure cooker.

Dress Quickly

Once downed, a coot should be skinned and gutted immediately. Many pin feathers necessitate skinning, and entrails and breast fat can impart a strong flavor. Keep all of the bird except the wings past the first joint. If you fancy giblets, the immense gizzard and liver of the coot should make him a favorite. The legs are large and should not be left behind; the bones in them will remind you of a pheasant. Like ducks, coots should be eaten soon, not days or weeks later. Many who shoot and like coots, do themselves a disservice by ripping off and taking home only the breast and wing. Others, still worse, use coots for target practice and intentionally violate the law by leaving them on the water or stomp them into the mud, hardly living up to the creeds of conservation and rod and gun clubs. Plastic bags are so easy

to get these days every hunter should always carry a supply to make a good day in the field a good one at the table too. Game should always be cleaned and cooled as soon as possible unless you're like the Britishers who favor game ripened by hanging from the neck till the weight of the body will sever the head from neck.

Natural Decoys

Still unconvinced? Well, if you don't want to eat coots, follow the line of the old hunters and welcome their presence near your blind. Some even use coot decoys to lure them closer and indirectly draw in the wary ducks that look for undisturbed coots on the water. One thing is certain, everything that lends to the naturalness of the vicinity of your blind is more help than hindrance.

A Reminder

Bear in mind that in most cases this year ducks will be at a premium. Your season tally could be pretty low if the narrow thinking of years ago prevails. Broaden your ideas and tastes and enjoy some of nature's less sought after bounty. Green heads and pintails are wonderful birds, but when it comes to eating—last year's stories taste awfully flat. During the balmy days of blue bird weather in the early part of the season the ducks may not be flying, but the chances are that good table fare is right under your nose.



Inappropriately termed "mudhen" by local hunters, the coot is an epicure's delight in England under the name of "moorhen." His assets include heavy legs and giblets.

HOW OLD IS IT?

E. B. Speaker

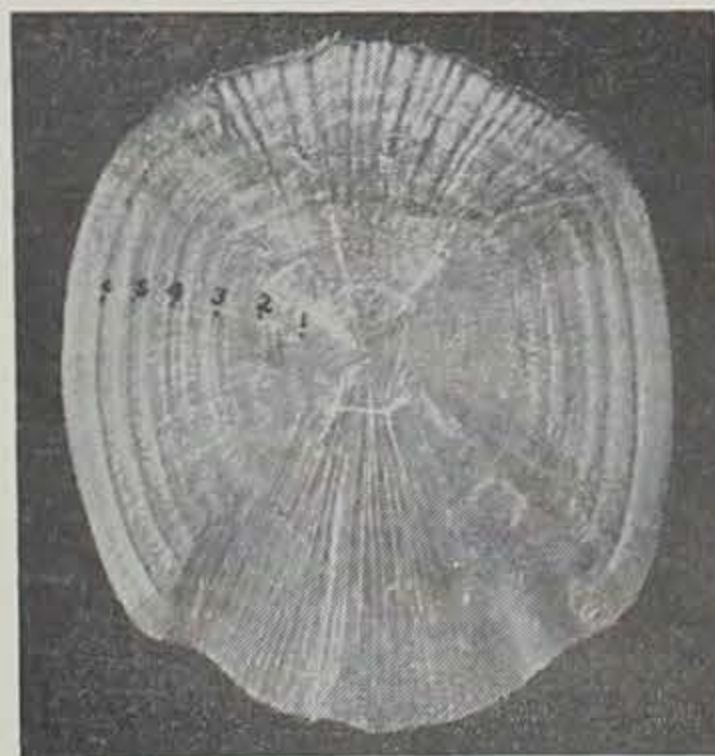
Superintendent of Biology

For centuries man has speculated on the age of woman, but with color tints for the hair, creams for the skin, and make-up for the face, his problem has become increasingly difficult. Foresters have been able to determine the age of trees since early times by counting the summer and winter growth rings in the wood. Only in comparatively recent years have biologists been able to age fish and determine the relative maturity of some of the major game birds and mammals. Wildlife is a product of its environment, hence size, shape and color cannot always be used as a measure of age.

We thought you might like to try your hand at aging that large elm tree that finally died and had to be cut down, or your prize fish or game trophy.

The tree is simple to age, and many tree stumps are available for the purpose. If you will examine a stump closely you will note alternate rings of light and dark wood. The light ones represent the summer growth and the dark ones the winter growth. A tree grows more rapidly in summer, hence the thickness or width of the light wood is greater than that of the dark. By counting the winter, or dark rings, you can determine how old it is. Simple, isn't it?

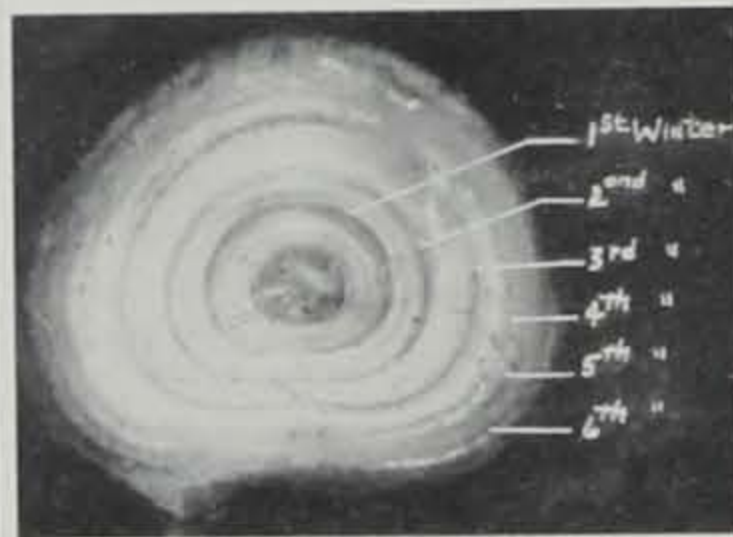
Biologists have found that fish lay down summer and winter growth rings in bony parts of the body. Although much more complicated, fish can be aged by counting these growth rings. A microscope is a must for accurate work, but a small hand lens will give you an idea of the age if carefully used. Let us take a scale from a fish. It is bony and must grow proportionately to cover the body. If you look at it closely, you will note many tiny lines radiating out from the center of the scale. These are called *circuli*. Look at the scale more closely and you will find these lines become much more crowded at fairly regular intervals. What you are now observing is an *annulus* or winter growth ring. Like the tree, fish grow much slower in



George Tovey Photo. Scale from six pound, seven year old buffalo taken at Storm Lake. Note the six annuli (annular growth rings).

winter than in summer. By counting these annual rings, you can determine how old the fish was at the time of capture (see photo).

What about fish that have no scales, like the catfish or bullhead? They are tough to age, but it can be done. Fortunately scales are not the only bony parts that lay down annual rings. Ideally, thin sections should be cut near the base of the spine and viewed under a microscope for this work. If this is not practical, thoroughly clean the first vertebrae behind the head and examine it under a hand lens for growth rings (see photo).



End surface of vertebra from 10 inch bullhead. The annual growth rings are indicated and the fish is estimated to be six years old. Iowa State University Photo.

If we haven't scared you out by this time, let us proceed with some of the game birds and mammals. In most instances you will only be able to tell if the animal is young or old. The deer is the exception in this article. Since most game harvested by hunters is less than two years old, however, this method of aging will usually suffice. For example over 80 per cent of the pheasants taken by hunters are birds that were hatched the spring preceding the hunting season. A similar situation occurs in a normal breeding season with quail, rabbits, squirrels, and many other species of wildlife.

Pheasants are aged by several methods. One of the most commonly used in the field is the spur method. Obviously only cock birds can be aged this way, but since only cocks can be legally taken in Iowa, this should present no problem. Large, plump birds are not necessarily old ones. Normally, pheasant eggs hatch from about June 15 to July 15. Some are earlier, and a few may hatch as late as August or even early September. The variation in the nesting season gives rise to a considerable difference in the size of the birds taken by hunters in the fall. Spur measurements are sometimes used to separate young from old birds (3/4 inch or less including the leg bone is considered young) but since the spur of young birds continues to grow all fall, there is some overlap between early hatched young and old. Most biologists now distinguish young from old by appearance of the spur rather than length alone. The spurs of adult birds (over one year old) are dark in color, long, sharply pointed and

often decurved, and have a hard, glossy surface. The spurs of young birds are light in color, short, the point is more blunt, and the surface is soft and without luster. Except in extremely rare cases hens have no spurs (see photo).

Immature quail can be distinguished from adults by the characters of the two outer primary



Pheasant feet can be used to determine sex and age of these birds. Top to bottom: normal hen foot without spur, hen with spur, young cock, and old cock foot.

wing feathers and the tip coloring of the greater upper coverts. The two outer primaries on the adults are rounded and the coverts are sleek in appearance, dark gray in color and without markings. The outer primaries of young birds are pointed and the coverts are tipped with light buff color (see photo).

Rabbits can be aged by the leg bones. The humerus bone (bone between the shoulder blade and



George Tovey Photo. Primary coverts on the juvenile quail are identified by the white tips.

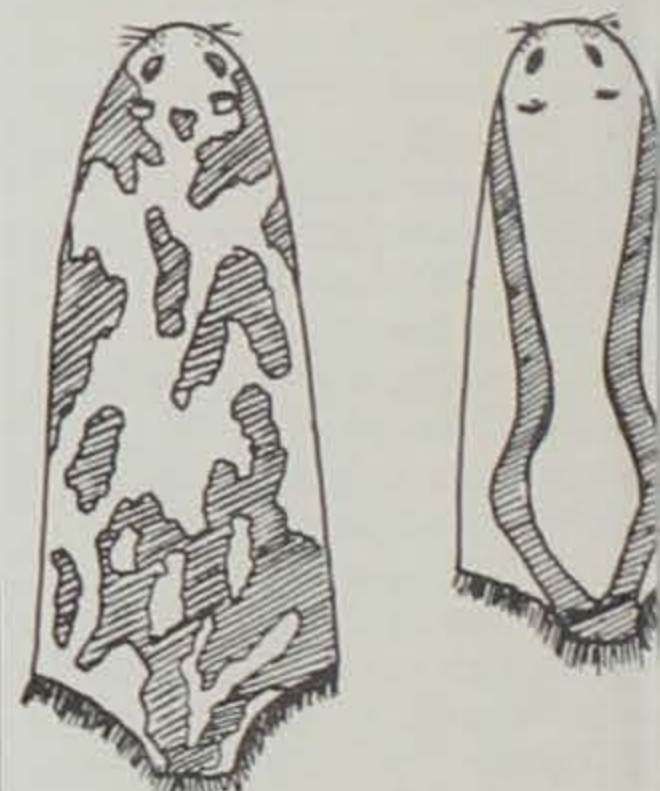
the elbow) is used for this purpose. Cooking does not damage the bone for this purpose, so meat need not be wasted. If the thin cartilage (epiphyseal groove) can be observed between the shaft and end of the bone it is a young rabbit. If this cartilage is absent the rabbit is fully mature (see photo).

A similar method is used to age squirrels. In this case the feet are used. By careful examination of the wrist bones (radius and ulna) it will be noted that the cartilage of the outer and inner bones is either separated from the shaft or shows a distinct line of fusion in the sub-adults. Adults show no line.



George Tovey The adult rabbit's upper foreleg bone the left does not have the cartilage as appears on the juvenile bone, right.

Biologists and game managers use the pelts to age muskrats. The flesh side of the pelts of the juvenile muskrat displays linear



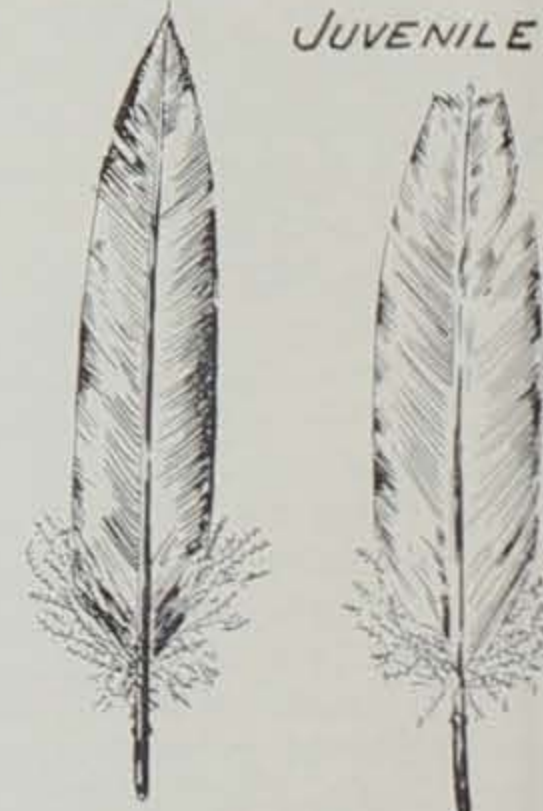
Adult muskrat on left has splotchy pattern while juvenile on right has symmetrical linear pattern on inside of pelt.

symmetrical dark-color areas while the adults show irregular mottled dark areas (see photo).

Several methods are used to

ADULT

JUVENILE



WATERFOWL TAIL FEATHERS

Waterfowl tail feathers.

termine the age of waterfowl. This method makes use of the tail feathers. The large tail feathers of juvenile ducks are "notched" (Continued on next page)

BIOLOGIST'S



CORNER

SEARCHES FOR SQUIRREL FACTS

Paul D. Kline
Game Biologist

Fella asked me what I was doing the other day. Wasn't too surprised, even though he was a stranger. You see, I had my eyeballs aimed skyward, up a big burr oak. Had no gun, so couldn't be squirrel hunting. Understanding his curiosity, I had to tell the truth: "Just checking the nut crop." Of course, that brought some specific questions; and a little explaining was in order. It went something like this:

We know that squirrels depend on nuts and acorns as a major source of food. Some falls, the oaks, hickories, and walnut fail to produce. Then what happens to the squirrels? We have some ideas on this—ideas which we're trying to check out. Possibly in most portions of Iowa, where corn dominates over woodland, squirrels turn to corn for food more than normal. The overall effect on squirrels may not be too important. But in the heavily wooded portions of Iowa, particularly in some northeast and southern counties, the effect may be more serious.

This effect may be tied up in a little bundle called "stress." A squirrel population under stress is subject to pressure or strain which results from exterior forces. Food shortage is only one form of pressure which creates stress. Severe cold and deep snow may be another.

The idea which we're checking out is that a population under stress does not produce young squirrels in normal numbers. The litters may be fewer and each contains less young. Young squirrels normally make up about 55 percent of the fall population in Iowa. If the squirrel population is under stress one winter and, consequently, produces fewer young than it follows that the woods will not contain as many squirrels as hunters would like to see the following season. And the whole picture may be reflected by poor hunting success.

But first of all we must check the nut crop each fall. This we do with the aid of foresters and unit game managers throughout Iowa. Then we measure production by collecting squirrel leg bones through hunters and conservation officers. We can tell old squirrels from juveniles by examining the leg bones. And, finally, we measure hunting success through cooperation of hunters who mail us reports on the number of squirrels killed and hours hunted. When hunting is poor the number of squirrels killed per hour goes down.

Three things must be studied over a long period of time, several years at least, before we can say for sure whether or not our idea is accurate. Only then, after we know the facts, can we apply management with any degree of confidence in an effort to control squirrel populations.

It appears we may be on the right track. The 1959 squirrel season gave poorer hunting success than any other of recent years. Hunters bagged less than 0.7 squirrels per hour of hunting. In 1958 it was 0.86 squirrels per hour; and the average for recent years is about 0.98 per hour. Young squirrels made up 50.1 and 48.4 percentages respectively for fox and grey squirrels. We've already stated that the normal fall population is 55 per cent young. All this followed an extremely poor nut yield during the fall of 1958, followed by a rather severe winter, 1958-59.

In the heavily wooded areas of northeast Iowa this evidence of stress was even more apparent. There, hunters bagged only 0.4 squirrels per hour. That is extremely low success. Not only that, young-of-the-year made up 42.3 and 44.2 percentages for fox and grey squirrels from that area. Practically no nuts or acorns were produced in northeast Iowa during 1958.

Our theory checks out so far. Will it continue to do so? We can find out only by checking the nut crops, aging the squirrels, and evaluating hunting success.

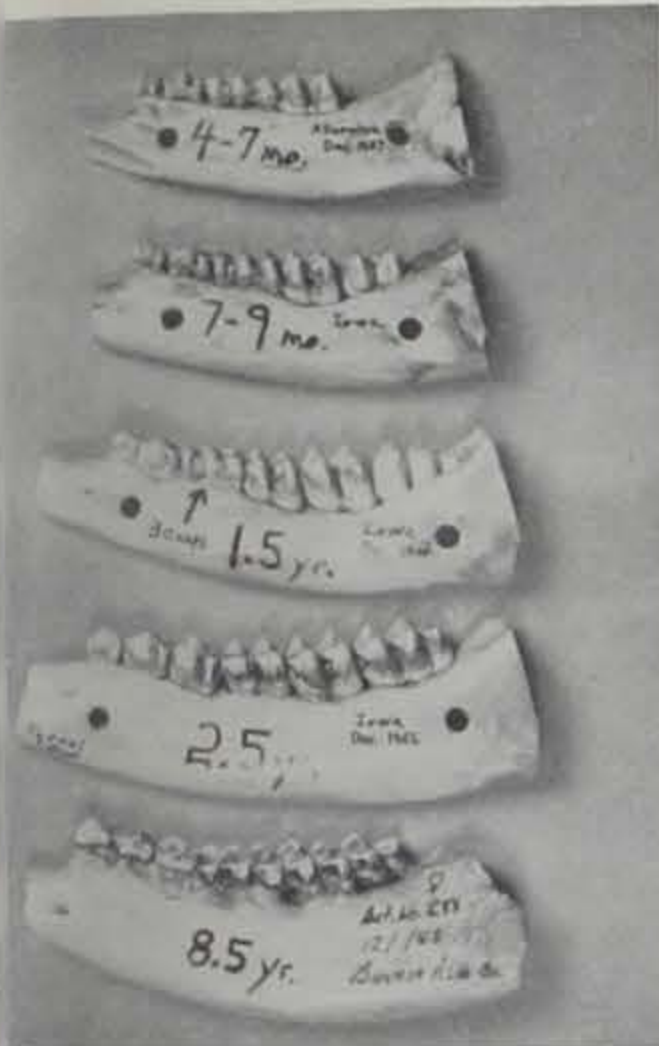
In captivity, the raccoon will not touch meat unless there is water in which to wash it. This washing habit largely explains why the raccoon is never found far from water.

The "milk teeth" or temporary premolars are replaced with permanent ones and there is no change after the animal is 1½ to 2 years old, except of course in wear (see photo).

We hope we have had fun attempting to age your prize trophy. Who knows, it may turn out to be your most interesting hobby! While we hope it is fun for you, it represents hours of work for the biologist who must age, with great accuracy, hundreds or even thousands of fish, birds or mammals during the course of the year. Aging techniques are tools of his profession, and assist him in doing a better job of fish and game management. The application to his work is almost unlimited. With the knowledge of aging fish, he can determine the rate of growth and show the response to management and natural changes. Large year-classes can be identified and followed for a period of years. Yearly production can be determined and estimates of future populations predicted.

In wildlife, age-ratios are a good indicator of reproduction and mortality. Although there are some exceptions, a high percentage of young usually indicates an increasing population, a low percentage of young a decreasing population, and an intermediate distribution of age classes a stable population. By use of aging techniques and modern census methods, the changes in the population can be correlated with habitat, environment, climate and other factors. The effectiveness of management measures can be evaluated and predictions of future populations calculated.

Much of this work is still in its infancy, but great strides have been made in our understanding of wildlife management through these techniques in recent years. As time goes on, further progress will be made.



Check teeth from white-tailed deer. Top bottom: one permanent molar at rear 4-7 months; 2 permanent molars at 1½ years; 2½ years, permanent premolars replaced milk premolars; 8½ years, molars worn.

Continued from preceding page)
The down is either still attached to the tip or there is evidence of the web and blunt tip after down breaks off. In adult ducks the large tail feathers are either pointed or rounded. This method of aging is only used until the juvenile tail feathers have been moulted and replaced by the feathers of the first winter plumage. A new method of aging ducks by wing characters is in the process of development. This will be described in a later issue of the CONSERVATIONIST.

White-tailed deer are aged by tooth development and wear. Several changes occur in the development of the teeth in deer until they are 1½ to 2 years old. These changes identify the age of the animal up to this time. After all permanent teeth have erupted through the gum, age is determined by wear. If you are as old as I am you probably can remember the old horse traders that used to sit the farms. Before completing the trades, they would invariably look into the horse's mouth and examine the teeth. If badly worn, they knew at once the animal was an old one. Present day biologists have perfected a method of aging deer so that many age groups can be distinguished. Since 80 per cent of the deer taken by Iowa hunters are 2½ years old or less, we will confine our remarks to this group and leave the tough age groups for the biologists to worry about. The only difference from this age is the amount of wear.

For our purpose we will ignore the front (incisor) teeth and use only the cheek teeth (premolars and molars). From 4 to 7 months there are 4 cheek teeth—3 premolars and 1 molar (see photo). From 7 to 9 months there are 3 premolars and 2 molars (see photo). At about 1½ years deer lose their third molar (see photo).



You better wake up and get off automatic pilot!

STATE PARKS OF IOWA

A Where To Go and What To Do
Feature

VIKING

Stan Widney

The greatest earth movers of all time pushed down from the far north at least four times during the past eons. They called them glaciers and three of them moved partly across Iowa and down into Missouri before dumping their loads of silt, dirt and rock.

The last one, called the Wisconsin, unloaded gradually in two big heaps, both in Iowa, about as far south as Highway 30. It leveled off the tops of these piles before melting, leaving higher, less hilly ground with many lakes and pot holes. Consequently, below the general area of Highway 30, the melting of old Wisconsin formed rivers and creeks instead of lakes and pot holes.

Some of the creeks are so situated between hills that, when properly dammed, they will form a lake—or one of the thousands of farm ponds we see so often in southern Iowa. One of these artificial impoundments, created just three years ago, is 150 acre Viking Lake in Montgomery County, just east of Stanton and northwest of Villisca.

It is the most natural looking artificial lake I have ever seen. The "arms," winding through the timbered shoreline remind you of Canadian lakes, as does the crystal clear water in which you can see bluegills and minnows four or five feet below the surface from the docks.

The south shore is almost entirely devoted to or is in the process of being developed for recreation. The rest of the shoreline is timber except for the neatly riprapped dam. The spillway, 500 feet long, slopes down from the lake level at a seven degree angle. It

is doubtful if any foreign fish could ever climb it.

As for fishing, this fine new lake is abundantly supplied with bass, up to 3½ pounds; bullheads up to 12 inches, and bluegills that are not yet king size by any means, but they are eatin' size and lots of sport to catch. Viking was opened for fishing a year ago in May and has been fished heavily ever since. Farm pond owners would do well to take a leaf from Viking's book because when the lake was first opened for fishing, no bass measured over 10 to 11 inches and the bullheads were no more than seven or eight inches. The appeal of its waters was so great that it was not uncommon to see as many as 100 boats and over a 100 shore fishermen at eight o'clock in the morning on a good day. This seems to prove that fishing is what a lake, or farm pond, needs to make the fish grow.

The lake is 46 feet at its deepest and has many bays and projecting points around its 4½ mile shoreline. A portion of the north shore is sanded, providing a well marked area for swimming and bathing. A bathhouse with showers is going to be built shortly. Meantime, neat, clean compartment size buildings for changing clothes are provided. A bait house with boat and motor livery is manned and kept spotless by Jimmy Jones, who calls visitors by name ten minutes after their arrival.

A shelter house for the picnic area will be constructed in the near future; one that has a huge fireplace in the middle and open on both sides to provide for two family reunions at a time.

Neatly graveled rock roads lead to all areas in use now, as well as two large overlooks from which there are excellent views of the lake.

No, the glacier did not create Viking Lake, other than to provide the start of the stream that event-



George Tovey Photo
The Conservation Commission's "Stop Wishin' Go Fishin'" car stickers were very effective last summer—at one Des Moines barber shop at least. The camera caught its owners as they were putting up this sign on August 24 preparatory to closing the shop for a whole week of every chair's favorite pastime. Regular customers say they came back with good tans and steady hands that not only cut hair better, but spread wide whenever "the ones that got away" were mentioned.

ually filled it. The Conservation Commission bought the land from farmers who were most cooperative in order to provide themselves and neighbors with so fine a recreation place. Commission engineers designed the dam that encloses the waters that even now are drawing visitors to them from as far away as New York and California. How better can conservation minister to the mind and spirit of mankind than in the building of a beautiful lake and parkland?

COOT COOKERY

The preparation of a coot dinner begins not after arriving home from the hunt, but when the bird is downed and in your hand. The flavor of ducks and coots, especially, is dependent upon how it is handled and when.

Bleed the bird as soon as it is retrieved. Take out the entrails while the bird is still warm—this produces finer flavor—by first plucking a strip of feathers from breastbone to vent, then cut and eviscerate. Wipe out the body cavity and keep the giblets. You may want to skin the coots on the spot. At any rate don't try to pluck them, as the pinfeathers are too much trouble and also the fat between the skin and carcass should be scraped off.

At home: soak the carcass in a weak brine solution (¼ cup of salt per gallon of water) for a day or more in the refrigerator, if possible, or other cold place. Change brine to draw out the blood as

needed. Drain and dry. Young tender coots can be roasted like ducks if desired. For the older birds, flour the meaty pieces if desired. Brown slowly in a small amount of fat in a heavy frying pan or Dutch oven, turning to brown all sides. Season with salt, pepper, herbs and spices as you prefer. Add a small amount of liquid (1 to 2 tablespoons), using water, stock, milk, cream (sweet or sour), or tomato juice. Cover pan tightly and cook at a simmer over a low heat or in slow oven (250° to 300° F.) until meat is tender and well done. Turn the meat occasionally and add enough water to keep steamy. Total cooking time should be from 1½ to 2 hours. Remove cover when nearly done to make brown and crispy. Put the coot on a heated platter and serve with gravy made from drippings left in the pan. Then you have it, a one-way ticket to a gourmet's delight.

The butterfly was originally called the flutterby.

The average hunting bows of successful archers "weigh" about 55 pounds of energy to pull them the length of an arrow. The average distance deer have been shot is about 30 yards. The longest known lethal shot on a deer was 173 yards, in Utah. This is about the extreme range for a hunting arrow and illustrates its effectiveness.



The Conservation Commission's campground improvement program is near completion. This new shower and toilet building at Dolliver Memorial Park is larger than most and was designed for group camping. Other improvements include expanded parking and camping areas. Sixteen of the parks have the new shower buildings.

KNOW YOUR GEESE BEFORE YOU SHOOT!



CANADA GOOSE
AVE. WEIGHT 8-9 LBS.



ALL SUBSPECIES CLASSED
AS CANADA GEESE 2-5 LBS
ALL HAVE BLACK BILL,
HEAD, FEET AND A WHITE
CHEEK PATCH.



SNOW GOOSE -
WHITE HEAD AND
BODY - PINK BILL
AND FEET WITH
BLACK WING TIPS
AVERAGE WEIGHT
5 TO 6 LBS.



ADULT



BLUE GOOSE - WHITE
HEAD OFTEN RUST STAINED,
PINK FEET AND BILL - AVE.
WT 5 LBS. - IMMATURE
GRAYISH BROWN HEAD
OR FLAKED WITH
WHITE - DARK
FEET



IMMATURE



WHITE FRONTED GOOSE -
BROWN HEAD - WHITE
AROUND PINKISH BILL
AVERAGE WT. 5 LBS.



THE BLUE GOOSE - HIS NESTING
GROUNDS HAVE BEEN RELATIVELY
UNDISTURBED, WITH THE
PRESENT RESTRICTIONS AND
REFUGE SYSTEM HIS KIND
IS ON THE INCREASE.



R. Fliger

DUCK AND GOOSE HOURS STATE OF IOWA — 30 MINUTES BEFORE SUNRISE AND SUNSET SCHEDULE CENTRAL STANDARD TIME

		DAVENPORT		BURLINGTON		DUBUQUE		KEOKUK		WATERLOO		DES MOINES		OMAHA		SIOUX CITY	
		Noon	5:34	Noon	5:35	Noon	5:33	Noon	5:38	Noon	5:39	Noon	5:45	Noon	5:55	Noon	5:30
Oct.	8																
	9	5:38	5:32	5:39	5:33	5:39	5:32	5:40	5:36	5:45	5:37	5:49	5:43	5:59	5:53	6:01	5:30
	10	5:39	5:30	5:40	5:32	5:40	5:30	5:41	5:35	5:46	5:35	5:51	5:42	6:00	5:52	6:02	5:30
	11	5:40	5:28	5:41	5:30	5:41	5:29	5:42	5:33	5:47	5:34	5:52	5:40	6:01	5:50	6:04	5:30
	12	5:41	5:27	5:42	5:29	5:42	5:27	5:44	5:31	5:49	5:32	5:53	5:39	6:02	5:49	6:05	5:30
	13	5:42	5:25	5:43	5:27	5:43	5:25	5:45	5:30	5:50	5:30	5:54	5:37	6:03	5:47	6:06	5:30
	14	5:43	5:23	5:44	5:26	5:45	5:24	5:46	5:28	5:51	5:29	5:55	5:36	6:04	5:46	6:07	5:30
	15	5:44	5:22	5:45	5:24	5:46	5:22	5:47	5:27	5:52	5:27	5:56	5:34	6:05	5:44	6:08	5:30
	16	5:45	5:21	5:46	5:23	5:47	5:20	5:48	5:25	5:53	5:25	5:58	5:32	6:07	5:42	6:09	5:30
	17	5:46	5:19	5:47	5:21	5:48	5:19	5:49	5:24	5:54	5:24	5:58	5:31	6:07	5:41	6:10	5:30
	18	5:48	5:18	5:48	5:20	5:49	5:17	5:50	5:22	5:56	5:22	6:00	5:29	6:09	5:39	6:12	5:30
	19	5:50	5:17	5:50	5:18	5:50	5:16	5:51	5:21	5:57	5:21	6:01	5:28	6:10	5:38	6:13	5:30
	20	5:51	5:15	5:51	5:17	5:51	5:14	5:52	5:20	5:58	5:19	6:03	5:26	6:12	5:36	6:14	5:30
	21	5:52	5:14	5:52	5:15	5:53	5:13	5:53	5:18	5:59	5:17	6:03	5:25	6:12	5:35	6:16	5:30
	22	5:53	5:13	5:53	5:14	5:54	5:11	5:54	5:17	6:00	5:16	6:05	5:23	6:14	5:33	6:16	5:30
	23	5:54	5:11	5:54	5:12	5:55	5:10	5:55	5:16	6:01	5:15	6:05	5:22	6:14	5:32	6:18	5:30
	24	5:55	5:10	5:55	5:11	5:56	5:08	5:56	5:14	6:03	5:13	6:07	5:20	6:16	5:30	6:19	5:30
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	15	6:52	4:34	6:51	4:38	6:54	4:33	6:51	4:42	7:02	4:36	7:03	4:45	7:13	4:56	7:19	5:30
	16	6:53	4:34	6:51	4:38	6:55	4:33	6:52	4:42	7:03	4:36	7:04	4:46	7:13	4:56	7:20	5:30

(Note: The difference in time between stations should be taken into consideration in figuring the exact time at your particular location.)

WATERFOWL SEASON DUCKS, COOT OR MUDHEN

Open season October 15 to December 3, 1960, both dates inclusive. Entire state open. Shooting is allowed from one-half hour before sunrise to sunset except opening day when the shooting hours will be from 12:00 noon to sunset. All times Central Standard time.

DUCKS—Bag limit three in the aggregate of all kinds except not more than one Hooded Merganser and one Wood Duck shall be in-

cluded in such limit.

Possession limit six after first day.

Five American and Red-breasted Mergansers may be taken daily with ten in possession singly or in aggregate of both kinds. This is in addition to the bag limit and possession limits of other ducks.

Season is closed on Canvasback and Red Head ducks.

GEESE—Open season October 8 to December 16, 1960, both dates inclusive. Shooting allowed from

one-half hour before sunrise to sunset except opening day when shooting will commence at 12:00 noon, Central Standard time. Bag limit and possession limit five. Not more than two of the limit may be Canada geese or sub-species, or White-fronted geese. Only two of any of the above may be included in the limit. The entire bag may be made up of either Blue or Snow Geese or any combination of them.

COOT OR MUDHEN—Bag limit six, possession limit twelve.

WIL