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Careless Acts... Big



Photo by Stephen Henry

By Roy Hatcher, Protection & Utilization Forester and Stephen L. Henry, Information & Education

THE YEAR, OCTOBER 9, 1871 . . . The city, Chicago . . . swept by a \$168 million dollar fire, killing 250 persons and destroying 17,430 buildings. The credit has been traditionally placed on a lady, Mrs. O'Leary, her cow, and a lantern—kicked over in her barn by the cow.

The significance here is not whether this legend has any basis for truth, but upon certain factors which hold true today in large cities as well as rural Iowa communities. Most of the highly destructive fires begin with a small, careless act, which might easily have been avoided.

With emphasis on a need for fire safety recognition, the Fire Marshals Association of North America gave birth to Fire Prevention Day in 1911. By 1922, upon recommendation of the National Fire Protection Association, this "day" was expanded to the present Fire Prevention Week.

This year, October 5-11, marks the international observance of Fire Prevention Week. Commemorating the anniversary of

one of America's worst fires, this observance focuses attention on a continual need for awareness of fire safety at work, home, school and everywhere.

To promote this concern for the safe use of fire, the Iowa Conservation Commission has several cooperative fire programs administered through its Forestry Section.

SMOKEY BEAR PROGRAM

Each year Smokey bear costumes are used in 40 to 50 programs in schools, parades, fairs and other special occasions held by fire departments throughout Iowa. In addition to these programs, thousands of pieces of material on fire prevention are sent to the students of various school systems. This Smokey bear material is in the language of the elementary grade level. In addition, the National Junior Forest Ranger Program is handled in Iowa by the Protection Forester's office located in Ames. This office sends out approximately 8,000 Junior Forest Ranger kits to children upon request.



STATE LAND

The Forestry protection plans refuge areas. For fire department programs, which provides fire tool who in return pr state lands in the cache consists shovel, fire swatte poster materia throughout our supplied by the Conservation Co caches to all state some other state

Big Fires!



Conservation Commission Photos

STATE LAND FIRE PREVENTION PROGRAM

The Forestry Section has established fire protection plans on state parks and some state refuge areas. Foresters develop, with various fire departments, cooperative agreement programs, whereby the Forestry Section provides fire tool caches to these departments who in return provide fire protection to the state lands in their fire district. This fire tool cache consists of backpack pumps, axe, shovel, fire swatters and rakes. Fire prevention poster material signs are maintained throughout our state parks with materials supplied by the Forestry Section. The Iowa Conservation Commission provides fire tool caches to all state parks, state forest lands, and some other state areas. A few fire pumper units

are also located in the heavy-use parks and state forest areas. A fire lookout tower is located at Yellow River State Forest in eastern Iowa, and is manned during times of high fire danger.

EXCESS PROPERTY PROGRAM

Each year the Forestry Section acquires through the U.S. Forest Service, a federal government agency, excess property for use by fire departments as wildland fire control equipment. The equipment consists basically of various types of trucks, which can be converted into brush fire fighting units, tankers and equipment trucks. In addition, fire departments occasionally acquire portable generators and air compressors for their units. The Forestry Section has provided over \$2,500,000 worth of excess military equipment to fire departments in Iowa since 1965.

RURAL COMMUNITY FIRE PROTECTION FUNDS

Some rural Iowa fire departments have received over \$117,000 in Federal matching funds to buy equipment under a recently funded act, administered by the Forestry Section.

The Rural Development Act of 1972 authorized the funds which were available for the first time in 1975. Priority was given to projects which serve areas of greatest need and are multi-community in nature. Only communities under a population of 10,000 and having the local matching funds on hand were considered. Hopefully, the future will bring growth and expansion to this program.

FIRE PREVENTION TRAINING

The Iowa Conservation Commission, in cooperation with the Fire Service Extension office at Iowa State University, provides wildland fire training to I.C.C. personnel on state lands and makes this training available to fire departments. The U.S. Forest Service also provides technical assistance on the training program.

Ultimately, a cooperative fire safety role is shared by everyone when we use fire for daily living. Smokey said it years ago when he stated, "Only You Can Prevent Forest Fires" and fires at work, home, school and everywhere.



100 Million Walleye?



By David Moeller, District Fisheries Manager

Photo by Roger Sparks

THAT'S RIGHT, the Fisheries Section stocks over 100 million walleye fry into Iowa lakes, reservoirs, and streams every year. Why do we manage for walleye? Why do we stock them? Why so many? Why don't we stock walleye in artificial lakes and farm ponds? Let's take a look at the answers to these questions.

The walleye is native to the natural lakes of northern Iowa such as East and West Okoboji, Clear Lake, and Spirit Lake. The walleye is also native to the Mississippi River and the upper reaches of many of our major inland rivers such as the Cedar, Des Moines, Shell Rock, and Raccoon.

The walleye is managed because it is a major predator, particularly in our large natural lakes, and plays a very important role in maintaining a balanced fishery. Walleye prey on bullheads, yellow perch, crappie, and other panfish. Without this predation, the panfish would overpopulate and stunt, causing poor-quality fishing. The

walleye is also highly prized and sought by many Iowa anglers. He is a strong fighter and on the table, his flesh is rated "supreme."

To answer the question of why we stock walleye we must look at two things — the spawning habitat walleye require and the spawning habits of this prized fish. Walleye spawn in the early spring in shallow water over rocky reefs, gravel and sandy areas that are free of silt. Unfortunately this habitat is limited, even in our best walleye waters such as West Okoboji, Spirit Lake, and Clear Lake. The second factor involves a behavioral characteristic of the walleye. During spawning, the adults immediately return to deeper water and provide no care or protection to the eggs while they incubate. Bullheads, yellow perch, yellow bass, and other species common in walleye waters delight in eating the highly nutritious and unprotected walleye eggs. So, a very high percentage of the eggs that are naturally spawned are eaten by other fish.

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Egg loss also occurs in our rivers where silt has an additional detrimental effect on the eggs. The spawning period in the early spring is when our rivers generally carry a heavy silt load. Silt deposited on the eggs suffocates and kills them.

So, walleye eggs that are spawned in our lakes and streams have an extremely small chance of even hatching. In order to compensate for this loss we stock walleye fry to maintain the population at optimum levels.

This past May, 70 million walleye fry were stocked in natural lakes, 20 million into Rathbun and Coralville Reservoirs and 10 million into the upper portions of our major inland rivers. Why so many? The reason, again, is predation. Walleye fry hatch with a yolk sac that provides nourishment to the "baby walleye" for two days. The fry must be stocked before they are two days old so they can start feeding on natural food in our lakes and streams. The fry at this stage are only 3/16 inch long, helpless and easy prey for perch, crappie, bluegill, white bass, and yellow bass. But when we stock walleye fry by the millions, the small percentage that do survive will be sufficient in number to bolster the adult population, thus adding walleye to your stringer and ensuring a balanced fishery.

The Iowa Cooperative Fishery Research Unit at Iowa State University, in conjunction with the Iowa Conservation Commission, conducted an extensive study on Clear Lake from 1947 to 1958. During that period, fry were stocked in Clear Lake every other year. Young and adult walleye were sampled yearly and a few scales were removed from each fish. By "aging" the scales it was determined what year each fish started its life. The majority of fish sampled began their life during those years when walleye fry were stocked and few fish were sampled that began their life when no walleye fry were stocked. The study revealed that of every four walleyes caught by fishermen, **three** were stocked from our hatcheries as fry.

How many fry should be stocked per acre of water to maximize the number of walleye the lake or stream can support? Well, we know that stocking 5,000 fry per acre does substantially boost walleye population in our natural lakes. But would 3,000 fry per acre give the same results, or would 10,000 fry per acre do a better job? Another study was

conducted on Clear Lake from 1958 to 1974 to determine the "ideal" stocking rate for walleye fry. During this period walleye fry were stocked at rates ranging from 500 to 15,000 fry per acre. The study did not determine a magic number as the best stocking rate, but it did find that stocking rates of 10 and 15 thousand fry per acre did produce the strongest year classes. It also showed that stocking less than 2,500 fry per acre did not substantially boost the adult walleye population.

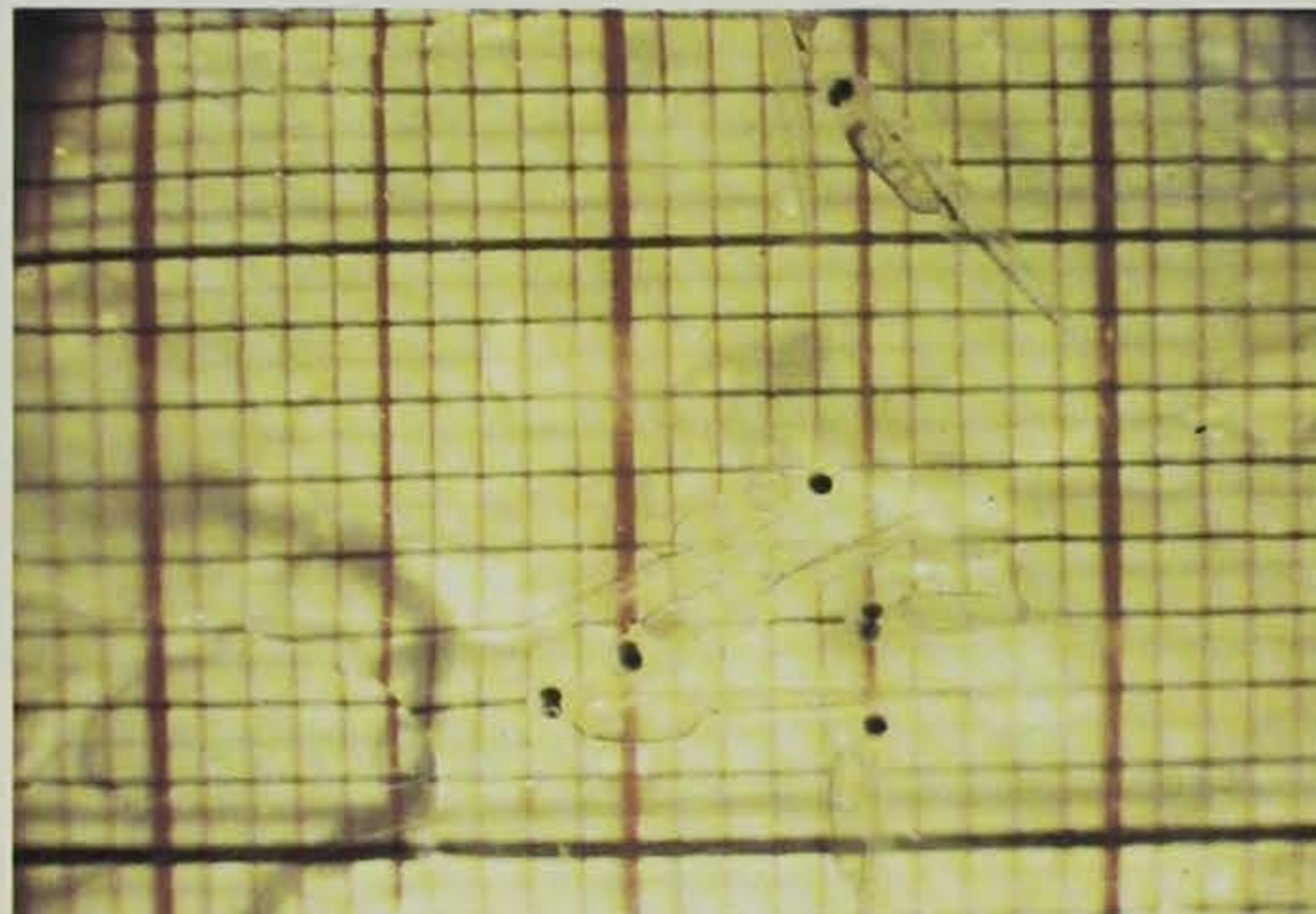
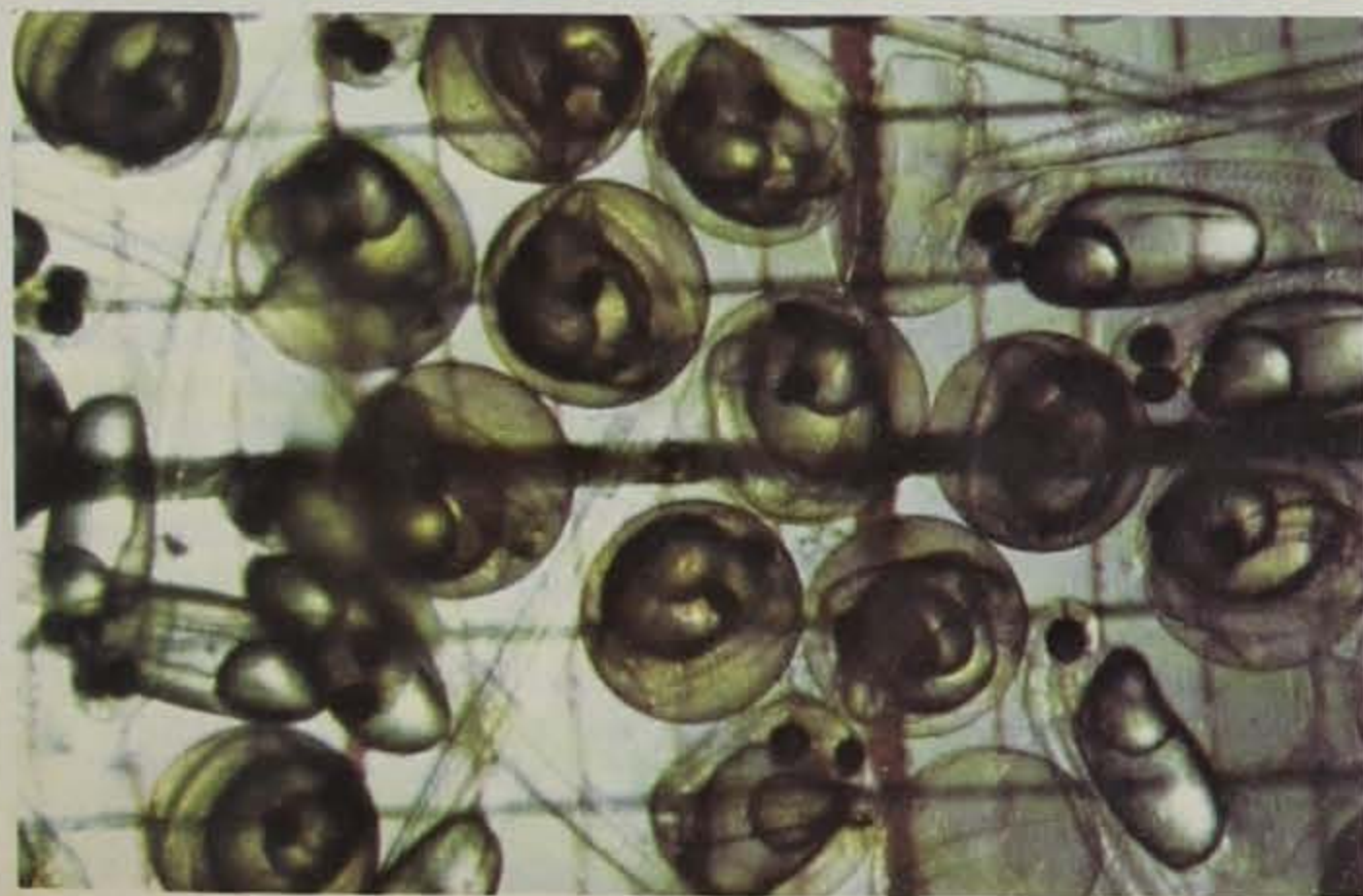
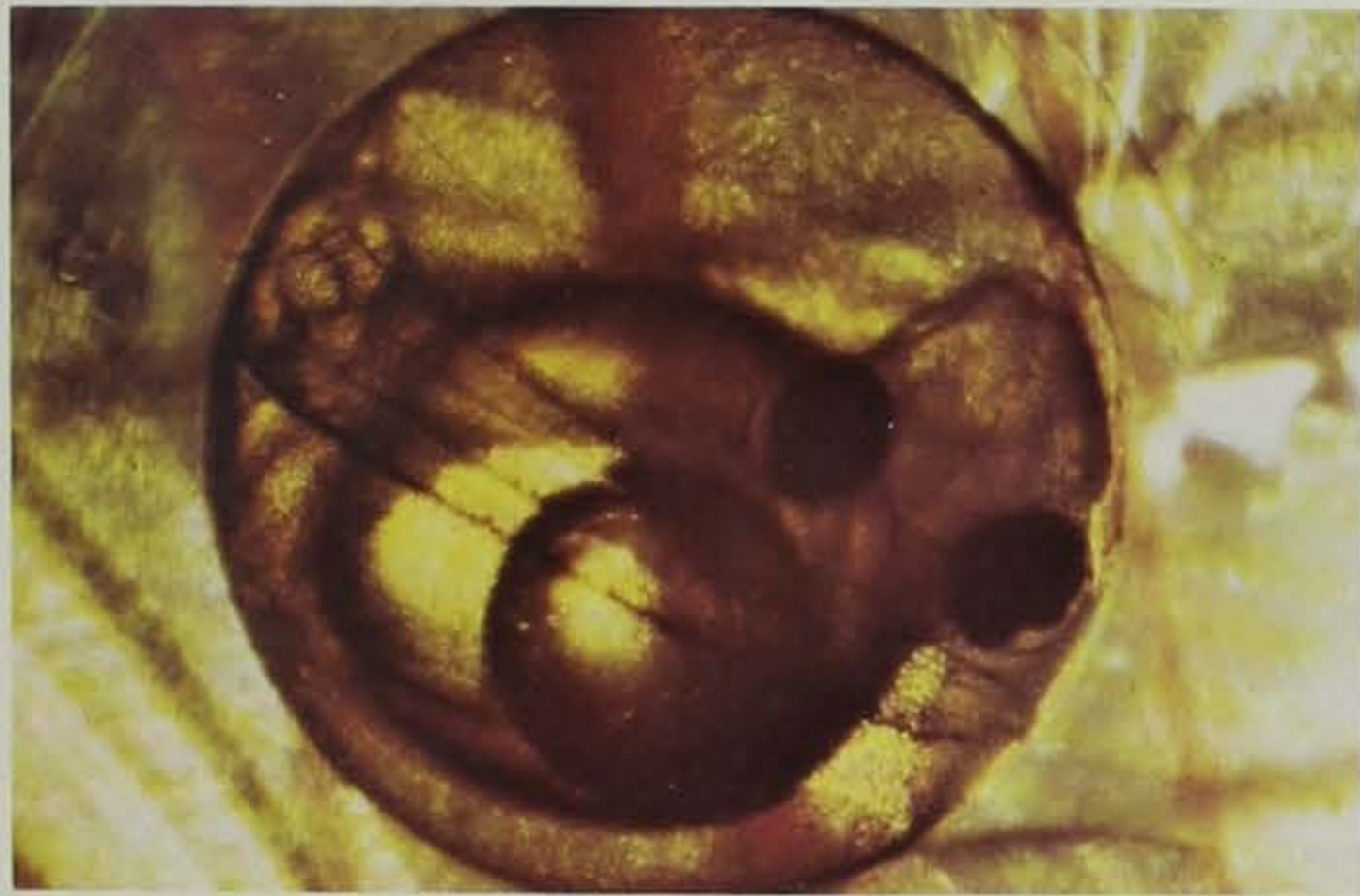
There are several other factors that enter into determining the success of any fry stocking. These include food conditions when the fry are stocked, the abundance of fish that will prey on walleye fry, and the condition of the fry when they are stocked. These are factors the management biologist considers when he determines what stocking level will do the best job on each lake and stream he manages.

Now let's look at why we stock certain lakes and streams and not others. We know that fry stockings benefit walleye populations in our natural lakes. We also know that walleye stockings in our large reservoirs such as Rathbun are successful and fine walleye fisheries have developed there. We are presently conducting a research project on the Cedar River to evaluate how effective fry stockings are in maximizing walleye populations in our inland rivers.

What about artificial lakes and farm ponds? Walleye fry have been stocked in many artificial lakes and ponds in Iowa in past years. Nearly all of these stockings have been unsuccessful. The few successes were in impoundments larger than 500 acres. The majority of Iowa's artificial lakes and farm ponds are best suited for largemouth bass, bluegill, and catfish. The inability of the walleye to compete with the bass and bluegill is probably the main reason we have been unable to develop walleye populations in our artificial lakes. Based on this experience, we do not stock walleye fry in artificial lakes less than 500 acres and recommend that farmpond owners do not stock walleye.

The State hatcheries at Spirit Lake and Clear Lake produce all the walleye stocked in Iowa waters each year. Observing this process is interesting and informative. Both hatcheries are open to the public and we encourage you to stop in during early April next spring and observe this important facet of walleye management. □

Photos by the Author



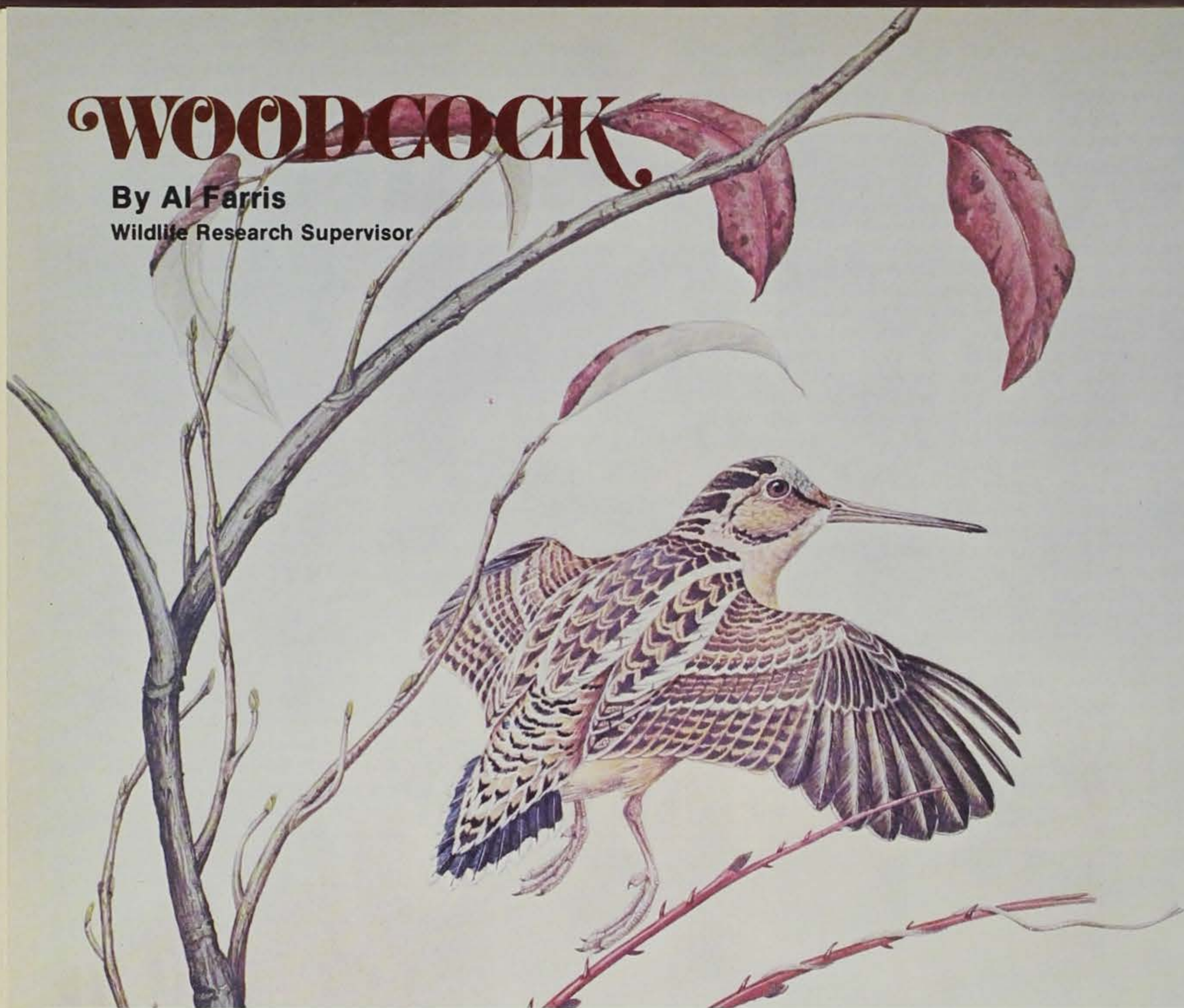
Left, above: Walleye egg prior to hatching. Left, below: Newly hatched fry. Above and below: Size of newly hatched walleye fry.



WOODCOCK

By Al Farris

Wildlife Research Supervisor



PAINTING BY JIM LANDENBERGER

"Timber-doodle", "bog-borer" or just plain woodcock—this bird is not well known to most Iowa residents. However, there Chuck and I were, standing at dusk on a beautiful spring evening, listening for the characteristic "peenting" call of the displaying male. Red Haw State Park was as pretty as always in the spring and the fishing was picking up as well. But we were not thinking of fishing or spring flowers this evening. What we wanted was to locate the displaying woodcock and get close enough for a good look.

As we stood on the road in the dusk we heard the first of a series of evening aerial singing displays. We could just barely see the bird as it rose above the tree tops in a crazy zig-zag upward flight. Each time the bird rose from the ground into the air we moved closer to the clump of trees where the woodcock would land when it returned to the ground. Finally, we were trying to stay motionless on hands and knees under a tree when the woodcock lit within 10 feet of us. It was a great way to spend a spring evening.

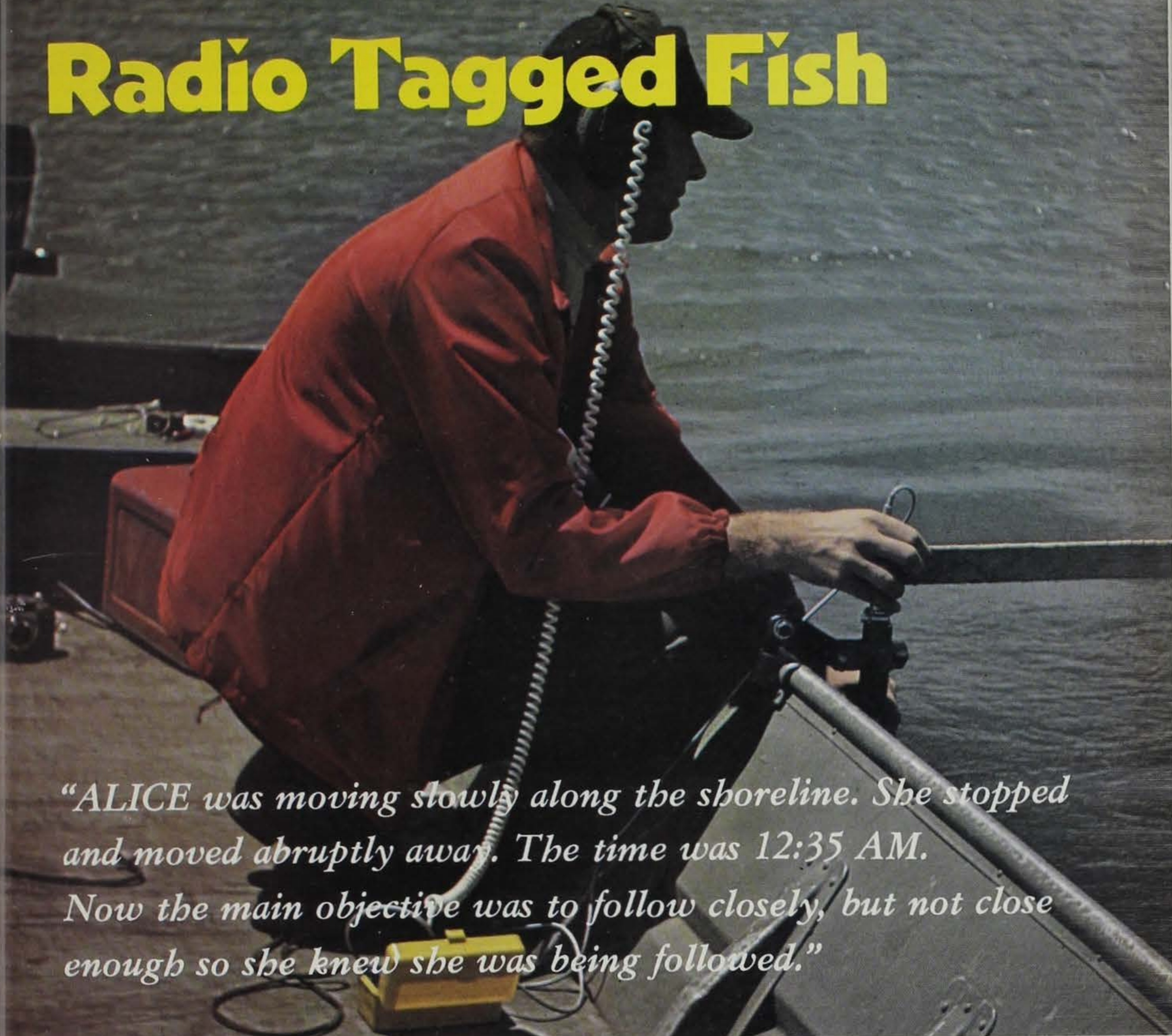
Although Iowa is on the western edge of the woodcock breeding range in the United States, some of these fine game birds do nest in our state. Woodcock nesting is most common in the eastern half of Iowa, although nests and broods have been found in Harrison, Pottawattamie and Monona counties in the Missouri river bottoms. In the eastern part of the state woodcock nests and young have been found from Lee county in the south to Alamakee in the north and as far west as Lucas, Hardin, Floyd and Mitchell counties. The nests are established from

April through June and are usually located in open wooded areas. The nest is on the ground usually in a slight depression and not often well concealed. The mottled color pattern on the back of the female is extremely good camouflage and completely hides the nest when she is sitting. Ordinarily there are four eggs to a nest and incubation begins after the last egg is laid. The female leads the young away from the nest soon after hatching and broods them until they can fend for themselves. During their life, woodcock feed almost entirely on animal matter. In fact, the bulk of their diet is composed of earthworms. Because of this heavy dependence on earthworms, most woodcock are found in areas where good earthworm populations exist and the soil is damp so the long bill can probe the ground for worms.

During the fall, birds from northern breeding grounds migrate through Iowa on their way to the wintering grounds in Louisiana. This migration takes place from late September through late November. At this time hunters are liable to flush woodcock from thick brushy areas where moist soil is present. The woodcock, which has been a legal gamebird in Iowa since 1972, can provide some challenging early season action for bird hunters. The season starts September 13 and continues through November 16, 1975. Woodcock are sporty birds and tricky targets with their erratic flight through thick cover areas. Quail and grouse hunters can "warm-up" their dogs and shooting eye by spending some time in September and October hunting the elusive timber-doodle. A brace of woodcock in the frying pan is also a great way to kick off the fall. □

JFLANDENBERGER

Radio Tagged Fish



"ALICE was moving slowly along the shoreline. She stopped and moved abruptly away. The time was 12:35 AM. Now the main objective was to follow closely, but not close enough so she knew she was being followed."

**By Larry Mitzner,
Fisheries Research Biologist**

Photos by the Author

THE QUOTATION READ like something from a mystery novel, but was actually on entry in a field notebook used to compile information on the movement and activity of a grass carp.

Grass carp were recently introduced into Red Haw Lake, near Chariton, to study their effectiveness in controlling massive beds of noxious aquatic vegetation. Grass carp are a native of eastern Asia and their habit of consuming large quantities of water plants has great potential for biological control of nuisance aquatic weeds that plague many Iowa lakes. Unlike native fish, little was known about the behavior of grass carp in impoundments similar to Red Haw.

The method of determining movement and behavior of grass carp was possible by the development of miniaturized sonic transmitters. Until recently sonic telemetry was possible only for large animals such as sharks and whales, but improved design and miniaturization decreased the size of the transmitter, while increasing the signal strength and longevity of operation. Newly developed models are about 2 inches by 1/2 inch with signal ranges to 1/2 mile and power life of approximately 300 days.

At Red Haw Lake miniature radio transmitters which send out sound waves were surgically implanted into the abdominal cavity of



several fish. An underwater antenna, called a hydrophone, sensed the sonic impulses which were transferred through the water to an electronic receiver resulting in beep-like signals which could be monitored with a signal amplifying headset.

The hydrophone was aimed at the signal, and the location of the fish determined by finding the direction of the strongest beep. The listener

Continued on Page 15



Photo by Ken Formanek

A DUCK STORY

By Bob Runge

Late September. Another summer won, another summer lost. A fish here and there, a boot full of water, a dropped ice cream cone, little boy tears, an amusement ride - summer breathes its last and gives way to fall.

■ It was a watermelon autumn, sweet with blue skies and crisp with morning chill. Suddenly somewhere on a marsh up in Canada, the ducks of the year wondered why they felt an urge to fly south. Just as suddenly

somewhere in an office far to the south, a man felt an uneasy stirring as he remembered his decoys stashed in the basement.

The old man was sitting in the sun, much as an old dog will do. That heavenly comfort

filtered through the trees and painted him and the bench beside his tool shed. He eyed the young neighbor boy who had just arrived holding his duck call, waiting for approval. The old man nodded and the youngster ripped into a mallard highball. A bluejay and a distant dog sounded their disgust at the call but the old man smiled.

■ On a marsh far to the north a drake mallard exploded into the air, gained altitude and began flying huge circles around the pothole where he had spent much of the last two months. He would not return this year.

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Others of his kind joined him in the air and they began the first step of a long flight to the south. This journey would carry them many miles through many days the very first of which the birds came upon a much larger marsh where thousands of waterfowl had gathered. Here the drake would linger a day or two always preferring the company of others of his kind. One morning a group of about forty mallards left this huge staging area for points south. Our drake went with them.

■ Riding down in the elevator the office worker felt tired but pleased that the weekend offered him a chance to check his hunting gear. As he descended and walked to his car he made a mental inventory. The decoys were new and very expensive as was his selection of shotguns. He was proud of his belongings and cared for them well. Price was no problem to this sportsman and he was a fine judge of quality. A waterfowler of some twenty years' experience, he had every advantage money could buy.

Having reached his home in the fashionable suburb, he got out of his car and walked over to the kennel calling his dog. A beautiful black lab came over to him, not to wiggle and grovel at his master's feet, but to stand proudly at his side. After rewarding the dog with a gentle word and pat the man went inside.

The decoys, new last year, were costly but very effective. The man took them from the bags and examined each one. All were in fine condition. From a drawer he took the lanyard of calls. He spent an hour going over the equipment before other matters drew his attention and he went upstairs. Everything was ready for opening day.

■ Across the city the retired laborer pattered around his tool shed. The decoys he had collected over the years were of many different kinds and sizes. Paint had chipped away from some. Others were discolored and some were even missing the tip of the beak. It wasn't a top notch collection but then it never had been. Money had never been plentiful to the old man who reflected to days gone by as he stood there at his workbench.

Many years before he'd had a son much like himself for whom he'd baited hooks and cleaned game. A twist in life had ended that and now the memories left behind flashed in his mind like many old photographs, pictures but nothing more. The young Davis boy had been a God-send. Fifteen years had passed since he'd hunted the wild ducks. Then that day, two seasons ago, when the Davis boy had spied the decoys in the shed. Old stories lived again. The excitement of the hunt returned. Once again the aroma of wild duck prevailed in his wife's kitchen, for over the years the old man had learned his hunting lessons well.

He found himself as anxious for opening day as when he'd been a young man. How strange this passing of time was. He'd hunted his first ducks on the small marsh which took up a corner of his father's farm. That was over sixty years ago and he'd ridden to the marsh on horseback. There was the life of the young boy, the young married man, and now this new life. They were all so different and yet they were all his.

□ Moving ever southward, the drake mallard had winged his way into the United States of America. He hadn't noticed the boundary line. Now in his prime, he was three years old. His very first migration had nearly been his last but the shots had somehow missed. Since then the duck had been cautious. This year he had spotted some hunters the third day out and had avoided them. If anything was out of place below he had learned to stay away.

By now the mallards were really feasting. The delicious cultured grains of man were everywhere and the birds spent several hours a day in the picked fields often loafing on small creeks or puddles away from the large marshes. A few more kernels of grain in the evening and back to the marsh after sunset. Only a storm front would push them further south now. October was taking its first unsteady steps.

■ Gleaming in the floodlit driveway, a new four-wheel drive vehicle was loaded with decoys, rain gear, shotgun and other hunting equipment. The man had selected his superposed 12-gauge, choked full and modified. For the lab, the morning promised excitement. The guns and other things, the curious fake ducks, this meant hunting and action, action, action! Barely able to settle down, the dog entered the back of the vehicle on command. The man started the engine and left for the marsh. Some fifty miles away, he had allowed himself two hours for the trip. His destination was a natural marsh about a mile in length and a quarter mile wide. Although several people had permission to hunt the area, all seemed to be good sportsmen and they all enjoyed quality hunting. Thirty minutes before legal time he was back in the blind, the decoys all in place. He glanced at his watch and then up to the sky looking, listening and longing for whistling wings.

■ Pancakes from scratch, hot syrup, toast and honey, what a breakfast thought the boy. He considered the old man and lady as an extra set of grandparents. The old man took his coffee steaming and black and when he was done they left. Out on the road his ten year old car

performed as well as ever and soon they reached the marsh. They drove by the brand new four-wheel drive vehicle which belonged to a man they'd never met. He hunted this end and they hunted the other. On down the lane, around the bend, up a small grade, they left the car near a tree and walked into the field. A half an hour later the boy had put out the decoys, under the watchful eye of the old man. The two then huddled in their blind as a cold wind had picked up, covering the other early morning sounds of the marsh.

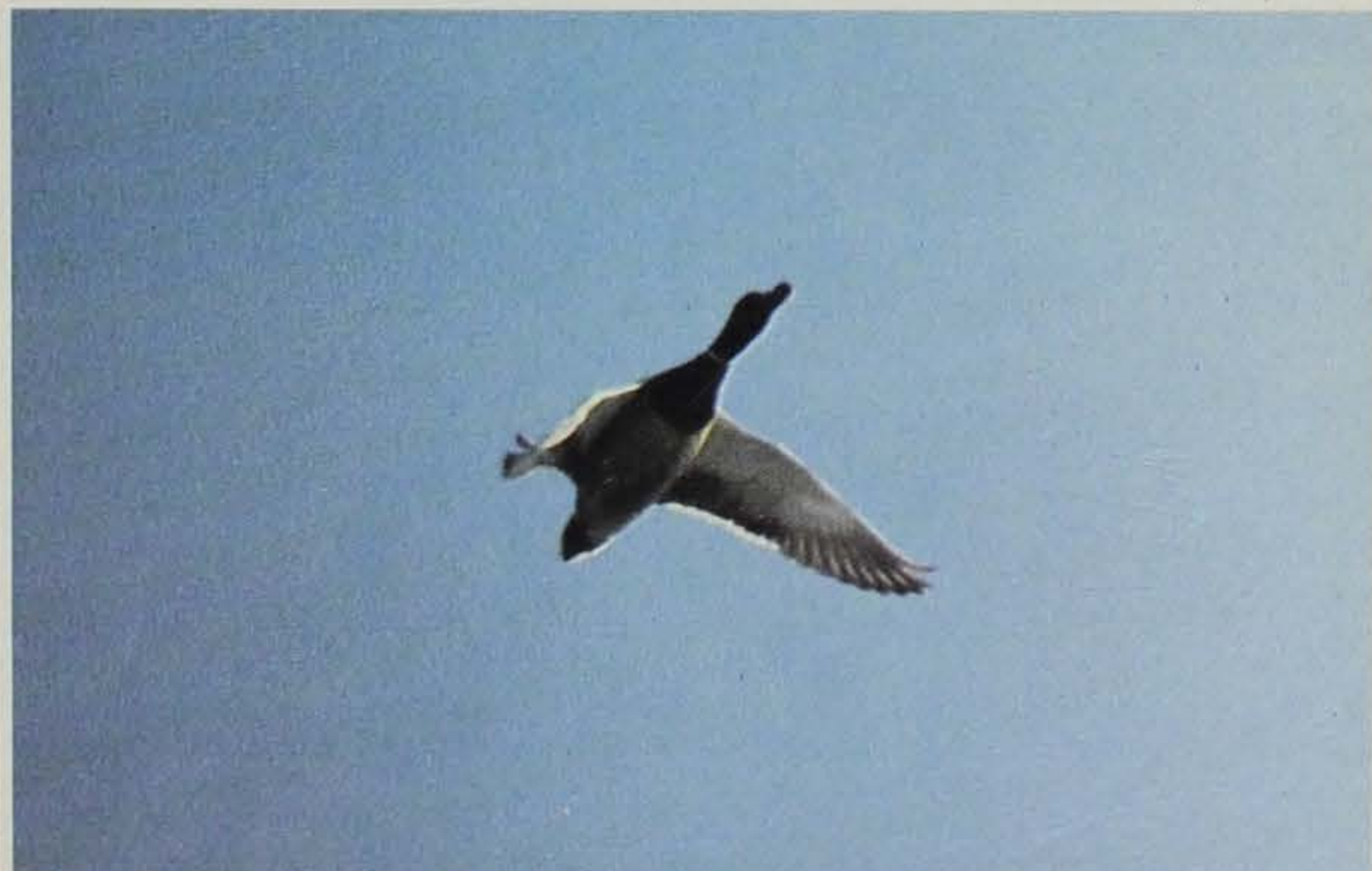
■ The drake mallard hadn't seen a hunter for several days. That early snow had pushed them further down into the States but at least here the marshes were empty of man. The nice mile-long slough they had picked last night was perfect in every way. Pondweed, smartweed and other vegetation was abundant with nice open water areas throughout. There was even a millet growing here and the ever present grain fields on all sides. Other ducks were chuckling and quacking around the marsh as morning approached. Soon they would get up and move around.

The wind seemed to hold the ducks down a little longer than normal. When the drake took to the wing the sun was in plain sight on the horizon. He swung out and around the marsh. He eyed a group of ducks near a large open water area and flew over them.

■ The old man spotted the drake working his decoys. He motioned to the boy to take him if he came within range. Around and around he flew, just a little too high. Way out in back of them he went, then out in front. Sweee, sweee, sweee his wings called to them when he passed directly over the blind. All at once he left them and flew directly away. Moments later they heard a single shot down the marsh.

■ The black lab retrieved the greenhead his master had shot and laid it in the blind at the man's feet. The duck had worked the decoys well and at last just pulled up right in front of the blind. The man looked at the duck fondly almost reverently, and turned his gaze to the sky. □

Photo by Jerry Leonard





Photos by Ken Farmanek

BACKPACKING IN STATE FORESTS

YELLOW RIVER FOREST

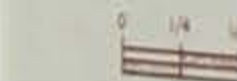
The Paint Creek Unit of the Yellow River State Forest is used as a year around recreation area. It is basically timbered, has extremely steep terrain of the limestone bluff variety and is bisected by two clear flowing trout streams. Access to the Allamakee County area is marked from State Highways #76 and #364 plus county blacktop (H road) winding west from Harpers Ferry. The towns of Lansing, Waukon, and McGregor are about equal distance from the area.

A Backpack Trail (BP) has been developed in the forest with the hardy naturalist in mind. It is, however, segmented into five alternate trail patterns to allow shorter walks through selective areas.

HIKING TRAIL
PAINT CREEK
YELLOW RIVER

TO WATERVILLE

TO WATERVILLE

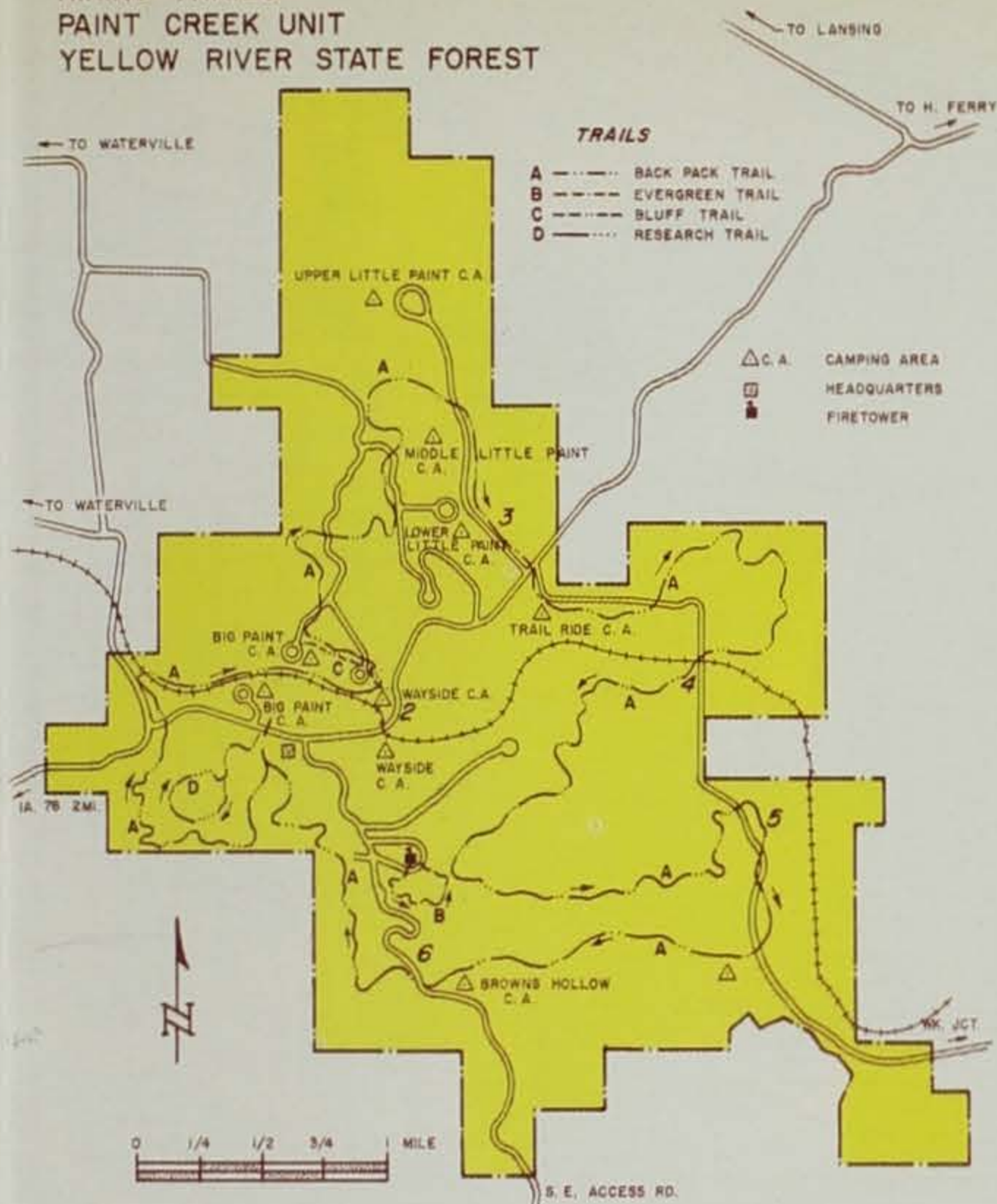


The trail begins at headquarters and with an occasional transects the ni available at the 20 miles of trail forested hills and

The initial segment many tree species plantings from w timbered block t Paint Creek Brid bed adjacent to t This camping are or cooling the fee break. The ways stopping point.

The trail leaves route of the Bluff areas situated on species are mark Paint Creek Ove into a small stan across one of 57 an established co the trail around planted about 1 again crosses an salvage remainin forest regeneratio narrow valley tha and exists into t point #3) where t camping areas an during flood peri ride facility wher log buildings. Th uphill to an area control. The fore turkeys, deer, and

HIKING TRAILS
PAINT CREEK UNIT
YELLOW RIVER STATE FOREST



The BP trail meanders down the access trail managed as a snowmobile trail, to alternate stopping point #4 on the banks of Big Paint Creek. The backpacker shares the next part of the trail with horseback riders, through lands leased for agriculture crops to farmers with grain left for winter wildlife and bird feed, to a grassed slope. The trail continues through a rejuvenated area that is highly susceptible to erosion. The gulleys are healed with erosion control ponds and plantings and grass protects the fragile slopes. The BP trail moves west to a cool northern exposure, through a hardwood stand of timber to the summit near the fire tower. This area produces edible berries, nuts and acorns and has a variety of trees in the oak-hickory association. Walnut trees are abundant on the lower bench. They are valuable for their nuts and quality woods. The butternuts show symptoms of a disease that threatens the species.

A short alternate hike up the fire tower access road will exit at the fire tower. (The Evergreen hiking trail may be of interest here and will return the hiker to the BP trail after an opportunity to see many uncommon species of conifers marked with tree names.) A downhill trek returns the hiker to the Paint Creek Valley on the Waukon Junction access road or alternate stopping point #5. The trail follows the road to the right into Browns Hollow where primitive overnight facilities may be used. This hollow has a dense stand of thriving young walnuts. A small wayside area is located at the south end of the hollow, stopping point #6 and is adjacent to the woods road, which carries traffic back to the headquarters. A free flowing spring gushes out of the road side here. The BP trail follows the access road to an S curve which winds left into a fine hardwood timber that was harvested in 1974 & 1975, through a small cleared meadow seeded to grasses and legumes and back into a timber tract to the starting point.

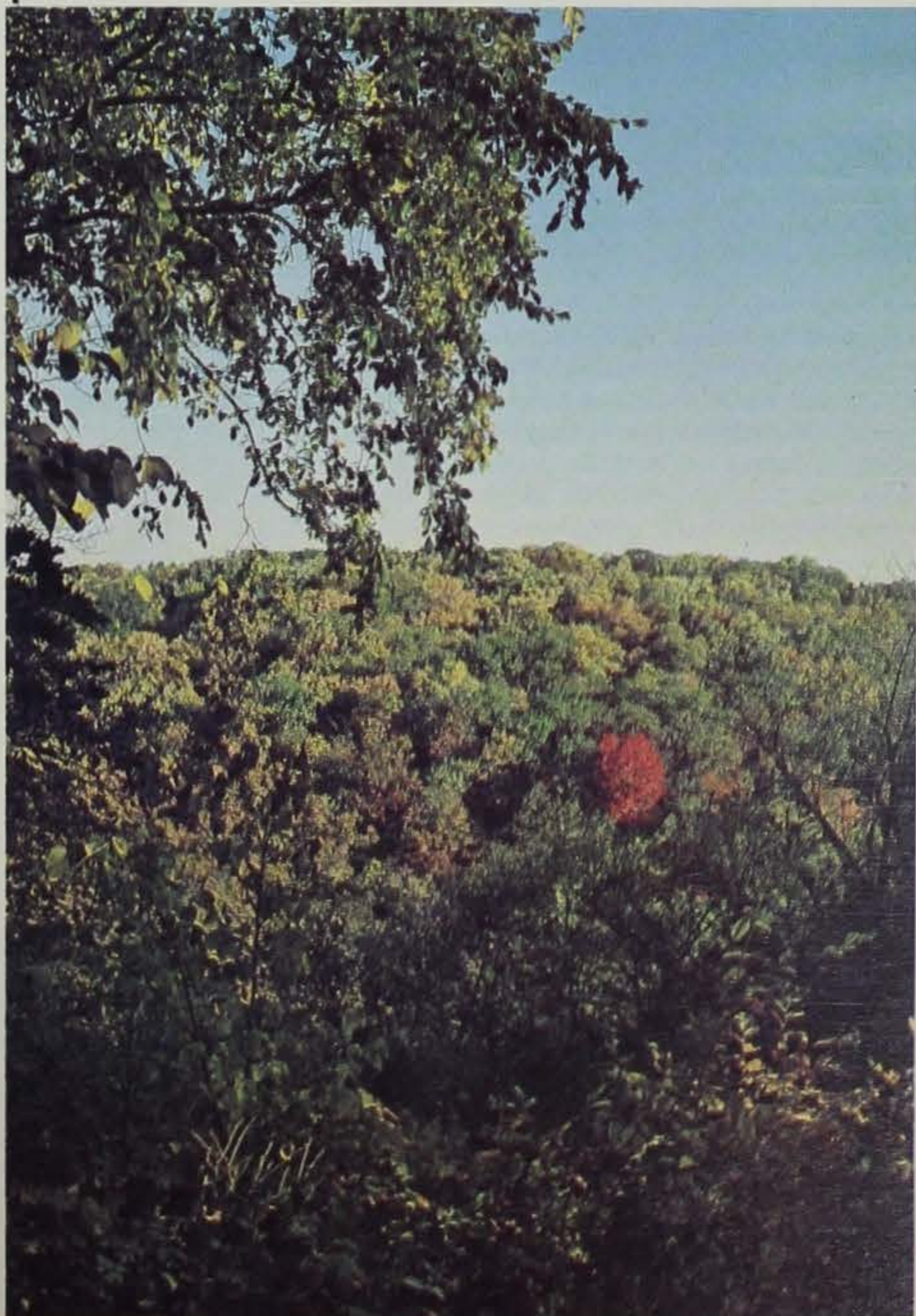
A hike on this trail or any of its segments should be rewarding any season of the year. It was planned to thoroughly acquaint the user with the area and have 20 miles of quality experiences.

Continued next page

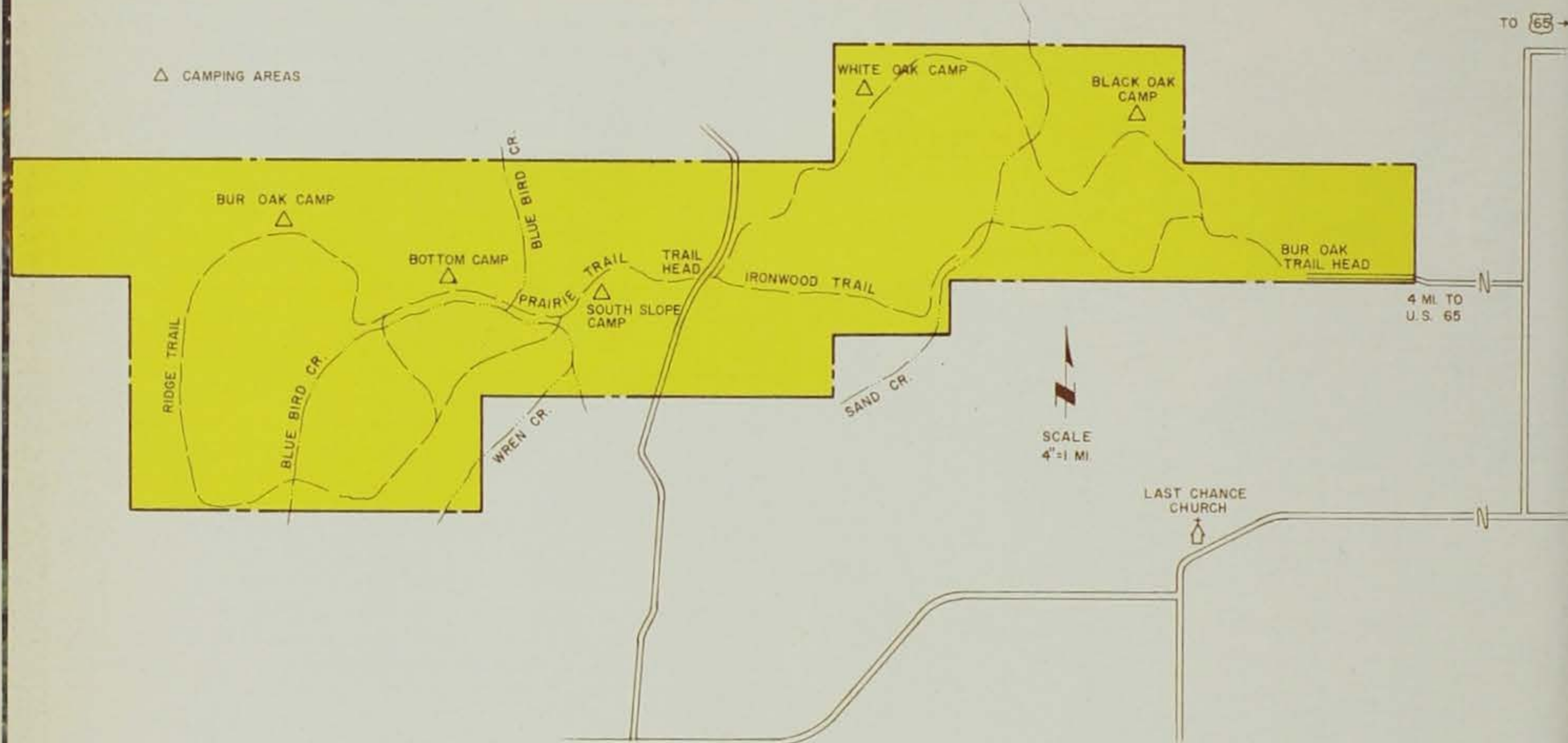
The trail begins at the information area adjacent to the forest headquarters and is identified by brown signs with yellow letters (BP) with an occasional arrow sign planted to provide guidance. The route transects the nine areas with overnight camping facilities. Water is available at the trail beginning and headquarters of the forest. About 20 miles of trail allow one to leisurely or hurriedly traverse rugged forested hills and valleys of a very scenic area.

The initial segment of the trail (BP) is quite undisturbed. It features many tree species in all stages of succession including larch and pine plantings from world-wide seed sources. The trail descends the mature timbered block to enter a valley at the county access road around the Paint Creek Bridge at the Waterville access, down a vacated railroad bed adjacent to the creek to an area developed for overnight camping. This camping area is supplemented by an area across the road. Fishing or cooling the feet in the creek on this segment may present a welcome break. The wayside is marked on the map by #2 and is an alternate stopping point.

The trail leaves the wayside, backtracks a stone's throw and joins the route of the Bluff Hiking Trail to the top of two developed overlook areas situated on sheer limerock bluffs. Some common hardwood tree species are marked on this segment and camping is permitted on the Paint Creek Overlook. The BP trail continues northerly on the road into a small stand of hardwoods, guides right down the clearing area across one of 57 wildlife and erosion control ponds on the unit toward an established conifer planting area. A firelane serves as the route for the trail around red pines, white pines, jack pines and some spruce planted about 1948 on abandoned agriculture fields. The BP trail again crosses an access road into an area that was clear-cut in 1974 to salvage remaining values of an oak wilt infection and allow healthy forest regeneration. The BP trail continues downhill on the road to a narrow valley that is occupied by many primitive shade growing plants and exists into the Little Paint Recreation Area (alternate stopping point #3) where the stream is well stocked with trout. Three overnight camping areas are available and are easily accessible by vehicle except during flood periods. The BP route now enters the access road to a trail ride facility where other camping areas are maintained to two rebuilt log buildings. The BP trail follows a spring fed, rocky stream bed uphill to an area selectively managed for forestry, wildlife and erosion control. The forest and game plantings are intended to attract grouse, turkeys, deer, and small game provide winter food in the food patches.



BACKPACKING TRAILS STEPHENS STATE FOREST



STEPHENS FOREST

The Stephens State Forest, located about one hour's drive south of Des Moines on U. S. 65 offers an opportunity for hiking, backpacking, cross-country skiing, snowshoeing and related activities. Many miles of trails and roads are available in the Lucas and Whitebreast Units located southwest of the town of Lucas. Also, a backpacking trail has been established and marked on the Whitebreast Unit. The trail is of sufficient length to provide a two or three hour hike one way. Campsites are provided for those wishing to spend a night out. Alternate trails, some of which are unmarked, provide variety or a challenge for the experienced hiker.

Two trail heads are provided. The Bur Oak trail head may be inaccessible under some road conditions. To reach the trail, travel approximately four miles south on Highway 65 from the junction of Highway 65 and 34 at Lucas. Turn west on Lucas County road M for three and one-half miles, then one-half mile south, and three-fourths of a mile west on a graveled lane.

Some Things to Look for Along the Trail

Wild turkeys are common in the area. You will want to walk quietly and keep a sharp lookout for this wary bird. You should have a chance to see one or more during your visit. Less likely to be seen is the white-tailed deer as they keep to cover during the day. Perhaps at evening you may encounter them grazing in the open meadows. Some game birds you will meet are bobwhite quail and pheasant. Some smaller animals to be found in the area are red and gray squirrels, raccoon, rabbits, woodchuck, muskrat, skunk, red and gray fox, coyote and others. Depending on the season of the year, many songbirds, predatory birds and others may be seen.

As you leave Bur Oak Trail Head, the trail passes through crop fields of corn, hay or perhaps other crops. They are planted by local farmers to provide winter food and cover for wildlife. The farmer receives a share of the crop for his effort.

Entering the forest, you may notice that the trees are small. You are walking on land that not too many years ago was cleared for crops and pasture. The forest has regrown since. The larger trees were not cleared and are older than the rest.

Before going much farther, you will pass a fence corner which is at the boundary of the forest, and soon after that you will arrive at Black Oak Camp Site, so designated for the predominant species in the forest around. Continuing, the trail descends into the bottom and crosses Sand Creek, named for its uncommonly sandy character. Note the transition from oak and hickory timber of the uplands to the walnut, cottonwood and ash of the bottomland. The trail ascends the ridge opposite through forest and open field and crosses a graveled road to the head of Prairie Trail. Prairie Trail follows the ridge for some distance before descending into Bluebird Creek bottom. After crossing Bluebird Creek, the trail follows a series of bottom fields in which may be seen many of the grasses and forbs that are plants of the tallgrass prairie that once covered large areas of the midwest.

Ascending the ridge again, the trail ends at Bur Oak Camp Site in the shade of large bur oak trees that once graced the farmstead that was located here.

The Ridge Trail leads south from Bur Oak Camp through open fields to the south boundary, then cuts east to cross Bluebird Creek and ascend to the ridge opposite. The trail follows this ridge and presents two options for returning to Prairie Trail.

Ironwood Trail leads through open fields then into oak-hickory timber. As the trail descends into the bottomland, many ironwood trees are found growing on the slope. The trail follows Sand Creek and rejoins Bur Oak Trail near Bur Oak Trail Head.

Rules

1. Camp at one of the designated campsites.
2. Build fires in fire rings provided for that purpose. No open fires, please. Use of dead wood is permitted.
3. Burn all combustible waste.
4. Pack out all cans, bottles and other non-combustible waste. Do not bury as animals will dig it up.
5. Bury human waste.
6. Be careful with fire. Don't leave fire unattended. Make sure it is out before abandoning. If you should lose control of a fire or discover a wild fire on state property, notify the nearest fire department.

No water is available in the area.

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Try Snipe

By Thomas J. Neal,
Wildlife Biologist



IT'S A SUNNY AFTERNOON in late September. Two men and a dog are wading quietly along the edge of a cattail marsh. Suddenly a small brown bird rockets into the air uttering a nasal "enk!" Three quick shots at the zig-zagging bird fail to connect and he's out of range. The hunters stop to reload. Just as they are thinking up excuses for missing, there is a sudden roar of wings and a derisive "enk!" only five feet above their heads. One hunter manages a quick shot, and misses the fast moving bird by ten feet.

Whether you call him Wilson's snipe, jacksnipe or **Capella gallinago**—this is snipe hunting. Yes, there really is such a bird, and no, you don't hunt him with a sack and a flashlight.

This little known shorebird is common in Iowa marshes and flooded pastures during the fall hunting season. The little snipe (about the size of a robin) has a long straight bill, pointed wings, striped back and an orange tail. It typically flushes from the marsh in an erratic zig-zag flight, usually uttering a nasal, rasping note when flushed.

The snipe is seldom found on open mud flats frequented by other shore birds. Neither is it often seen in wooded areas, where its cousin, the woodcock, is more likely to be found. Its favorite habitat is along the margins of cattail marshes and in flooded pastures, where it locates the insects and worms on which it feeds



Snipe decoys.

Photos by Ken Formanek

by probing the mud with its long bill.

The little snipe breeds in the northern United States and Canada, and winters as far south as Brazil. It is also found in Europe, Asia, and Africa. The snipe passes through Iowa on its annual migration in April and again in September and October.

The weather is usually delightful during the fall snipe hunting season. Poking around the marsh edges in search of snipe is a good excuse for being out on a bright September morning. It's not a bad time to line up places to hunt ducks or trap muskrats later on, and who knows, you might even get a couple snipe.

A favorite snipe tactic is to wait until the hunter is almost on top of it before flushing.

The snipe is so well camouflaged that it is almost impossible to see it until it's in the air. Even then you are more likely to hear the nasal "enk!" note before you see him. Most likely ignoring the hunter's shots, the snipe zig-zags away, often going higher and higher until it is lost from sight. Next he begins his dive from this tremendous height. Usually approaching from the hunter's rear, the snipe develops fantastic speed in this "power dive", often pulling out of the dive just in time to pass over the hunter's head only a few feet away with a roar of wings. It's a rare shooter, indeed who can bag a snipe using this maneuver! The flight of this little bird more resembles that of a jet fighter than an ordinary bird.

Small shot and open bored guns are the rule for snipe. They are hard enough to hit without handicapping yourself with a full-choked, slow-swinging shotgun. Believe me, you need all the help you can get!

Snipe hunting is usually best early in the season, with most of the migration complete by mid-October. The abundant snipe is hunted by very few people in Iowa. For those who go to the trouble to learn a little about him, Mr. Snipe can provide many hours of outdoor recreation. This little bird can stretch out your scatter-gunning season and really get you in shape for other hunting to come.

If you think you are a pretty good shot and you're ready for a real challenge, try the snipe.

FROM THE

Warden's diary

By **Rex Emerson**
Law Enforcement Supervisor



A YOUNG ROOKIE GAME WARDEN was working with an old experienced officer on night patrol. The old-timer's face showed effects of the sun and wind during the twenty years of being a warden. They had supper together and talked about the area they were going to work that night where deer poaching had been reported. After a new officer has a chance to get acquainted and people learn they can trust him not to reveal the source of his information, they will begin to report such things to him.

They left town after dark with the young officer driving. The area they were going to work was in the next county. Part of an officer's training is not to be seen in a town too close to where he is going to work at night. With the communications the poachers have, the warden would likely be the only one out in the area if he had been seen.

Going down an old dirt road they saw a car sitting in a field entrance. It wasn't too likely a place for a hunter to leave a car. The officer's spotlight lit up the parked car and two heads popped up in the front seat. It was a young boy and his girl friend. Acting on the older officer's advice the spotlight was turned off and the red light was flipped on and off for identification, and they continued down the road looking for hunting violators. There was no use bothering that couple, as they weren't hunting.

In a good timbered area another car was parked. This looked as if it could be a little different. As the officers stopped their car with lights off and quietly stepped out, careful not to slam the doors, they could hear hounds running. Even though the raccoon season was not open, hunters could still run their dogs, provided they didn't kill any raccoons. The officers took off through the woods to check some hunting licenses. Every one in the group would be in pursuit of game and therefore would need a license. Going through the woods without the aid of a flashlight is not too easy. The young officer was eager and a little impatient because he had to wait for the older man. Suddenly the dogs changed their tune and were barking tree. The old officer took off toward the sound of the dogs so fast his young partner wondered where he got all that energy so quickly, and actually had trouble keeping up. The old man went over the downed trees like a track star going over the hurdles, while the rookie fell over each one and almost got hung up on a grapevine. There was no doubt about it, the old man had eyes like a cat and could see in the dark.

The officers came to the river bank and could hear the group of hunters talking to the excited dogs on the opposite bank. One of the hunters was climbing up the tree. They could see the light on his cap.

He shook the coon out of the tree and when it hit the ground the dogs made quick work out of killing it. The young officer was ready to take right off across the river and get them. They were definitely in violation for not leaving the coon alone after it went up the tree. The old man's advice was to not get all wet and waste all that energy, since the location of their car was known. During the excitement at the tree the hunters had been calling each other by name, so they wouldn't be too hard to identify. It sounded as if the dogs all had the same name, but no doubt that wasn't the real name of any of them.

About an hour and a half later four men and three dogs came back to the car. The young officer, being quite eager, immediately started the conversation by questioning them about killing raccoon out of season. They denied any knowledge of a coon being killed and a big argument was about to start. That was when the old officer took over the conversation. A little compliment about how nice their dogs looked sort of changed the subject and soon quieted things down. A check of the hunting licenses not only verified their names as the ones at the tree, but it also made it possible to call them by name. A person's own name is always music to his ears and seems much more friendly. Then they were told there was a bit of a problem, as the officers were just across the river when they shook that "coon" out for the dogs to kill. They knew they were wrong and had been caught, so didn't have much to say. Citations were made out for each to appear in court the next day at 9:30 a.m. They really weren't bad guys. They had a young dog they were training and had wanted him to get hold of a coon.

On down the road the old officer gave the rookie some very good advise. "You don't put a man in a position where he loses face. When you put a person in a position where he tells you a lie, and then turn right around and trap him in his lie, he immediately wants to fight back, either verbally or physically, and sometimes both. To them they had an excuse to break the law and therefore it was best to give them the chance to save face. The judge will surely convince them that they shouldn't do this again."

The two officers were in adjoining counties for the next two years. So the young officer continued to learn from the old officer about how to apprehend the hunting and fishing violators and, more importantly, about understanding human nature. He was indeed a master at both. This story happened twenty years ago. The old officer was Ward Garrett. He is no longer with us, but his memory and the training that he gave young officers will be handed down from generation to generation. In case you haven't guessed, I was the rookie officer.

RADIO TAGS

Continued from

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RADIO TAGGED FISH

Continued from page 7

knew which direction the fish was, but not how far away. After receiving an initial signal from the radio-bearing fish the observer moved to a different location and obtained a second signal. The fish was located where the imaginary lines of aim intersected.

Nine grass carp were implanted with these radio tags at Red Haw. Each radio had a slightly different radio frequency and impulse rate so each tagged fish had its own identifiable signal. The fish were identified alphabetically by name. For example, the first three fish were named, Alice, Bertha and Carla. During the summer, observers listened over 190 hours to these fish in Red Haw and recorded information never before known on movement and behavior of the radio bearing grass carp.

The most common behavioral trait of grass carp was their tendency to establish activity centers. Alice was almost always located near the shore in a small bay 500 feet southwest of the swimming beach. Not only did she stay in the area for long periods but when she left for a short time she always returned to the same location.

Carla established a center of activity near the picnic shelter, but she rarely came near shore except to find food. Her activity was mostly restricted to deeper water where she swam about aimlessly in a small area. Like Alice, she left the area at times, but eventually returned to her activity center.

Another trait of grass carp was their movement away from shore and the weed beds in late autumn. Greatest activity near the weed beds was in August and September, but by November most of their movement and activity was in deep water. In late autumn, the vegetation density was reduced and grass carp were feeding much less so they were not as dependent on staying in shallow water.

The fish showed a distinct preference to establish activity centers in the upper ends of bays and small coves. They tended to avoid the area near the dam, and areas of heavy boat use. Many times grass carp were located near fishermen. The only time they were disturbed and left the area was when they were startled by loud noises such as boats bumping into fallen logs or splashing oars.

Results of the study showed early indications of control of aquatic weeds by grass carp. Over the summer weed beds in Red Haw were reduced by 60% and many areas were opened up to shore fishing that would have been impossible to fish the year before.

Radio tags were very effective in determining the location and movement of grass carp, but behavior of other fish species are being investigated as well. At Big Creek Lake near Polk City, the movement and distribution of largemouth bass is being investigated by Iowa State University personnel. The objective of this study is to describe the movement of bass in the lake with emphasis on the depth at which they are most frequently found.

Relative size of transmitter.



The versatility of miniaturized radios is being used to study flathead catfish in Oklahoma, channel catfish in Arizona, walleye in Minnesota and muskellunge in Wisconsin. Many investigators are using radio tags to follow fish near the heated effluent of electric power stations to determine the effects of thermal pollution on the distribution and well being of fish near heated discharge water. Results of these investigations provide biologists with a better understanding of fish habits which are necessary to manage lakes and streams. The final results of behavioral studies are greater fishing opportunity for the sportsman.

The behavioral study of grass carp at Red Haw Lake was completed and the facts are being evaluated so they can be used to create better fishing in Iowa. But, some of the facts are difficult to evaluate. The most eerie experience was on July 3 when the observer was following Alice, and Bertha was following the observer. You don't think . . . ? No, it had to be a coincidence. □

CLASSROOM CORNER

by Robert Rye

Administrator, Conservation Education Center

MOST PEOPLE have already taken their summer vacation. Now they are reliving and building on their experiences. Many hours have been used fishing or sightseeing in Iowa this year. Some people are counting the days, hours, and minutes until they can hunt or fish on their fall vacation.

We are now in a period when the hot sunshine of July is past and the January blizzards are ahead. We have visited the prairies and the hills are awaiting our skis.

Members of the Iowa Conservation Commission are thinking of these diverse recreations. They work for the people of Iowa enhancing their place of beauty. They also study the fish and wildlife in the state.

One organism that is studied at the Conservation Education Center is the clam. They are very easy to collect. I am aware of no one who ever lost a race with a clam.

Classroom uses of the clam are many. They can be used to observe the action of small hairs (cilia). These small hairs are similar to those found in the human body such as in the respiratory tract. The clam is opened and sprinkled with fine black pepper. The short hairs will line the pepper up and move it toward its mouth. Once the clam finds the substance is pepper, it will reverse the action of the hairs and move it away from the mouth.

Did you ever watch how it moves its foot? Ever observe how the siphons work using dyes in the water near the clam? Did you know that clams are filter feeders and therefore indicators of pollution? Many other similar experiments are devisable.

Clams can be used to study populations. Groups of students collect and count them. By taking clams from a measured area (say one square foot), it can be estimated how many live in the entire area.

They have been used in habitat studies. All living things prefer certain conditions. People on a very hot day prefer to sit by their air conditioners. Clams can be found in certain areas of a stream or lake. Once found, one can study this area and the total habitat can be determined.

Have you ever picked up a clam and really looked at it? They are found in many shapes and sizes. Some round, some more triangular, and some are of a rectangular shape. The fingernail clam grows to the size their name indicates. Some may grow as large as 6 or 8 inches across. Some have green stripes, some have wavy shells. They can be found with blue, pink, white or purple insides.

Once you have found the shell of a clam, (empty ones are best) your mind can thrive on possibilities for its use. Shells can be used as part of a wall display, a table arrangement or even used as an ash tray.

Commercially clam shells have been used for many years. They first were used by the button industry. Now many shells are sent to Japan where they are used in the cultured pearl industry. Some are used in this country for clock cases, paper weights or table top inlays.

For commercial purposes, they are collected in rivers such as the Mississippi in six to ten feet of water ordinarily from areas with sand or gravel bottoms. Some do live in rivers with mud bottoms.

For those interested or nearby, clams are collected in the Mississippi between Harpers Ferry and Prairie Du Chien in beds five to eight miles long. Boats leave early in the morning and return in the afternoon. When the boats return with their load of sometimes 350 tons, the "clammers" clean and sort the shells.

Clams are edible. It is best to allow them to remain in fresh water for 24 hours to clean them out. The clams are then steamed for five to ten minutes. One problem with fresh water clams is that they become tough or chewy—which often makes them undesirable for this use.

The study of clams can be relaxing, enjoyable, and educational. It can be a tremendously rewarding way to spend a couple of hours of your much needed vacation.



CARDINAL FLOWER
Photograph by Ken Formanek

