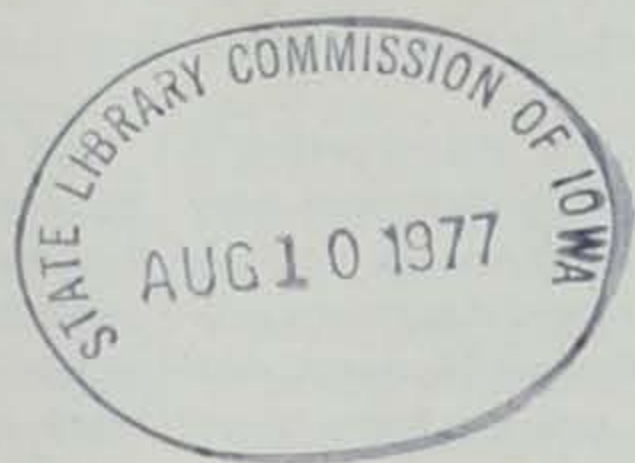


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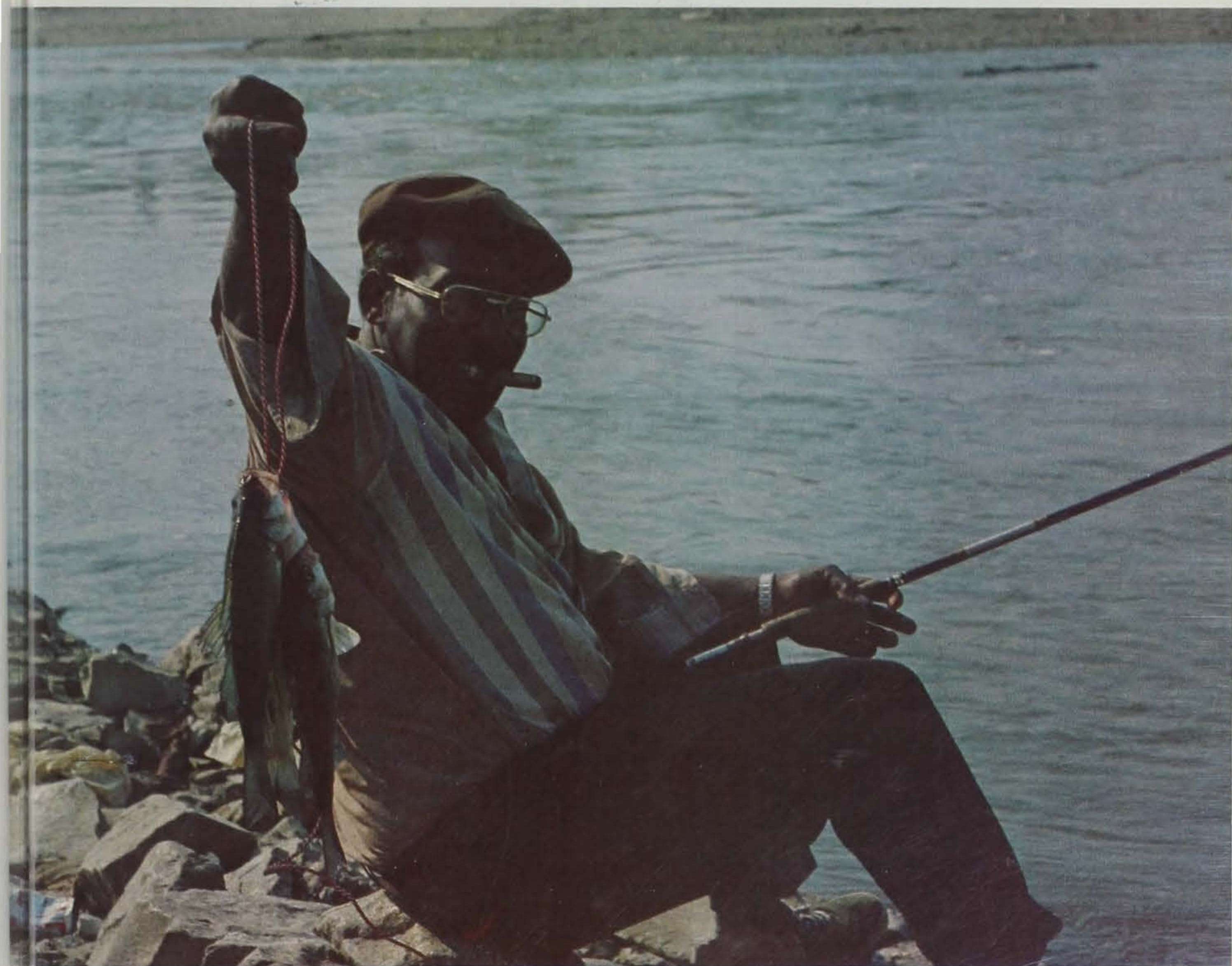


AUGUST 1977

U.S. GOVERNMENT  
Depository Material



**conservationist**



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**COVER BY JULIUS SATRE**

*Des Moines river fisherman and catch of white bass.*

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Published monthly by the Iowa Conservation Commission, State Office Building, 300 4th Street, Des Moines, Iowa 50319. Address all mail (subscriptions, change of address, Form 3579, manuscripts, mail items) to the above address. Subscription price: one year at \$2.00; two years at \$3.00; four years at \$5.00. Second class postage paid at Des Moines, Iowa and other points.

*Editorial:*

*Mother Nature Had A Better Method  
Of Safeguarding Water Supplies —  
And We've Almost Destroyed It*

*(Reprinted from the Maquoketa Community Press)*

Most of Iowa's rivers almost ceased to flow during most of January and early February. A combination of freezing temperatures and low soil moisture conditions saw many of the smaller rivers, such as the Little Sioux, actually freeze to the bottom and stop running.

The Des Moines water works was withdrawing almost the entire flow of the Raccoon. And below Des Moines the effluent from the Des Moines sewage plant piped to the Des Moines river exceeded the amount of normal flow up to that point. And the Des Moines, in what one might call "normal conditions," is several times the size of the Maquoketa or Iowa in terms of cubic feet of flow per minute.

Weather records over the past century indicate we are always going to have dry years and wet years. However, man has destroyed much of the resiliency that nature used in dealing with these variations in moisture.

Almost every farm originally had at least one marsh or boggy area that didn't have natural drainage. Jackson, Clinton and Scott counties had lots of wet land. They retained a lot of the winter snow. It gradually soaked into the ground and kept the water level high. No one had to dig a well very deep anywhere to find good water.

And all of the little streams meandering through the meadows, traveling four miles to make one mile as the crow flies. The banks were lined with willows and cottonwoods that shaded the water and the many deep pools full of bullheads, bass and sunfish. There was no silt from cropland to fill these pools. And even if it was a dry year the moisture retained in the wetlands continued to meter enough underground water to these shaded streams to keep them flowing and to provide habitat for all types of aquatic life.

Land was cheap and the pioneer farmers simply cropped around the marshes. The flood plains and the wooded areas bordering the small streams were left for pasture or a source of timber for firewood. Ducks and geese by the thousands used these marshes and small streams as they flew north in the spring and south in the fall.

But as land became more precious it became obvious that if some of those marshes were drained they would raise some mighty rich crops. And thus the tiling began. The one, two or five acre pockets of water accumulated from melting snow and spring rains were no longer able to provide nature's "bank account" against the driest of summers.

And then man had another good idea on how to improve on nature. Why waste all that potential cropland that is now making up the floodplain of a meandering stream? Once the trees are cut down, a dragline can channel that stream straight as an arrow. Once its confines are made permanent, one could plow right up to the banks on each side. And all of the low spots in fields on either side can be tiled right to it. Basically, it would be no different than a city storm sewer system.

And so, in recent years, the water literally shoots from the low places into the channeled streams and ravines. From there it catapults into rivers like the Maquoketa that are either too large, or too embedded in rock bluffs (fortunately) to be channeled and "sewerized."

And from there the water goes to the Mississippi from most of Iowa, and to the Missouri from some of the western slopes. The Missouri is actually no longer a real river. The Army Engineers have converted it into nothing more than a barge and drainage canal. There is no protected area for either fish or waterfowl. As soon as any begin to develop through the forces of nature, the Engineers are soon there to dredge it, drain it or pave it.

And all the Engineers need to do to put the Mississippi in the same class is to cooperate with the barge line owners in spending billions of taxpayers' money in building new and larger locks and dams. The prop wash from the powerful towboats now in use has virtually made the river bottom untenable for the whole span of aquatic life our fish and waterfowl depend upon. Larger locks, making possible even larger towboats, will make a dead stream of the Mississippi.

One byproduct of the bigger and faster props would be to keep the silt (meaning

*(Continued on Page 14)*

**W**hite, black, and green ash are the most important of the 16 ashes native to the United States. All three species occur in Iowa forests.

**WHITE ASH** is the largest and most common of the ashes, and the most useful. It is common in southern and eastern Iowa. The leaves are 8-12 inches long with 5-9 (usually 7) oblong leaflets 3-5 inches long that have smooth or finely-toothed margins.

The fruit is 1-2½ inches long, and grows in crowded clusters 6-8 inches long. The tree may grow to 120 feet in height, but is commonly 70-80 feet tall with trunk diameters around 3 feet.

**Uses** — Much white ash wood is used for handles. It is the standard wood for D-handles for shovels and spades, and for the long handles of forks, hoes, rakes, and cythes. It is used in furniture, especially in the bent parts of chairs. It is used for slack cooperage and many types of sporting equipment including oars and bats.

**GREEN ASH** leaves are 6-9 inches long with 7-9 leaflets 3-4 inches long. The margins of leaflets are toothed, but only from the middle of the leaf to the pointed tip.

The tree commonly grows to 50-60 feet in height. Green ash is the most widely distributed of the ashes and is common in all regions of Iowa.

**BLACK ASH** is native to the north-eastern quarter of the state. The leaves are 12-16 inches long with 7-11 pointed-oval, finely-toothed leaflets. Leaflets are smooth dark green above and paler below. The fruit occurs in open panicles 8-10 inches long, and is 1 to 1½ inches long, oblong, and with the thin wing extending below the center of the seed cavity. The seed cavity is indistinct in black ash. This species typically grows along streams, in bogs, and in poorly drained sites with high water tables. It grows most commonly in peat soils. However, it occurs on fine sands and loams underlain by clays where the surface drainage pattern causes a high level of water table. The trees grow 60-70 feet in height (sometimes taller on the better sites) with trunk diameters of 1-2 feet. The slender upright branches form a narrow crown.



## LOOKIN' BACK IN THE CONSERVATIONIST



**THIRTY YEARS** AGO the pollution problem was discussed in these pages and lack of any effective measures was deplored by the Commission. A guest article by then

South Dakota congressman Karl Mundt appeared in which he called for federal laws against the pollution of our streams and rivers.

Quail populations were noted to be at high levels possibly the highest up to that time and the 1947 season was predicted to be a good one. Remember all that cover that was around in 1947?



**TWENTY YEARS** AGO the CONSERVATIONIST carried a story on the high use of the state's parks. During the previous year, Iowa parks had placed 9th in the nation in park attendance. Iowa drew nearly 6 million visitors to its parks that year — about half the number of people using our state parks today.

A crowd of 10,000 was expected to attend the national goose calling championship in Missouri Valley in 1957. A special attraction at that event was Ben Pearson, world famous archer.

A note on wetland drainage appeared in that issue. Thirty-two thousand pot-holes were lost to federally subsidized drainage programs in the midwest that year.



**TEN YEARS** AGO the CONSERVATIONIST reviewed the President's Commission on Law Enforcement and Administration of Justice report on control of firearms.

The commission recommended nationwide registration of all handguns, rifles and shotguns within 5 years. We took a stand against this action as did millions of other Americans and it did not come to pass. However, the threat of ineffective and ill-advised legislation still exists and should be guarded against.



One hundred years  
of hunting history...

# The HOGSBACK

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by Douglas Harr  
WILDLIFE MANAGEMENT BIOLOGIST

*Photos by the Author*

"FLOCKS OF WATERFOWL blackened the October skies," reported early visitors to the Iowa lakes region. But in the 1850's and 60's little more than passing notice was made, for ducks and geese were undesirable targets when elk still roamed these prairies and provided a plentiful food supply for Indians and pioneers alike.

It was not long, however, until big game became scarce and attentions were turned to the massive fall flights of ducks, geese, swans, shorebirds, and Sandhill Cranes. The lakes and marshes of Dickinson and surrounding counties were soon recognized to be an important migration pathway, continuing along the chain of wetlands that began far north in Canada. In addition, local prairie bays and lakes were themselves substantial producers of waterfowl, providing shooting for seven or eight months of every year. This, of course, pre-dated designated hunting seasons in Iowa.

At the heart of these prominent duck and goose shooting grounds lay what is today known as the Kettleton Hogsback Wildlife Management Area. A network of small, marshy lakes just west of Big Spirit Lake sheltered untold thousands of migrating ducks and geese every year. It did not take much to convince early hunters of these marshes' importance. The "Hogsback," a high ridge of glacially deposited soil and gravel, separated two lakes. To the west was Robinson Lake, now called West Hottes, and to the east was Marble Lake, named after a victim of the 1857 Spirit Lake Massacre who had lived nearby.

The hogsback ridge, at its narrowest point, was renowned as a "flyway," or "pass," between the lakes, over which winged countless waterfowl, hopscotching their way southward on fall migration. This pass was used primarily by the so-called puddle ducks—Mallards, Pintails, Gadwalls, Blue-winged Teal and the like. Another pass between Grovers and Little Spirit lakes, both on the Iowa-Minnesota state line, was also an important shooting area. Interviews with early hunters, as recorded by Frederick O. Thompson of Des Moines in 1930, attest to the importance of these two passes as well as a third, the "Isthmus" where today stands the Spirit Lake Fish Hatchery. Over this last pass flew the diving ducks, mostly Redheads, Lesser Scaup or bluebills, and especially Canvasbacks, as they moved from Big Spirit Lake to feed in the huge wild celery beds of East Okoboji's north end.

So famous was the entire vicinity that a center for early hunting expeditions and fishing trips sprang up on the northwest shore of Big Spirit Lake, less than a mile from the Hogsback flyway. The Hunters' Lodge, as it was known, was built around 1871 and hosted people seeking out everything from northern pike to "Brandt," as Blue and Snow Geese were then called. The old Hunters' Lodge occupied the site later to become famous as Crandalls Lodge, or the Crandall House.

Iowa's prairie soils soon proved valuable to late nineteenth and early twentieth century farmers, so they set to the task of draining every marsh possible in order to raise more crops. But the shallow, marshy lakes surrounding the Hogsback managed to escape destruction when most were declared as sovereign, or property of the State. This timely move rescued the complex of wetlands, and today they are among Iowa's premier waterfowl nesting, migrating, and shooting areas.

Until 1918, when the practice was outlawed, market hunting was a prominent activity of the region. In fact, Big Spirit Lake and its associated marshes and lakes nearly rivaled Minnesota's fabled Heron Lake as producers of marketable game. Even today, names

like Dick Harker, Joe and Fred Winter, the famous hunter and trap-shooter Fred Gilbert, and others are remembered with respect by older area residents. These men would often shoot as many as 14,000 waterfowl, plus countless plovers, curlews, snipe and prairie chickens, between late August and freeze-up each fall. Joe Winter would then pack the birds into barrels with crushed ice at his freezer operation. From there, the game would be shipped by rail to hotels and marketplaces in Minneapolis, Chicago, or even as far away as New York City. Fortunately, laws were passed to end market hunting and prevent the possible extinction of several species. Now, only farming and drainage practices remain to threaten the future of waterfowl.

Although market hunting was abolished, high bag limits, at least by today's standards, helped many hunters make it through the depression and dust storms of the 1930's. The Hogsback continued its tradition as a most important hunting area.

Beginning in 1941, the Iowa Conservation Commission began slowly purchasing prairies, croplands, and woodlands connecting Hottes and Marble lakes. In 1958 the largest tract, 197.3 acres that included most of the hogsback ridge, was purchased from Glenn and Orpha Kettleton, and the entire complex was designated the Kettleton Hogsback Game Management Area. Later additions were purchased, bringing the present land and water area to 1100 acres. The loosely knit chain of lakes, marshes, and uplands now includes Marble Lake, Sunken Lake, the east and west portions of Hottes Lake, and Little Spirit Lake as parts of the total acreage.

Originally, Kettleton Hogsback Game Management Area was maintained as part of the Ingham High Game Management Unit, headquartered near Wallingford, in Emmet County. In 1971, the Big Sioux Wildlife Management Unit was created by dividing the Ingham High Unit in two. At this time Kettleton Hogsback WMA was designated as operational headquarters for the new Unit, and more emphasis was placed on managing for all types of wildlife rather than just game species alone.

Today, Kettleton Hogsback is home to a resident Wildlife Technician and is the center for intensive wildlife management on state-owned lands and wildlife data collection for the region. It is also the site of a major Giant Canada Goose breeding and release project, part of a program by the Conservation Commission to bring this species back from what was once the edge of extinction. Besides its continuous popularity as a hunting and trapping area, Kettleton Hogsback WMA now maintains a nature trail sought out by hikers, photographers, birdwatchers, and even seasonally by cross-country skiers. While Lakes Region schools utilize the area for nature study by science classes, Kettleton's demonstration tree and shrub plantings offer hints to farmers planning windbreaks and homeowners wishing to learn what plants might attract wildlife to their yards.

But rising above all is still the area's pre-eminence among sportsmen. One only need settle into a blind on West Hottes Lake, just below the Hogsback, to imagine yourself in the company with perhaps the greatest of the old-time hunters, Fred "Dude" He spies an incoming flight of mallards, picks out a big drake and tells you where it will fall when he shoots. The old Parker shotgun belches and the greenhead tumbles. "It's a back hit," says Gilbert, and the bird strikes its predicted target. Awakening from your daydream you realize that duck hunting may never again be what it was in times long past. Nevertheless, it's comforting to know the "Hogsback" will always be there to help a youngster relive the area's rich hunting traditions.

The 200 wildlife specimens of approximately 80 species maintained at the Wildlife Exhibit are different from other wild animals in that, once removed from the wild, they have lost forever their ability to fend for themselves, and perhaps their fear of people. They must be maintained year-round, therefore, although they are not available for viewing while in winter quarters. Many of the animals here were mistakenly (and illegally) taken from the wild, and came to the Exhibit when they became too large, hungry, inconvenient, or dangerous. Since most young animals seen alone are not "orphans," people would do them a favor by leaving them in their natural environment. Animals brought to the Wildlife Exhibit become property of the State of Iowa, and may be exhibited, used for humane research or dispatched humanely. Although rehabilitation is not the purpose of the Exhibit, injured animals are cared for under veterinary consultation. Few sights are as exciting as a magnificent bird of prey returning with new strength to its place in Iowa's sky, after recuperating here.

The Wildlife Exhibit is usually open for public visitation from the first Sunday in May through the middle of October. During May, September and October it operates from 10 a.m. to 5 p.m.; summer hours (June-August) are 9 a.m. to 6:30 p.m. Mornings and weekdays have the lowest visitation rate, allowing visitors at those times an unhurried, attentive experience. Most people tour the Exhibit from 1-5 p.m. on weekends. Visitors would benefit from planning their trips for other times, when staffing personnel

can better respond to their questions. Groups or classes desiring guided tours should make reservations by contacting the *Wildlife Research & Exhibit Station, Route 1, Ledges Road, Boone, Iowa 50036, phone (515) 432-2823.*

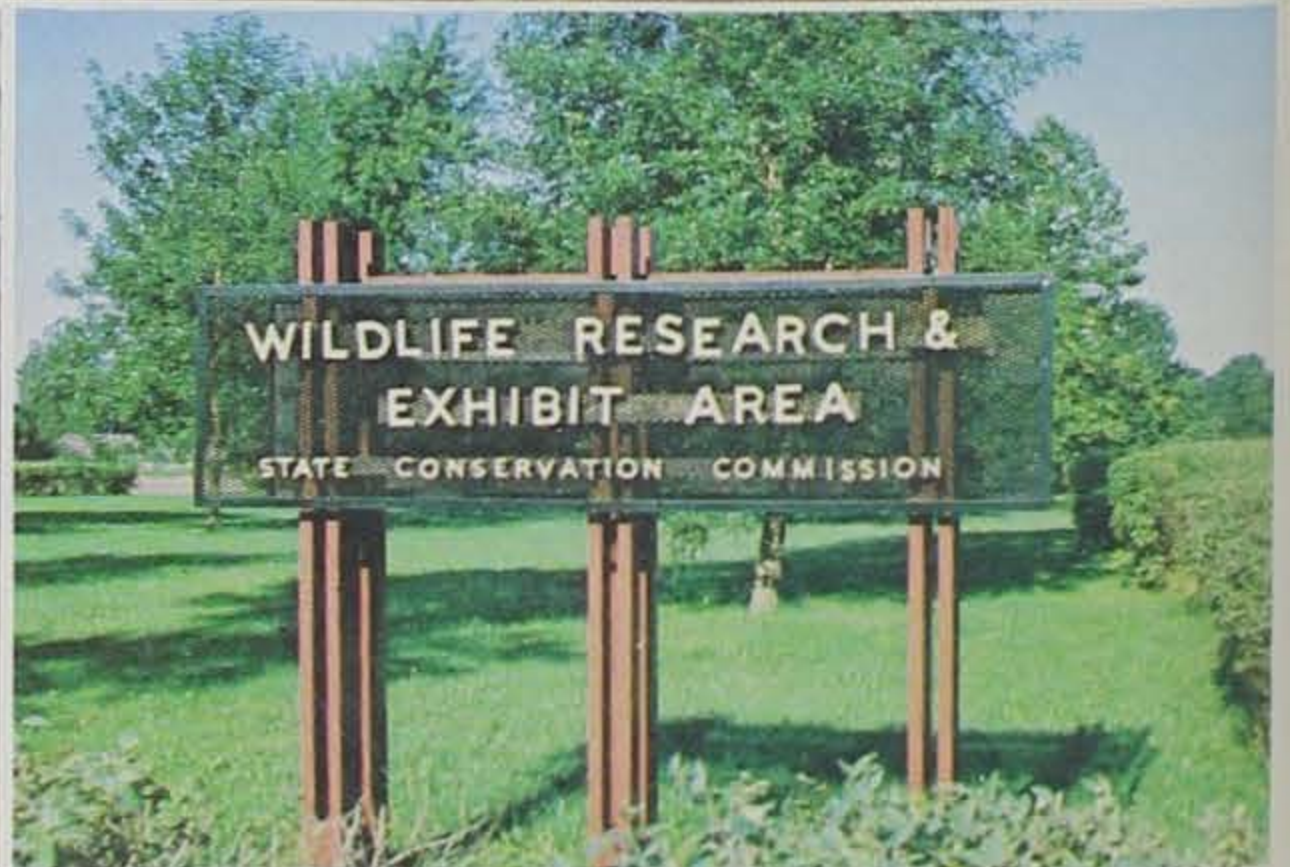
All these ambitious designs for the Wildlife Exhibit are promoted by a small staff of workers and students trained in wildlife biology, supported solely by the license fees of Iowa's anglers and hunters. During summer months, upperclass college students gain practical experience in the discipline and field operations of various facets of wildlife biology, while contributing to Exhibit visitors' knowledge of wildlife. They answer questions, present the principles of wildlife management and conservation practices helpful to wildlife, and discuss conservation problems. On non-holiday weekdays they conduct hourly tours of the Exhibit for interested groups and classes, gearing their presentation to the visiting audience. The Wildlife Exhibit remains open after students return to classes in the fall, of course, and its operation is continued by the Iowa Conservation Commission staff. When not engaged in field research on non-game animals, the wildlife biologist in charge of the Wildlife Research & Exhibit Station is always available to discuss Iowa's wildlife with interested groups or visitors.

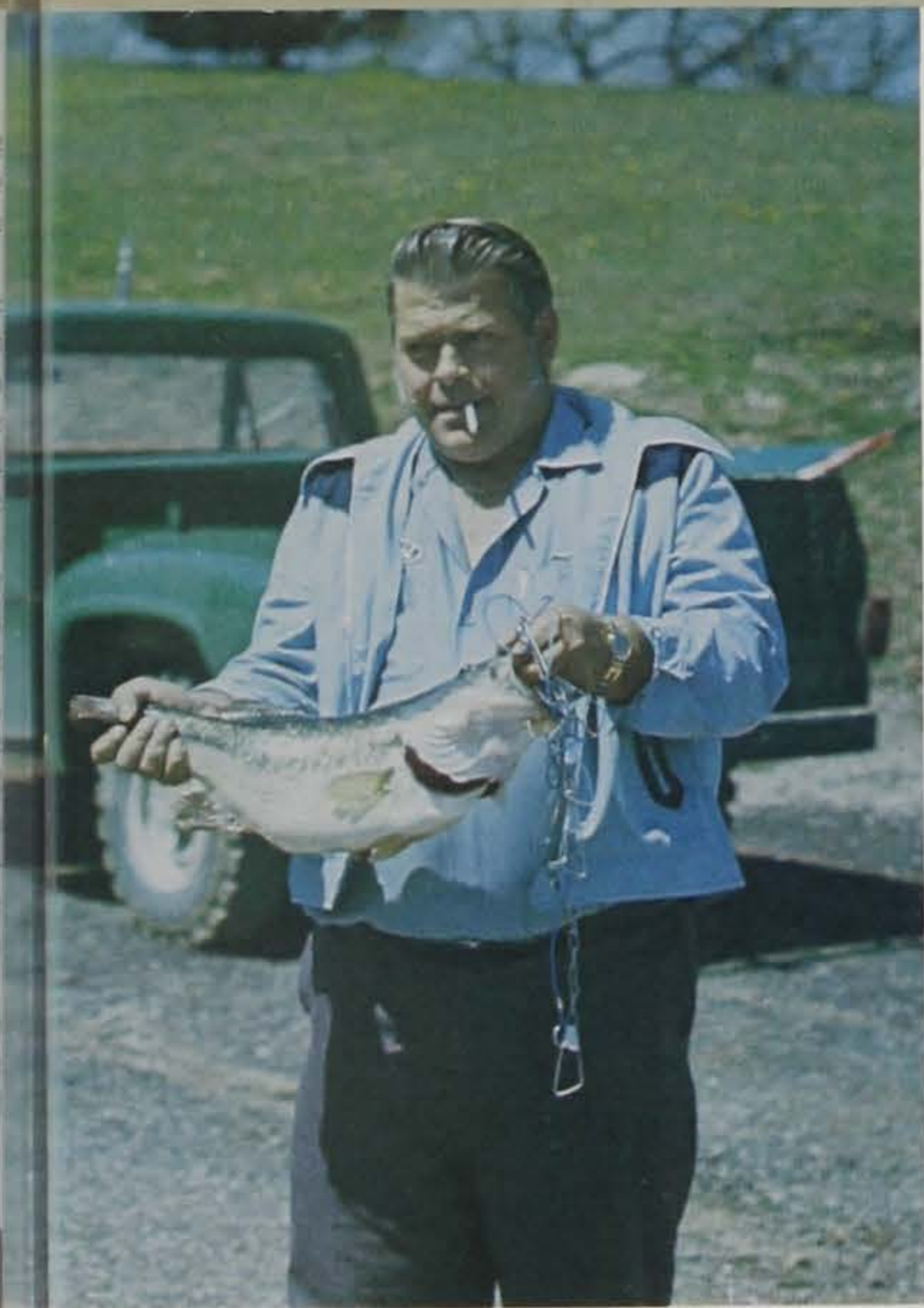
Whether you want to meet a friendly whitetail doe or learn to identify waterfowl, the Wildlife Exhibit awaits your visit. Once you get to know the snakes, quail and prairie dogs, you may find yourself stepping into harmony with the land. □

Great Horned Owl



White-tailed Deer





# BIGGER BASS WITH OMP

by Larry Mitzner  
and Jerry Spykerman

Photos by Don Kline



**A** NEW DEVELOPMENT in raising largemouth bass at hatcheries could help put more bass on your stringer. It all starts with the concept of fish stocking which is too often viewed as a cure-all for poor fishing. But stocking does have merit if used properly.

Largemouth bass stocking is a good example. Best stocking success is always achieved at new lakes where a new population of fish is to be established. However, bass stocking success in lakes already containing fish populations is another story. This stocking method is least successful and most costly, so hatchery fish must be used prudently. In all cases, stocking must be confined to lakes where natural reproduction is poor and the population would become nearly extinct without maintenance stocking.

Stocking newly hatched bass in lakes with predators is disastrous because fry are extremely vulnerable; survival is poor. A logical solution is to stock bass at a larger size. But how large?

Using conventional hatchery methods, bass will average three inches in one growing season. Is this large enough? In most cases the answer is no, particularly where there are many predacious fish such as crappie already in the lake.

A new method of rearing bass was developed in the late 1960's with which bass could be grown to an average length of five inches in a single season. It is possible the larger-sized bass survive better in lakes with established fish populations. The method was tried in Iowa during 1974-1975.

The newly hatched bass fry are stocked in rearing ponds containing numerous, small organisms called plankton. The small bass thrive on this food until they reach approximately two inches. When bass reach this size, they need a larger food size.

The two-inch fish are then trained to consume an artificial diet to attain five inches by fall. The diet most widely utilized for largemouth bass rearing is the Oregon Moist Pellet (OMP). This food was developed for salmon rearing.

The training process takes place in concrete tanks. Here the two-inch fish are fed OMP ten to twelve times daily. Some of the fish accept this diet readily, while others require a longer training period. After two weeks, most of the bass become "feeders."

The "feeders" are then restocked in ponds to continue their growth. The fish have become dependent on this food and feed voraciously three times daily. The growth is measured periodically so increased food consumption can be adjusted evenly during the summer. By September most of the OMP fed bass are five inches or longer.

The results of stocking OMP fed bass in 1974 and 1975 at Bobwhite Lake in southern Iowa were encouraging, particularly after poor success was attained stocking bass in 1973. In 1974, 53 OMP fed bass per acre were stocked with another stocking of 37 bass per acre in 1975. Prior to stocking, each fish was marked by clipping a fin so they could later be identified as hatchery-reared fish. Survival after one month was excellent and sampling in the spring showed good survival through winter. Sampling in 1976 showed a good population of young bass and 89 percent of the fish were identified as OMP fed bass.

Stocking of larger bass was successful at Bobwhite Lake so there is promise of better success in fingerling stocking than before. But, OMP fed bass will definitely not become a cure-all to better bass fishing within the near future. First, large numbers of OMP fed bass can't be produced and second they are an expensive hatchery product which must be used only at lakes where the need and expected success is greatest.

But most important, a new method is available to grow larger fingerlings with a better chance of survival. So, someday that three-pounder you put on your stringer may possibly be an OMP fed bass. □

# ELK GROVE WILDLIFE AREA

by George Cox

WILDLIFE MANAGEMENT BIOLOGIST

*Photos by the Author*



**F**OR SOME venturesome Iowans who still rejoice in the proverbial "Sunday afternoon drive" and travel the back roads of Guthrie County, the Elk Grove Wildlife Area must be a strange site. To see 1,600 acres of timberland in west-central Iowa, in one tract, is unusual. It is an island of timber in a sea of pasture and cropland.

Why wasn't the area subjected to the same rigors of "progress" that rendered most of the land adjacent to Elk Grove to treeless pastures and cropland? The next question that probably comes to mind is how could such a block of timber have developed on what was historically "wild prairie"?

To answer these questions we must look back into the history of Iowa as well as that of Guthrie County. We must consider the forces of nature that created the physical Elk Grove area and the various influences of man during its development.

Geologists tell us that at one time Iowa was under the sea. Proof of this lies in the fact that all of our major bedrock formations are sedimentary; that is to say, they were deposited in water and consist of limestone, shale, and sandstone. Invading glaciers, which from time to time have covered the entire state, were the result of changing climatic conditions. These glaciers either carried with them or through their movements created a blanket of soil over Iowa's sedimentary bedrock. This blanket of soil is known as *till*. The action of wind and water created other soil formations. Those deposits formed by wind action are referred to as *loess* and those carried and deposited by water are known as *alluvium*.

Guthrie County is characterized by all three soil formations and provides excellent examples of the distinction between each soil type. The flat to gently rolling northeast one-third of the county has dark, deep, rich soils that resulted from relatively recent glaciers. The southwest two-thirds of the county consist of loess material carried on prevailing southwest summer winds from the Missouri River systems. They are light, relatively shallow on steeper slopes and occasionally bedrock outcrops are visible. Elk Grove is characterized by loess soils with rocky, steep slopes. Glaciation occurred in this part of the county much earlier and the slopes have lost the heavier, richer soils through the process of erosion.

As the world climates began to moderate to warmer and dryer conditions, Iowa became a sea of prairie grasses that prospered in the newly-formed soils. Woody vegetation was confined to the river bottoms where there were ample quantities of moisture. Prairie fires also prevented the development of forest. The summer grasses, stimulated by the wild fires, became dominant.





How then, can we explain the existence of an oak-hickory forest at the Elk Grove Wildlife Area? The prairie was interspersed with areas known as *savanna*. A savanna is a grassland with sparse populations of trees. The primary tree found in the savanna is burr oak. Burr oak is able to withstand the fires because of its deep root system, almost fire-resistant bark, and its late to leaf characteristic. Wild fires usually occurred early in the spring, before the burr oak buds sprouted. The fires were also very fast and the taller trees with the physical qualities of burr oak survived.

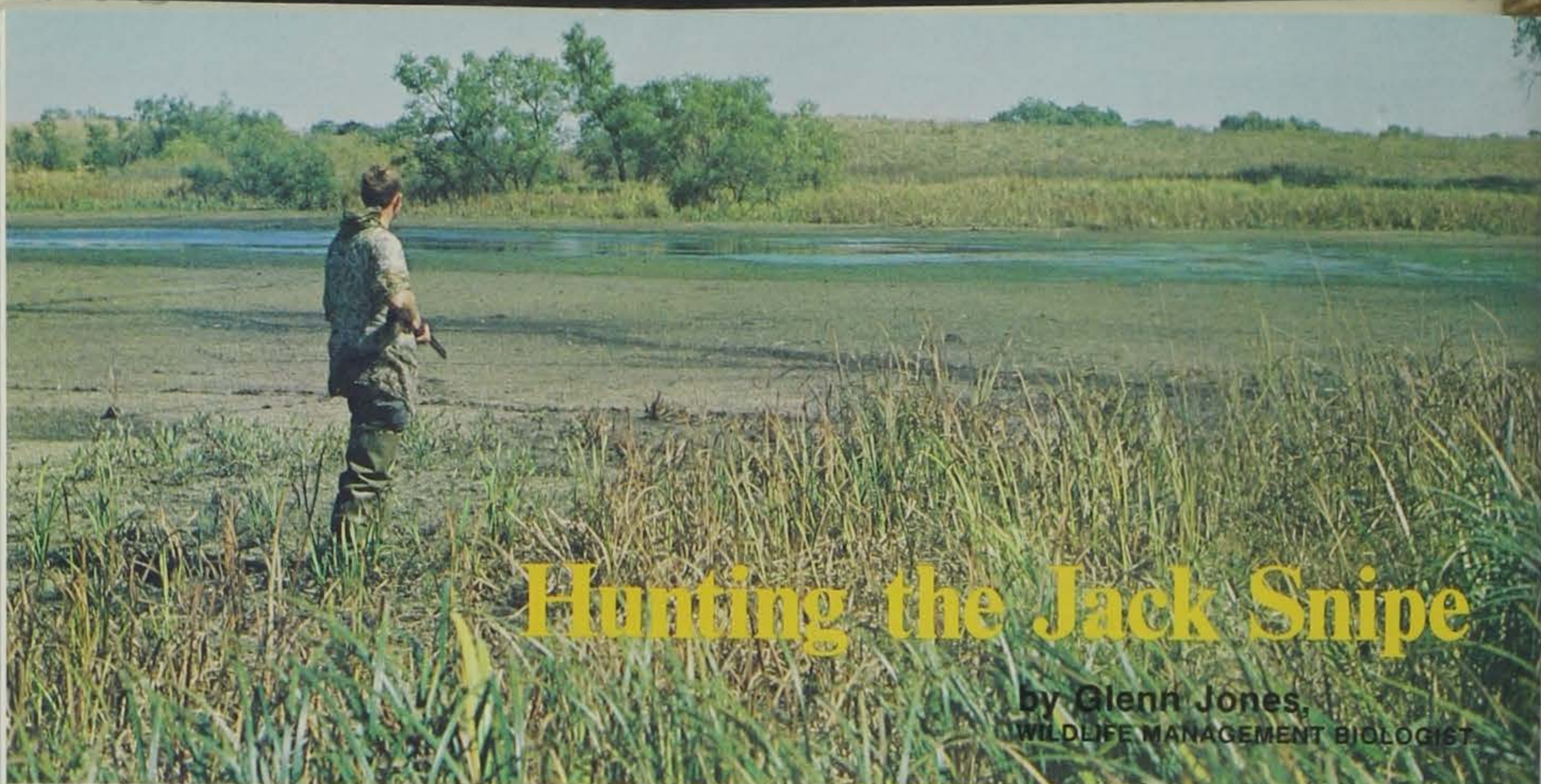


With the settlement of Guthrie County in the 1850's came the early farmer, called the "sod-buster". As more and more of the prairie was turned under, fewer and fewer wild fires occurred. Thus the stage was set for the development of a forested landscape. All that was needed to bring Elk Grove to the Twentieth Century was ownership by individuals who saw fit not to cut the trees. Today the forest exists due at least in part to the steep rocky slopes.

In 1970 the Conservation Commission, realizing the significance of such an area in west-central Iowa, began acquiring the Elk Grove Wildlife Area. The 1,600 acres was purchased in two parcels and is now in public trust for all Iowans to enjoy. It is managed as a mature oak-hickory forest in combination with openings of prairie grass trimmed with thick brambles of blackberry, wild plum, elderberry, crabapple, and dogwood. The forest is now second growth red, white, and burr oak with shagbark and bitternut hickories as the dominant tree species. Birch, walnut, box elder, maple, and red cedar can also be found.

Elk Grove is food and shelter to a variety of animals. The timber provides the essentials necessary for survival to the white-tailed deer, woodchuck, fox squirrel, raccoon, fox, coyote, opossum, and a few beaver. The tree canopy is inhabited by woodpeckers, owls, hawks, whippoorwills, jays, thrashers, and raincrows. Numerous other songbirds divide their time between the upper limbs and the thick brambles of the "edge" vegetation. The prairie grasses provide nesting areas for meadowlarks, pheasant, and gold finches as well as cottontails and numerous small rodents.

Elk Grove has been and is being developed to serve many outdoor experiences. Primitive camping, hiking, and nature study head the list of leisure activities. Hunting and fishing are the primary consumptive uses of the area. Elk Grove is unique and interesting both in its historical development and in its present form. We certainly hope more "Sunday afternoon" nomads discover the Elk Grove Wildlife Area. □



## Hunting the Jack Snipe

by Glenn Jones,  
WILDLIFE MANAGEMENT BIOLOGIST

*Photos by Ken Farnham*

**S**O YOU WANT TO HUNT the Jack Snipe, eh? Well, it is a little more than holding the sack and letting others drive the snipe to you. However, trying to find the birds sometimes makes you feel like you have been left holding the bag.

This brownish shorebird, often confused with a dowitcher, is a common migrant through Iowa and may even nest in the state. The birds are similar in that they both have long bills. However, the snipe is decidedly browner and more streaked on the head and back. The snipe stays near cover, whereas the dowitcher will be seen on mud flats. When the snipe flushes, which he sometimes does under your feet, the orange tail, the zigzag flight, and the rasping call, "KZRRT!" tells you that you are in Snipe Country.

I will never forget a snipe hunt two friends and I enjoyed in a pasture that was flooded with about 4 inches of water. The area was south of West Swan Lake in Emmet County and it happened in September 1964. These birds came in groups of four or five nearly all afternoon. I used my double barrel 16 until one of my friends convinced me I should borrow his old pump 12. He said I should have more shots to fire in the short time we had a target.

There's one thing about snipe hunting—once you have located where they are feeding, you seldom burn them out. They will circle back and drop into the grass, sometimes very near your feet, where they are so perfectly camouflaged they disappear. In fact, it has been said that if you invade their feeding ground they will flush, circle around, and one may even land on your head!

It is uncanny, though, how you can watch them fly out of sight and suddenly there they are, wanting to drop in right where they were before. But don't get the idea that this makes snipe hunting easy.

To get back to this big snipe hunt of '64—we proceeded to station ourselves around the wet pasture and burned powder like you wouldn't believe. We did end up with our eight birds apiece, but it took each of us nearly two boxes of shells to do it. That zigzag pattern is very deceptive. It is no wonder they are listed as a game bird; their flight is a challenge to follow. We had a retriever along, but she did not like the odor of snipe and was reluctant to bring the dead birds back. Evidently, there is an odor about them which dogs don't like.

They are good to eat—just cook them like a duck. (They are easily cleaned by skinning them.) The meat is dark and gamey.

This game taste can be eliminated by roasting them with a small onion in the cavity, as you would a duck.

On other snipe hunts, we have flushed them out of grassy and wet roadside ditches. Their actions are usually the same—they fly out of sight, circle around, and drop back into the same place.

One year later in 1965, there were a large number of snipe feeding in the flooded lawn south of the Service Building at Otter Creek Marsh. Several of us had a chance to get down there and once again we burned up the shells. (A few birds were shot, incidentally.)

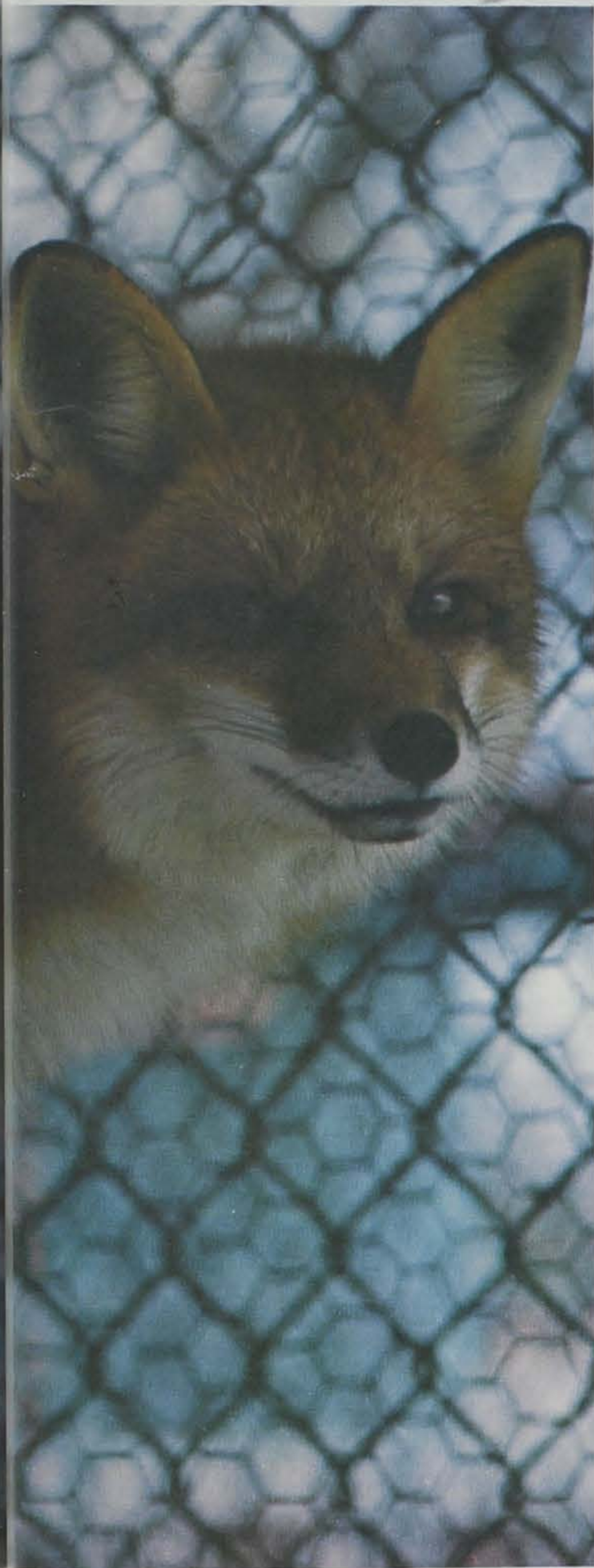
in the Blackhawk Unit, the area offering the best habitat for snipe, and the only one where I have found them to hunt, is Kiowa Marsh in Sac County, two miles east of Early. They should be present also in Black Hawk Marsh, three miles south of Lake View. However, I have never found them there in numbers conducive to a good hunt.

There are several things to remember about snipe hunting: look for them in flooded grass land—they will not be on wide mud flats (those could be dowitchers); move around slowly—if they are there, they will flush occasionally and will return; don't mistake a morning dove for a snipe—overhead, their flight is similar; use #8 or smaller shot—they are easy to down if you hit them; pray for rain this year—we need it for snipe production and hunting next fall. □



# Stepping into Harmony

Red Fox



by **David A. Newhouse,**  
WILDLIFE BIOLOGIST

AS THE SUMMERY AFTERNOON breeze drifts against your face, the drone of insects slips in and out of hearing, and luxuriant shade beckons you to a lazy idyl. Chasing that frisbee, paddling that canoe, hiking that trail, or even eating all those hotdogs has left you "just plum tuckered out." Aldo Leopold said that "we seek contact with nature because we derive pleasure from them;" and in the relaxation of this day you hear the song of a small bird, or admire the saffron blossom of the chickweed, or lie entranced at the scurrying of chipmunks. You share this place and this moment with the butterfly and nearby stream. Unintentionally, you have slipped into experiencing conservation, which Leopold described as "the state of harmony between man and land."

The Iowa Conservation Commission has established state parks to provide contacts with nature as well as facilities where the interested public can begin to develop this state of harmony. The Wildlife Exhibit, located just south of Ledges State Park near Boone, houses native wildlife for Iowans of all ages to see and study. Here visitors may begin to understand wild creatures as part of the natural environment we find so pleasurable. As they see the animals and find out how people, land and wildlife are interdependent, visitors can begin to appreciate creatures that before seemed strange to them. In the space of a short walk, visitors may become acquainted with animals they might never see in the wild.

Only from the close-up vantage offered at the Wildlife Exhibit does the similarity between uncommon otters and other seldom-seen members of the weasel family become evident. Bobcats and foxes seem smaller than anticipated, and it suddenly makes sense that they eat mice and rabbits more than grouse and pheasants. Hawks and owls exhibit the crushing power of their talons, and the different body and wing conformations that suit them to their habitat and prey. Where else could you approach a beaver closely enough to watch it groom and oil its fur with a specially-split claw? The dexterity of the racoon is seldom appreciated until you watch those inquisitive black "hands" at work or play. Badgers are famous for their digging ability, but a glimpse of their long claws and muscular bodies explains their ability to out-tunnel their prey. Visitors are spared, however, actual demonstrations of the skunks' defense system.

Perhaps more importantly, visitors are introduced to Iowa wildlife they may see along the nature walk on the Exhibit grounds, in nearby Ledges State Park, or at home. They may now recognize the spiralling red-tailed hawk and soaring vulture, remember the birds' food habits, and appreciate their place on the land. Fox squirrels may be watched wherever there are trees, by those who now know more about them. Those who hike wooded streambanks at dusk may recall the barred owl when they hear its "hoo hoo hoohoo, hoo hoo hooaaw." Even cottontails and ground squirrels become more important parts of the environment of people now familiar with them. Hopefully this heightened understanding and appreciation will lead to perception and harmony between people and their planet, an altered state of consciousness achieved through natural contacts.

Photo by D. Newhouse



Photo by the Author

## PRODUCTS FROM IOWA TIMBER

by Dennis Michel, UTILIZATION FORESTER

**I**N 1693, on the Piscataqua Falls between Maine and New Hampshire, the first sawmill was established in America. This was many years before sawmills even appeared in England. These early sawmills were the developers of civilization, since towns frequently grew up around them.

The first sawmill in Iowa was located on the Yellow River in the northeastern part of the state. The year was 1831. Lumber was sawed by power developed from a water wheel. There were numerous sawmills built along the Mississippi and its main tributaries for many years later. Early maps (1832-1850) of Iowa show about six and one-half million acres covered with timber. Today that timber area has dwindled to approximately one and one-half million acres. Lumber products from Iowa ranked ninth in the nation in 1869. By 1939, the production had decreased to 43rd and only .002 percent of the total cut of the country.

The farmer, not the logger, cleared Iowa of her forests. It was inevitable in many places because of the potential soils for farming. In some areas, the clearing has resulted in devastating erosion and soil loss. If forests are going to be a part of Iowa's future natural resources; continued tree planting and wise timber management must be practiced by all landowners.

Iowa forests are predominantly the oak species. However many other commercial species growing in Iowa include hard and soft maple, cottonwood, hackberry, elms, walnut, hickory, ash and basswood. Farmers own two-thirds of the commercial forest land. Lumber is generally considered as the main wood product from our timber areas. The potential for many different products from Iowa's commercial species is very great. There are numerous noncommercial tree species growing in Iowa's forests which also have potential uses but at the present time are not economically feasible to develop.

Many of the potential uses for Iowa tree species which we never think about are listed alphabetically by species:

**ASH:** Tool handles, tennis rackets, baseball bats, boats, furniture, and apiary supplies. Black ash is softer and is used for basket making. The leaf of a white ash rubbed on a mosquito bite or bee sting is supposed to relieve the itching at once.

**ASPEN:** Pulp for paper, matches, clothespins, boxes, crates, poultry supplies. The inner bark was cooked and the extract used as a substitute for quinine by the pioneers.

**BASSWOOD:** Veneer, plywood, baskets, trunks, coffins, tubs, shade and map rollers, venetian blind slats, and carving stock. The bark is a fine source of woodland rope, string, and thongs or strips for sewing birch bark.

**BIRCH:** Veneer, baskets, butcher blocks, railroad ties, musical and scientific instruments, toothpicks and medical tongue depressors. For emergency food the inner bark is pounded to yield a flour, and syrup can be made from the sap.

**BOXELDER:** Furniture, pulpwood and woodenware.

**BUTTERNUT:** Substitute for black walnut, furniture, and cabinetwork. The pioneers made a mild cathartic by boiling the root bark (one pound in a gallon of water boiled down to a quart) and adding honey.

**CHERRY:** Furniture, printers blocks, scientific instruments, piano actions, tool handles, gunstocks and veneer. An extract from the bark was used in medicine as a sedative or tonic.

**COFFEETREE:** Fence posts, railroad ties, furniture and cabinetwork.

**COTTONWOOD:** Pulp for paper, veneer, plywood, poultry coops, ironing boards, furniture, musical instruments, tubs and pails for food products. The Plains Indians used the root wood to start fire by friction.

**ELM:** Veneer, boats, furniture (chair arms), tool handles, saddle trees and interior trim. Slippery elm inner bark is aromatic and chewed to quench thirst. When dried and powdered it was used as a poultice, or when mixed with water it helped heal sorethroats and fever.

**HACKBERRY:** Furniture, boxes and crates.

**HICKORY:** Furniture, dowel pins, tool handles, ladders, skis, gymnastic bars, and fuel for smoking meats. The wood was used for automobile wheel spokes. It makes good charcoal and the ashes are suitable for soapmaking.

**HONEYLOCUST:** Fenceposts, railroad ties, veneer, and furniture.

**HOPHORNBEAM (IRONWOOD):** Furniture, fenceposts, tool handles, bows, wedges, and sled runners.

**HORNBEAM (BLUE-BEECH):** Tool handles, levers, woodcogs, mallets and wedges.

**BLACK LOCUST:** Railroad ties, insulator pins, dowels, boxes and fenceposts. It is told that the Indians made bows from black locust and a blue dye from the leaves.

**MAPLE:** Veneer, furniture, bowling pins, musical instruments, flooring, tool handles, butcher blocks, railroad ties, door, and sash. Silver maple (soft maple) sap can be used for making syrup but requires twice as much volume as the hard maple sap.

**MULBERRY:** Fenceposts, furniture, caskets, farm implements, and wooden dowels.

**OAKS (BLACK, PIN, RED, SHINGLE):** Furniture, railroad ties, railroad cars, mine timbers, flooring, ship and boatbuilding, caskets, farm implements and veneer.

**OAKS (BUR, CHINKAPIN, POST, WHITE):** Uses similar to the red oak family but important for barrel staves for a tight nonleak container.

**OSAGE-ORANGE (HEDGE TREE):** Archery bows, insulator pins and fenceposts. Pioneers boiled the wood chips to get a yellow dye.

**PERSIMMON:** Golfclub heads, billiard cues, shuttles, spools, bobbins, tool handles, and boxes.

**PINE (WHITE):** Matches, patternmaking, signs, pulpwood, caskets, venetian blind slats, and dairy supplies. This pine earned its reputation in the shipbuilding industry of early America. According to an English writer, "the distilled water of the green cones taketh away wrinkles in the face, when rubbed on with cloths." The inner bark in May and June is good to chew, and New Englanders used to make candy strips of it.

**POPLAR:** Pulpwood, poultry coops, ironing boards, and tubs for food products. Chunks of the bark have been used for fish net floats.

**RED CEDAR:** Cedar chests, closets, interior wood, woodwork, lead pencils, fenceposts, and rustic furniture. Gin presumably gets its name from the fact that in its preparation, alcohol is distilled over juniper "berries" to produce the characteristic flavor.

**SYCAMORE:** Cigar boxes, veneer, furniture, cabinets, railroad ties, butcher blocks and ironing boards. The Illinois French made dugout canoes of sycamore, one of which, 65 feet long, carried 9,000 pounds.

**WALNUT:** Furniture, paneling, veneer, gunstocks, caskets, and woodenware. During World War I, it was used for airplane propellers. The pioneers used the husks from the fruit for dyeing cloth.

**WILLOW:** Artificial limbs, pulpwood, charcoal, boxes and furniture parts. A mixture of bark and roots was used as a substitute for quinine.

**YELLOW-POPLAR:** Plywood, cigar boxes, caskets, musical instruments, furniture, toys, fruit and berry boxes, patterns and veneer. The inner of the roots is used to make hydrochlorate of tulipiferene, which is an alkaloid and heart stimulant. Another common name is tuliptree and it is the only species of tuliptree on the North American continent. The only other species in the entire world is in China and it is similar in appearance.

It is hoped that an awareness of the many different potential products from Iowa timber will help you to understand the value of each individual tree.

Man has depended on forests since the beginning of civilization. Forests have made America the great country it is today. How can we be so coldhearted and insensitive as to destroy our natural heritage with the "swoop of a dozer blade?" □



# CLASSROOM CORNER

by Robert Rye

ADMINISTRATOR, CONSERVATION EDUCATION CENTER

MAN HAS ALWAYS HAD his troubles with insects. Throughout history he has had fleas, lice, ticks, mosquitoes, and has been pestered by flies. In early times insects were not nearly as important as they are today. In fact, some were probably a great help as they were used for food.

## Monarch



Photo by Ken Formanek

## WATER SUPPLIES

(Continued from Page 2)

topsoil from erosion on our farms) stirred up and to hasten its way to the ever-extending mouth of the Mississippi south of New Orleans.

But now there are those with another good idea. Several farm owners in a number of Iowa counties are petitioning to either pump huge quantities of water from the still existing streams to irrigate their corn, or to drill large volume deep wells with which to do the same thing. Obviously, if this takes place, all of our cities and towns would soon find the water level lowered to where they would need to

spend more millions for even deeper wells. And it would be financially impossible for an individual farmer or rural area dweller to afford a well deep enough for just his own needs.

Quite a contrast to when the pioneers came and all they needed to do was to spade down 20 to 40 feet and they had perfect water.

The solution to our problem is increasing the retention of our ground water rather than drilling deeper wells to further exhaust this resource. We can bend the forces of nature to man's immediate needs—or what he thinks are his needs—to a certain point. Beyond that we get in serious trouble.

Since those beginnings, every change that benefited man also benefited many insects. As human populations increased, ectoparasites (those attacking outside) increased. Lice, fleas, ticks and mosquitoes found accessibility to additional humans and therefore a better chance to reproduce.

When man began to store food, it was attacked by insects which before had caused no problem. The cultivation of crops brought about a great change in food available to these insects and agriculture congregated plant hosts so that their insect attackers could build up extensive populations on them.

Insects are also beneficial, although we usually don't hear as much about this aspect. The honey bee is probably the most notable. Not only does it make honey but it also pollinates many valuable plants. Plants also rely on moths, flies and beetles. There are insects which parasitize harmful insects. Included in this group are some flies, wasps, and lady bird beetles.

Butterflies are eagerly sought after by our groups. The monarch (see photo) is one of the best known butterflies. The ground color of its wings is a brownish red, their borders and veins are black with white spots found in the border (the pale yellowish caterpillar is marked with rings of black). Monarchs collect in large numbers in the fall and migrate to the south; those which return in the spring are usually the offspring of those which left the previous fall. The larvae feeds on milkweeds and monarchs are often called milkweed butterflies.

One class frequently held at the Center is a survey of insect damage on trees. Study groups are divided and different areas are searched. Groups return with evidence of insect activities and the insects themselves. Some are able to find familiar and similar insects, while unique ones frequently are found.

Insect collecting equipment can be made, such as the beetle trap or collecting sheet.

The beetle trap consists of a No. 10 can. This can is placed in a hole so that its mouth is flush with the soil. A candy bar or similar sweet bait is placed in the bottom. A scrap of wood is placed on the top to keep out rain and small mammals. The board is raised slightly so that beetles can reach the trap.

An old bed sheet is used as a collecting sheet. It is supported by a frame and placed underneath a tree or bush. The branches are then shaken to gather the insects.

The following questions are discussed with all of these activities: Do certain insects prefer particular trees, shrubs, or areas? What times of year are most insects found? What interrelationships exist? Does location of trap or tree have anything to do with what is caught? □

We can do some selective tiling, some selective ditching—but not the mass effort we've seen in the last decades and planned by some for the near future. If our civilization ruins itself by over-draining, over-grazing, over-cutting and over-irrigating, we won't be the first. The Near East is filled with ancient cities and adjacent countrysides that were once garden spots of woodlands, fruit trees, vineyards and vegetable gardens. Through the abuse of the laws of nature, they became deserts and had to be abandoned.

Each year we see Iowa inching in the same direction. We need to arrest this trend before it is too late.

— Robert Melvold

I WENT PAST the place where the "old man down by the river" lives. He was out by his mailbox mailing a letter, so I stopped. He said, "You know, this thirteen cents for postage is really three cents for the mailing and ten cents for storage." Well, so much for his usual, so-called words of wisdom.

Some friends of mine from Van Buren County were fishing for carp in the Skunk River. They always catch a lot of carp, even when other people can't get a bite. They gave me the recipe for their bait and said I could pass it along to you.

*1 cup cornmeal*

*1 cup salt*

*1 cup boiling water*

*Mix cornmeal and salt together and add the cup of boiling water. Stir.*

That's all there is to it. Put a little ball of this bait on a small treble hook and you will catch carp. The first bait may wash off before you get a bite. Just bait up and put it right back in the water in the same spot. The carp will follow the scent right up to your hook.

On a hot August day most of the fishermen go out in the evening when it's a little cooler. So, about 4:00 p.m., I put the canoe into the river and paddled downstream to where I had located some illegal lines. Someone would probably run them after they got off work, and I would be there ahead of them and waiting. It seems like I spend half my time waiting for someone. The canoe was light-weight and quite easy to pull up into the brush, out of sight.

While looking for a comfortable place to sit and watch the bank lines, I saw a snake. My first instinct was to jump back. After all, I was born and raised in Madison County where they have some rattlesnakes. It's just instinct to jump back and take a second look at any snake. Fortunately, it wasn't a rattlesnake. It was probably the most harmless variety we have in Iowa, the hog-nosed snake. This snake is sometimes called a puff adder. Some people who don't know or understand snakes call it a spreading viper, just because it will spread its neck. The hog-nosed snake is the clown of snakes and you cannot make him bite. Maybe it's because he knows he doesn't have any teeth.

This little old hog-nosed snake was a good specimen, and did exactly what you would expect it to do. It raised up its head and spread out its neck (if a snake has a neck) as wide as your hand. It would hiss and strike as though to appear dangerous. When it was obvious that its bluff was not working and I tried to get hold of it, the next instinctive defense was to roll over on its back and play dead. When I turned it over on its belly it would roll over again on its back. It knew a dead snake should be on its back. People have made pets of these snakes, but we recommend leaving all wild animals alone. They are heavily built and get about two or three feet long. The female lays about two dozen eggs in the summertime. Their preferred food is toads. So if you had one for a pet you would have to be prepared to catch toads for it. Snakes also eat insects and small rodents.

Most people don't know one kind of snake from another. In fact, there are fables that a lot of people really believe, such as a snake hypnotizing a bird, or a hoop snake that puts its tail into its mouth and then rolls like a hoop. A lady visiting our State Fair exhibit told one of the officers that she knew there was such a thing as a hoop snake because her daddy used to tell her about seeing them. This officer, being diplomatic, and knowing there was no use in arguing with what her daddy had told her, simply said, "Yes ma'am, they make a track like a wagon wheel, only longer." She went away happy, but I always wondered if she ever thought afterward about that answer.

FROM THE

## Warden's diary

By Rex Emerson

LAW ENFORCEMENT SUPERVISOR

Many people see a Common Water Snake and call it a Water Moccasin. The Common Water Snake that we have in Iowa is not poisonous. It does have a nasty disposition and will not tame down. Basically, the only poisonous snakes that we have are rattlesnakes. We have timber rattlers in some areas and the Massasauga rattlers in other areas. I have heard of a cottonmouth and copperhead occasionally being found in the southern part of the state, but I have never seen one. Almost all of the snakes that you will run across are harmless and do much more good than harm. This time of year when the weather is hot, they will move around more in the cool part of the day. As they grow, they shed their skin. A snake is not cold and slimy as so many people believe. They are the same temperature as the air surrounding them. Some are egg laying and some live bearing. I had the opportunity to watch a bull snake lay thirteen eggs one day. That was very exhausting (for the snake).

When I said most snakes are harmless, I should qualify that by saying I meant most are not poisonous. Most of them will bite you if you pick them up. Their teeth point back toward the back of their mouth, and their jaw will become unjointed so they can swallow something as large as a frog or a toad. The frog can't get away once it starts down the throat past those teeth.

Even a small garter snake will bite. It will make little pin sized holes in your finger. But, when you jerk your finger out, as it seems to be normal to do, you make long slits in your finger. This makes your eyes water.

The time had passed quickly while I played with the hog-nosed snake. Two men came up to the bank in a little twelve foot boat to run their lines. When I stepped out of the brush with a snake in my hand, they almost fell out of their boat. I put the snake back on the bank where I had found it before checking for fishing licenses and writing out a citation. As I paddled back upstream to the car I couldn't help but hope that the next person who sees that hog-nosed snake will enjoy seeing it and let it live. □

*Rainstorm on Clear Lake by Jim Copic*

