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FRONT COVER: *"Best Laid Plans". By John Bald. Bald owns and operates John Bald Wildlife 2127 E. 12th Street, Davenport, Iowa 52803, phone 319/322-4414.*

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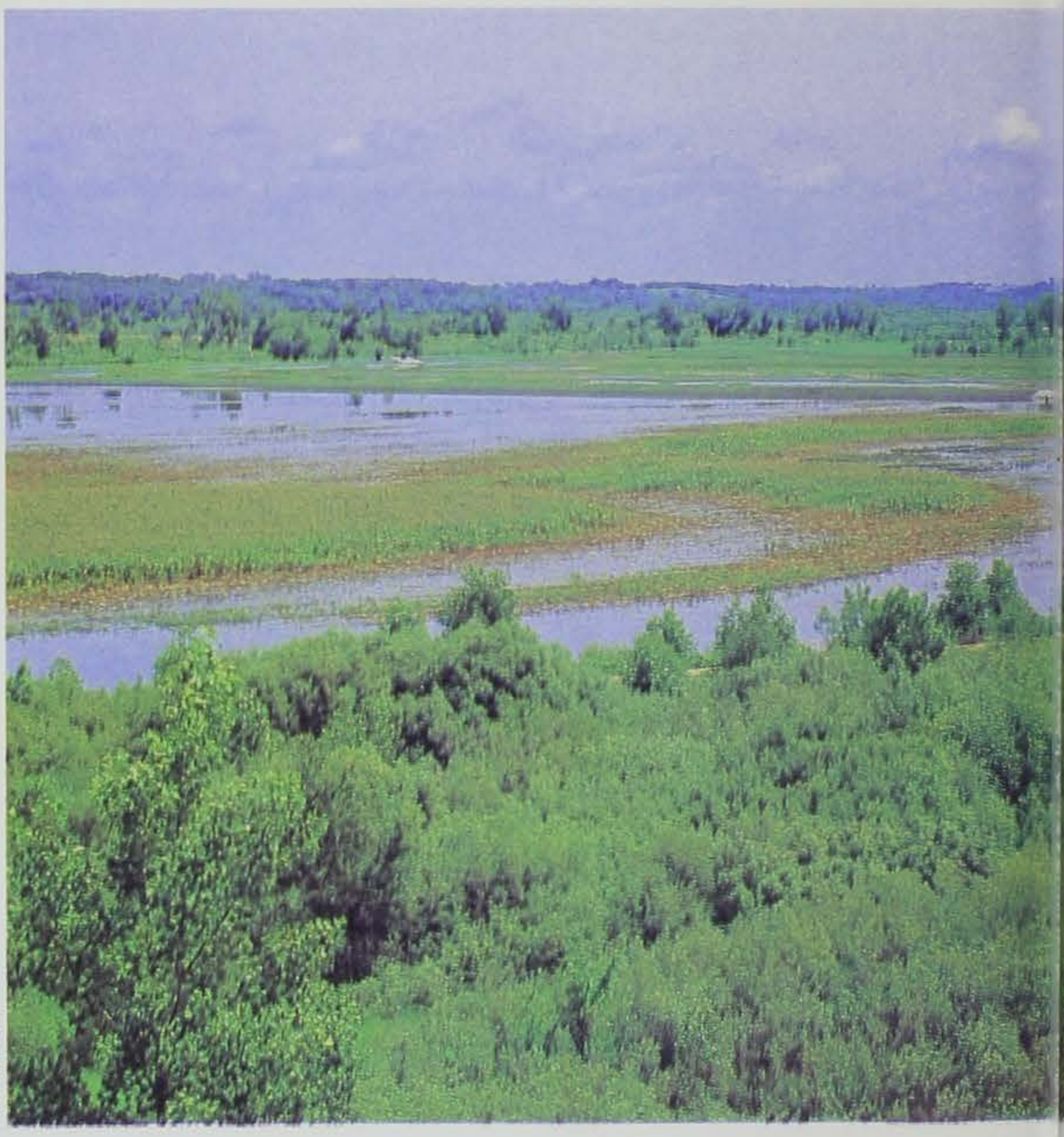


Ken Formanek

SUBIMPOUNDMENTS

New Waterfowl Habitat

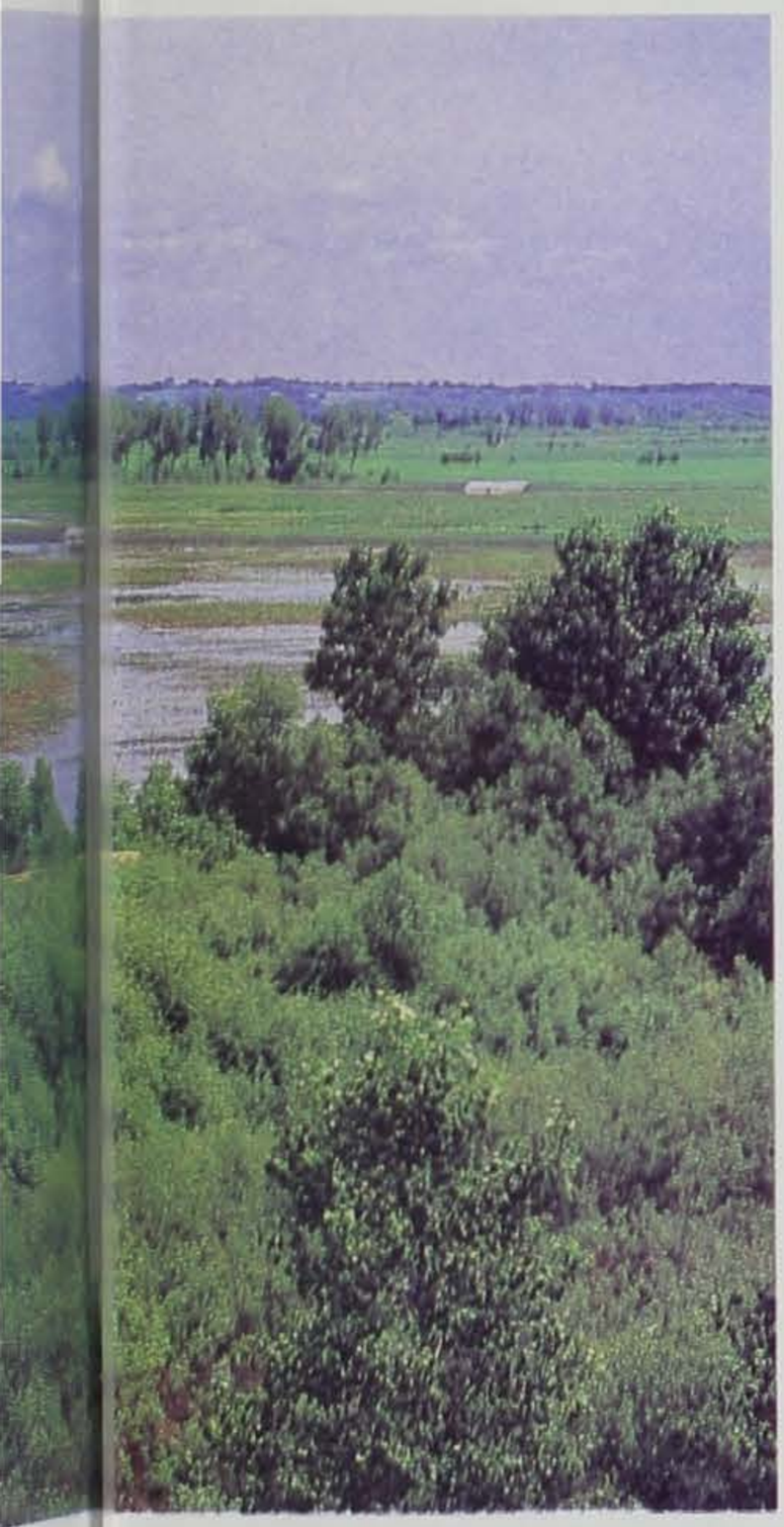
By Robert Moore
and
Donald Pfeiffer

The term "subimpoundment" is applied to a new concept in wildlife management on reservoirs in Iowa. It refers to wetlands that are being developed within the floodpool of the four reservoirs. These structures offer new habitat for waterfowl and many other forms of wildlife. They provide refuges as well as excellent wetlands for waterfowl hunters.

The primary objective of each reservoir is to reduce flood destruction along respective rivers and to augment low water flow in these rivers during times of drought. To accomplish the flood control goal, it was necessary to purchase or obtain easement on several thousand acres of land in excess of the normal conservation pool. Flood control is accomplished with the capabilities of the respective dams to store water over normal-pool capacity. This storage can result in vast water-level fluctuations (up to 57 feet at Saylorville Reservoir).

The Iowa Conservation Commission obtained a license on each area to manage a sizable portion of these federally owned lands to provide a wide variety of recreation opportunity. Specific sites are managed to provide wildlife habitat during dry periods when the reservoirs are not utilized for flood control. Ducks and geese were the primary species to benefit from intensive management efforts.

The reservoir operational plans call for a small water level rise in September



to flood the wetland vegetation that grew in the floodplain during the summer. Smartweed, wild millet, and other natural foods preferred by waterfowl grow well on the mudflats exposed following spring floods, providing the water comes down in time. Fall flooding of this natural smorgasbord has attracted thousands of migrating waterfowl. But a negative effect has been the substantial siltation that occurs in the upper reaches of the floodplains, destroying the wetlands. Drastic water level fluctuations during the spring and summer cause problems in providing a suitable, dependable wetland habitat. Often, flooded reservoirs are lowered too late for vegetation to grow. Over a period of time, the end result has been a loss of management capabilities due to uncontrollable factors.

A natural solution would be to create a wetland at the upper end of a reservoir's floodplain. Major flood waters would recede more quickly, water level fluctuations during the summer would have less effect on the vegetation and aquatic vegetation would be more dependable. The subimpoundment concept was born.

There are many aspects taken into consideration while designing each subimpoundment. The watershed of a particular drainage, flooding frequency within the reservoir, siltation, Corps restrictions, and a source of water are all important considerations. The design and management of these artificial wetlands on each reservoir is unique.

Practical implementation of the program required adequate funding. Development became a reality with indirect support from the Corps of Engineers with a major change in the handling of agricultural leases. A change in 1979 to cash rent for farm ground provided that funds generated on the Commission's licensed lands could be spent for maintenance and development projects on those lands. These funds became known as condition five monies.

Engineering for the subimpoundment projects came from a variety of sources. For example, Rathbun design was provided through the Chariton Valley Resource Conservation and Development Agency (Soil Conservation Service). The Red Rock package was put together through the efforts of a private engineering firm. The Commission's engineer section has been actively involved in various phases of the projects.

Saylorville, Iowa's most recent reservoir, is located just north of Des Moines, in Polk, Dallas, and Boone counties. The dam was completed in 1975; and, the normal conservation pool provides a 5,400-acre lake.

Subimpoundments on the 11,786-acre Saylorville Wildlife Area were planned to provide shallow wetland habitat not found along the steep, narrow valley of the reservoir's floodplain. The first subimpoundment developed in 1980 provided 60 acres of water surface. The final marsh was constructed in 1984 bringing the total impoundments to four with a wetland area of nearly 100 acres. Two are located northwest of Madrid and another southwest of Madrid. One is located near the Big Creek shooting range.

Water levels are manipulated by use of stop-log structures. Water sources for three wetlands are creeks. Water is pumped from the Des Moines River to create the fourth marsh.

Proper management and additional developments to provide optimum marsh habitat in the Saylorville floodplain are limited due to the steep, narrow river valley, large watershed above the subimpoundments, and frequent flood water with its heavy silt load from the main pool. The Corps of Engineers regulation specifies that the subimpound-

Subimpoundment dikes at Red Rock and other reservoirs hold good numbers of ducks and other wildlife species.

SUBIMPOUNDMENTS *continued*

ments are to be drained following the waterfowl season. This does not permit establishment of the most desirable aquatic plants attractive to waterfowl. Development thus far has been an attempt to create much needed wetland habitat in this area. The subimpoundments are open to walk-in public use. Habitat is excellent and they should provide good hunting this season.

The 47,608-acre Red Rock Reservoir south of Des Moines extends through Polk, Marion, and Warren counties. Construction was completed in 1969 and the normal conservation pool provides a 10,400-acre lake.

The 25,452-acre Red Rock Wildlife Area is located on licensed federal land upstream of the Iowa Highway 14 bridge. Waterfowl have traditionally used this broad floodplain. Past management consisted of row crop production and a large waterfowl refuge. However, persistent water problems, too much or not enough, hampered effectiveness of the basic waterfowl program.

Planning and design work for a large subimpoundment near Swan began in 1978 and construction was underway in 1980. The vast floodplain within the subimpoundment is divided into five segments holding almost a thousand acres of water. The area is managed as a refuge.

The management design is very simple. Water is taken from the Des Moines River with portable pumps. The water level is regulated in each segment by a stop-log structure, and at drawdown, the water is returned to the river.

The individual segments within the subimpoundment permit a wide range of habitat manipulation attractive to waterfowl. Grain sorghum and corn are planted, moist soil management allows desirable aquatic plant communities (smartweed, sedges, millet) to develop, and the ability to regulate water levels, all combine to create a dependable wetland. The 2,000-acre refuge is the finishing touch to this man-made waterfowl paradise.

The captive giant Canada goose production program is showing positive results as more and more free flyers return to Red Rock and surrounding waters to nest each year.

Because the area didn't flood last spring, excellent growth of vegetation has created near ideal waterfowl habitat this fall. Hunting in water areas above and below the refuge as well as other areas throughout Central Iowa should be enhanced by the Red Rock refuge.

Coralville Reservoir is located on the Iowa River between Iowa City and Cedar Rapids. The Corps of Engineers controls 24,800 acres of land in this portion of the Iowa River valley. This was the first flood control reservoir in Iowa and was completed in 1958.

The Hawkeye Wildlife Area is a 13,048-acre area located west of U.S. Highway 218 which is licensed to the Iowa Conservation Commission. The broad floodplain in this area included several old river-meander ponds which provided attractive areas to migrating waterfowl before the dam was constructed. Since the operation of the dam for flood control results in periods of high water, most of the flood plain timber has been destroyed and accumulated silt has filled many of the meander ponds.

Diked areas were funded in 1979. The first subimpoundment was completed in 1980. This 65-acre area is known as Island Marsh. Construction began on two additional marsh areas in 1982. High water prevented their completion until this past summer. Plum Creek Marsh will impound 65 acres of water, while Round Pond will provide 90 acres of dependable aquatic habitat.

Water to fill these wetlands is dependent upon rainfall in the watershed. Plum Creek and Round Pond receive their water by diversion of a stream. The water control structure is closed to contain all the flow in a small creek to fill Island Marsh. The use of diverted water from a creek reduces the silt entering these artificial wetlands during spring runoff. Therefore, the life of these marshes is extended beyond those where the runoff from the watershed must pass through the subimpoundment.

The location of these marshes permits either moist-soil management for natural foods or cultivated crops such as corn, wheat, or grain sorghum. By flooding these crops, waterfowl are attracted to the area and remain nearby for a longer stay during migration.

Island Marsh will be designated an inviolate refuge beginning this fall. Round Pond and Plum Creek provide top-notch habitat and are available to walk-in and small-boat hunters.

Rathbun Reservoir is located in the upper segment of the Chariton river watershed. This location prevents massive fluctuations in water levels as are seen in the other three reservoirs, but small fluctuations have reduced the area's attractiveness to waterfowl. This 11,000-acre lake can increase to 16,000 acres when flood waters are being stored.

Three subimpoundments have been completed to date. Two of these areas are located on the North Fork of the Chariton River and are known as Hickory Hollow and Goodwater Marsh. Woodpecker Marsh is located on the South Fork of the Chariton River.

Woodpecker Marsh is an 80-acre subimpoundment completed in 1984. This dike and stop-log water control structure was contracted by the Resource Conservation and Development Agency. Federal funds were used in completing construction. Hickory Hollow Marsh

Ken Formanek

has 33 acres of water when full. Goodwater Marsh contains 65 surface acres of water.

All three impoundments at the Rathbun Wildlife Unit contain nesting islands within the floodpool of the marsh. These islands are very popular for the giant Canada goose flock established on this reservoir. For example, each of the five islands in Goodwater was used by a pair of nesting geese. Islands reduce nest losses attributed to predators.

The water source for the wetlands is watershed runoff. Because of the small watershed there will be some water retained in these areas throughout the year. Hickory Hollow and Woodpecker Marsh have a potential to permit pumping from the Chariton River.

All of Rathbun's subimpoundments are in good shape this fall and should provide excellent walk-in hunting.

Subimpoundments have permitted development of a diversified wetland habitat incorporated in the big reservoir environment to the benefit of many animal species. The positive effect on rare and endangered species is not yet known but it is known, for example, that Blandings turtles prefer wetland habitat similar to that being created by subimpoundments. Bald eagles frequent all four reservoirs during migration. Wood ducks, mallards, blue-winged teal, and Canada geese utilize these wetland areas to nest and raise their broods.

Subimpoundments have permitted development of a new recreation potential on federal flood control reservoirs. Some sites are a part of the refuge system and offer the wildlife observer a year around sanctuary to enjoy. Public hunting and trapping are permitted on other sites where it does not conflict with management objectives.

Perhaps no wildlife area in the state can be as frustrating to manage as a federal flood-control reservoir. However, great potential exists on these areas and subimpoundments can help realize it.

Bob Moore is a wildlife management supervisor for Southwest Iowa. He holds a B.S. degree from Colorado State University and has been with the commission since 1968.

Don Pfeiffer is a wildlife management supervisor for Southeast Iowa. He holds an M.S. degree from South Dakota State University. He has been with the commission since 1972.

Furbearer Forecast

By Ron Andrews, Furbearer Resource Specialist

A sample of fur trappers and hunters will be sent questionnaires at the end of season to gather vital information on the number of pelts taken, method of take, effort, and some idea of how many dollars are pumped into the Iowa economy by fur harvesters pursuing their quarry. If you receive a questionnaire we encourage you to fill it out and return it to us as the information will help us to better manage Iowa's fur resources.

Muskrats

The 1985-86 muskrat population will generally be down because of dry conditions in marshes, streams, creeks and ditches throughout the state. Late summer and fall rains occurred too late to add much to this year's muskrat production. The "rat" harvest will again be lower this year, but when normal water levels return, the usual boom in muskrat numbers will occur.

Mink

The mink harvest often parallels the muskrat harvest because many mink sets are made while a trapper is muskrat trapping. The more muskrat trapping that occurs, the more mink sets are made, and thus more mink are harvested. With the anticipated reduced muskrat harvest, the mink harvest will be probably down somewhat as well.

Beaver

The beaver is alive and well. The beaver harvest has been low for the past several years, and there is no reason to believe that this will change this year. Beaver numbers remain relatively high, especially considering their incompatibility with Iowa's agricultural interests. The beaver season is long to reduce the amount of beaver damage complaints the Conservation Commission receives from landowners, and to let the trapper utilize the abundant resource.

Raccoon

The Iowa raccoon population remains at high levels. During the 1984-85 season the raccoon harvest surpassed a record 330,000 animals taken. For 11 of the past 12 years the raccoon harvest has annually exceeded 1/4 million pelts. In spite of this high harvest, raccoon numbers remain at high levels. If weather conditions are similar to the mild weather experienced last fall and winter, raccoon harvesters will have another good year. Pelt values will likely be less than last year's, but with high numbers harvested this masked marauder will still be number one in fur value.

Fox

Red fox populations should be higher than last year's, as they traditionally are following a mild, open winter. Fox trappers and hunters depend on nearly the opposite weather conditions to be successful at their sport. Trappers want dry, mild, relatively open conditions, while hunters want lots of snow cover on the ground for better visibility as they spot foxes. If favorable hunting conditions exist, the fox harvest will be up; if not it will be about the same as 1984-85.

Coyote

Since coyotes have established themselves in Iowa there has really been no reason to worry about their numbers. They appear to have stabilized somewhat in their traditional southern and western range, and have shown increases in southeast and the entire eastern half of Iowa. Their harvest should be in the normal range of 8 to 12 thousand pelts this season.

FURS PURCHASED FROM IOWA TRAPPERS AND HUNTERS AS REPORTED BY IOWA FUR BUYERS DURING THE 1984-85 SEASON

SPECIES	NUMBER PURCHASED	PERCENT CHANGE FROM 1983-84	AV. PRICE PER PELT	TOTAL VALUE
Muskrats	372,466	−20	$ 2.88	$1,072,702.10
Mink	28,346	+27	14.22	403,080.12
Raccoon	334,179	+28	18.94	6,329,350.30
Beaver	16,323	+91	8.65	141,193.95
Red Fox	18,916	−11	25.24	477,439.84
Gray Fox	1,896	+60	20.82	39,474.72
Coyote	7,809	−20	10.04	78,402.36
Opossum	21,455	+40	.82	17,593.10
Striped Skunk	1,023	−11	1.07	1,094.61
Badger	1,754	+35	8.22	14,417.88
TOTAL PELTS	804,167		TOTAL VALUE	$8,574,748.98

10 QUESTIONS

FREQUENTLY ASKED ABOUT BIRD FEEDING

By Doug Reeves

The feeding of songbirds is an activity that many Iowans enjoy. Feeding programs vary from the occasional scattering of leftover popcorn to serious feeding of such specialty feeds as safflower, niger and suet. Types of feeders vary widely too. Some folks just scatter feed on the ground. Others invest rather large sums in special glass, "squirrel-proof" feeders. Regardless of the level of involvement or degree of specialization, most people who feed wild birds have questions. Here are ten of the most commonly asked questions and some answers.

When should I start feeding birds?

You can begin at any time. If you want to have good numbers of birds around in midwinter, it is wise to begin feeding early, say by the first of November, so that "new" birds coming into the area to spend the winter (juncos, purple finches and pine siskins) will find the feeder and become accustomed to using it. If you wait until midwinter to begin, you might have difficulty attracting birds.

With hummingbirds, the story is considerably different. The first hummingbirds usually show up about the first of May and the last ones are often gone by the middle of October. With that in mind, the smart person who likes to feed hummingbirds will have the feeder up on May 1 and leave it up until the birds leave in the fall.

When should I stop feeding?

You do not have to stop at all if you do not want to. However, if you do feed year-round you will notice some major changes in bird life throughout the year. By about the first of April, many birds will be gone. All that will come after mid May will be local residents.

If you plan to stop feeding birds when winter is over, you can use the birds as indicators. When the number of birds visiting the feeder drops off sharply and you are quite sure there will be no more heavy snowstorms, you can stop feeding without harming anything. However, you may be robbing yourself of viewing opportunities if you quit before mid May. During spring, many people enjoy watching for new birds as they head north. The sighting of a towhee, white-throated sparrow, or redpoll can add a lot to your enjoyment of birds. Furthermore, goldfinches (our state bird) are just beginning to acquire their colorful breeding plumage in spring. Keeping the niger feeder full will allow you to see them at their absolute prettiest.

Finally, there is the question of quitting in mid winter, for those who take winter vacations. Research by Aelred Geis, a wildlife biologist with the U.S. Fish and Wildlife Service suggests birds have no problem finding new food sources, so interrupted feeding causes them no great hardship. This would be particularly true in areas that had trees, shrubs and weed patches that would provide natural sources of food or in neighborhoods where several people feed birds.

However, if you wanted to reassure yourself that the birds would have an ample supply of winter food, you could get a feeding program going at a neighbor's house, a park or other public facility.

Am I keeping birds here that would normally migrate farther south?

The simple answer to this question is no. Migratory birds migrate in response to many cues, perhaps most importantly photoperiod (day length). Many birds leave their northern breeding grounds when food is still very abundant. For example, blue-winged teal, the earliest ducks to move south, leave in September, even before many favored seeds are ripe, let alone depleted. Indeed, if birds could easily be short-stopped during fall migration, we would have a much greater variety of species in Iowa during winter.

Some people point to the odd birds that winter near a bird feeder as examples of "short-stopping". Actually, birds outside their normal winter ranges are not all that unusual and are as likely to occur in field areas as around feeders. They are just more apt to be noticed at a feeder. In any case, they are aberrant individuals.

What impact does artificial feeding have on populations of songbirds?

Chances are that if all artificial feeding stopped today it would cause but a blip in the numbers of most species on a national scale over time. Certainly any individual person's decision to feed or not feed has no effect on bird population levels, even on a local basis. What might seem to be a large number of birds at your feeder really represents a miniscule part of the population. At any rate, your feeding will not produce a noticeable increase in populations. Weather is much more important to populations whether in the form of extreme cold, ice storms or wet periods during nesting.

Are the foods we feed birds nutritionally complete or "junk" food?

Based on the condition of wild birds at feeders as well as birds held in captivity, there is little evidence that artificial feeding causes them to be malnourished. Furthermore, the cardinals, goldfinches and sparrows that come to feeders all year long seem to reproduce just as well as other birds. Probably several things are important in this regard. During winter, birds need a high energy food source. Most of the foods we provide are excellent high energy foods. At other times of the year, the birds can, and do, supplement their diets with other foods to meet their needs. For example, insects are required as a protein source by most female birds during egg laying and by young birds for normal growth and development.

Why doesn't a certain species come to my bird feeder?

There are several reasons why a certain species is not found visiting any given feeder. Perhaps the most important is habitat preference by birds.

For example, woodpeckers are found in wooded areas whereas meadowlarks are found in fields. If your house is located in an open area with few trees, your chances of attracting woodpeckers will be slim. On the other hand, if you live in a wooded area, meadowlarks are unlikely to visit your feeder.

Another reason for lack of any given species might be the food you are offering. For example, American goldfinches come readily to niger seed and the small sunflowers, but ignore the millets, wheat and cracked corn. Also, woodpeckers will come to suet feeders, but rarely make regular trips to seed feeders. Most businesses that sell bird feeds can provide you with information on food preferences.

Finally, the distribution of the species in Iowa is important. For example pine grosbeaks and red crossbills come into the northern counties in winter, but are not found in the southern part of the state. Likewise, mockingbirds are rarely seen north of I-80.

Why are no birds coming to my feeder?

The question of why birds are not coming to a feeder is most often asked by people who are just beginning a feeding program. Be patient. Do not be dismayed if it takes three weeks or more for the first birds to show up.

What happened to my birds?

Occasionally, birds "go off feed" during warm spells in midwinter. There is usually no reason for concern about this because energy demands are reduced during warm spells and the birds just do not have to eat as much to meet their daily energy requirement. The result is that they do not visit feeders as frequently.

At the other extreme, very severe weather can directly reduce the number of birds coming to your feeder. There was evidence last winter that many birds, both in the field and around feeders, perished during the severe blizzard conditions. Good habitat management (planting and keeping dense conifers and shrubs for winter weather protection) will help minimize losses during these severe periods. In fact, you can provide all of the requisites of habitat — food, cover and nesting sites — by placing some shrub plantings around your yard. This is at least as important to birds as feeding, all factors considered.

How do I keep squirrels out of the bird food?

Depending on your point of view, squirrels can be a blessing or a pest.

If you want to keep them out of a feeder, use a metal pole (preferrably one with a squirrel guard) to mount the feeder on, and place it far enough away from trees and bushes, so a squirrel cannot jump to it. Sometimes, you can hang the feeder on a long wire from a limb far out from the tree trunk to eliminate squirrels.

Several feeders on the market purport to be squirrel proof, however, squirrels can find ways to extract food from most kinds. It is amusing to watch a squirrel attempt to get food from "squirrel proof" feeders. Any food they get is well earned.

Sometimes, squirrels can be lured away from bird feeders by putting acorns, walnuts or ears of corn out for them.

How can I discourage starlings, house sparrows and blackbirds?

Probably, the best way to discourage undesirable bird species from using your feeder is to provide foods they do not care for or cannot get to. This summer, I had cardinals, goldfinches, chickadees and white-breasted nuthatches coming to my feeder. There were no grackles, blackbirds or starlings using it and the number of house sparrows was few. My secret? I used niger seed in a tubular feeder and safflower seed in the pan below the tube. The goldfinches and chickadees enjoy the niger seed while the cardinals and nuthatches prefer the safflower. Other birds cannot get to the niger seed (the holes in the tube are too small) and they do not like safflower seed.

Birds can do without our feeding them and we can see them in their natural habitats if we take the time and make the effort to look. However, it is fun to watch birds from the comfort of your home. Just remember, your enjoyment is the most important function of a feeding program.

Doug Reeves is a nongame biologist located at Boone. He holds a B.S. degree from Lake Superior State College and an M.S. degree from Michigan State University. He has been with the commission since 1984.

Most ice fishing trips around Iowa will net a mess of crappies or bluegills, but a trip to Spirit Lake could produce a catch, like this one, of perch as well as a few walleyes.

Ron Johnson

Ice Fishing "Lac d'Esprits"

By Wallace D. Jorgensen

The word "Lac d` Esprits" is the French translation for Spirit Lake. The early voyageurs passed on to other frontiersmen the tales of beauty and enchantment that abounded at the area presently known as the Iowa Great Lakes.

Prior to the French explorers, the American Indian dialect for Spirit Lake was "Minne-Waukon." The Sioux word "Minne", meaning spirit, mysterious, sacred and the word "Waukon" meaning water; therefore, the name Spirit Lake or "Mysterious, sacred water." These native Americans had many superstitions and legends about "Minne Mecoehe Waukon" or Lake of the Spirit. I wouldn't try to verify or discount the Indian's beliefs concerning the spirits or supernatural beings surrounding this natural lake. However, there does seem to be some mystical drawing power about this beautiful, majestic lake, with very heavy pressure exerted on angling endeavors.

Regardless of where you prefer to ice fish, some of the information presented here would be applicable. However, this article will present some facts and speculations about ice fishing for walleyes and perch on Big Spirit Lake.

ICE SAFETY

The following facts are important for ice anglers to remember.

Two inches of ice will support one man on foot. Three inches of ice will support a group of people traveling in single file. Seven and one half inches of ice will support an automobile two tons gross. Twelve inches of ice will support a heavy truck.

Slush ice is about half as strong as clear, blue ice. New ice is generally stronger than old ice, but repeated travel over the same route weakens ice, as do underwater springs and currents. It is a very good idea to talk to some of the local residents concerning the area you are planning to fish. A prime argument for asking locally would be the winter of 1984-85 on Spirit Lake. There were pressure ridges from expanding ice at several locations on the lake which were unsafe to cross, even on foot. Also, there was open water in the middle part of the lake throughout the entire winter.

SHELTERS

The thickness of ice will dictate if a fish house or vehicle can be used on the ice. Many people fish in the open, just sitting on a five-gallon bucket. This gives you the versatility of fishing various locations with minimum effort. However, when ice thickness increases and weather conditions worsen, an ice house with some of the comforts of home is an attractive alternative. A vehicle is commonly used, which conveniently gets you to your fishing area and provides a windbreak and if desired, a cushioned seat and heat while fishing from an open door of the vehicle.

EQUIPMENT

Some type of implement will be needed to create a hole in the ice for fishing. The three most commonly used tools are; a chisel, hand auger and the power auger. The hand chisel works well on ice up to eight to ten inches, but becomes quite laborious with thicker ice. The hand auger is an excellent choice and works well with moderate effort and virtually on any thickness of ice. However, when ice reaches 20 inches and beyond, the power auger takes a lot of the work out of making a hole. The negative side of a power auger is the cost and weight.

The next important tool would be the ice skimmer. This skimmer is needed to clean out the slush ice after chopping or drilling a hole. Also, you will use the skimmer to clear the hole of ice as it forms in cold weather.

There are many types of rod and reel combinations available to the angler. Probably the most popular is a two to three foot fiberglass rod with an open-face reel. The shorter rod has the advantages of easier carrying in a bucket, keeping you close to the hole for skimming off ice and giving you a better hook set for tough-mouthed fish. Popular sizes of fishing line are four- to eight-pound monafilament for perch and eight- to ten-pound for walleyes.

Other equipment the angler may use is a cushion of some type for more comfort if sitting on a bucket and a gaff for landing large walleyes. Again, each angler has their own preferences on the type and amount of fishing gear that they use.

LOCATION TO FISH

If fishing for walleyes it would be very helpful to study a topography map and learn the general location of suitable bottom structure. Some of the proven favorite areas would be the rock reef on the east side of Spirit, the foot bridge area on the north end, the scattered rock reef between Big Stoney and the north shore and the rock piles in Angler's Bay. However, don't pass up some little natural drop-offs or bottom irregularities. These are more common than many people realize, and they will produce walleyes quite often. In the winter of 1984-85 I fished an area on the east side of Angler's Bay in approximately 13 feet of water with a sand bottom and some deeper water close by and consistently caught walleyes measuring from 14 to 22 inches long.

Yellow perch can be caught in the same area you are fishing for walleye. However, more often you will locate and catch them in a flat-bottom area containing remnant summer vegetation. Perch are less predictable than walleyes and may be found in any part of the lake. I hesitate to say this but a concentration of fishermen is usually where the perch are biting. A person can be courteous and respectful of the fishermen there and still fish the general area of the crowds, or better yet, pioneer new areas. If the fish are biting at one location they will be biting in other areas also. The name of the game with perch seems to be locating them by fishing different areas and lake depths.

BAITS AND TECHNIQUES

There is such a large array of baits available and techniques used I will not try to cover them all. Instead, I will discuss the most popular baits and methods, along with a few of my own thoughts on ice fishing. One important point to be made would be the time of day to fish. Normally, the most effective time to catch walleyes is early morning (daybreak) and just prior to sundown into late evening. Perch will be caught early to mid-morning and again at the sunset period; however, it is not uncommon to catch perch throughout the day.

Some of the artificial lures used for walleyes are jigging Rapalas, Kastmasters, Swedish Pimples and Super Dupers. Perch will be caught with these same lures or smaller versions of them, also with tear drops, green backs and mini-jigs. There are many other variations of the above lures; however, these have proven themselves and continue to catch fish. These lures are usually presented with silver wigglers, wax worms, various fish parts or minnows on the hooks to entice the fish. I feel the sight and more especially the scent of these additions enhances your chance of catching fish.

Live bait is always quite effective but a little more of a nuisance in freezing weather. Minnows are usually fished just off the bottom with a hook sized to the bait, split shot and a little bobber *just big enough* to support the rig. Perch fishing with tear drops, mini-jigs and green backs, tipped with some bait, can be fished in a similar manner. However, they are more effective with some jigging or what I would call just vibrating the bait.

In conclusion, the baits mentioned here, live and artificial, are all effective at various times, so if fish are on one, try a different type. It also may give you a little edge using some scent, either fresh or the bottled type found on the market. Fish close to the bottom or on the bottom but don't be afraid to try different depths. Vary your jigging rhythm until you hit a style that takes fish. Don't always expect a hard tug on your line. Perch are notorious for biting very lightly at times. You may only see your bobber roll or lift slightly as the perch try to steal your bait. At times your line may just move across the hole with either a perch or walleye taking the bait. Generally the walleye does hit quite aggressively but not always. The point is to be alert for any type of movement other than the bobber going under or a hard jerk on the pole, as the fish do get very picky at times. Try known structure areas but be adventurous enough to locate new areas. The main point is to be versatile in your fishing techniques — it could make the difference between going home with nothing or with enough fish for some excellent eating.

Wally Jorgensen is the fish hatchery manager at Spirit Lake. He has been with the commission since 1958.

CONSERVATION UPDATE

SAFETY COURSE REQUIRED

Anyone born after July 1, 1965 must pass the Iowa Conservation Commission's snowmobile certification course before he or she can legally operate a snowmobile in this state. This same course is required for operators of all-terrain vehicles (ATV's).

The minimum age for the course is 12 years. Courses will be conducted at various locations around the state beginning this month. The course consists of five two-hour sessions. For information on a snowmobile course located near you, contact your local conservation officer or call the conservation commission's main office in Des Moines (515/281-6824).

Graduates will receive a snowmobile safety certificate, which must be carried when operating a snowmobile on public lands or ice. The graduate also receives a shoulder patch and helmet decal. The courses are conducted by certified instructors.

Leaders in Conservation

The State of Iowa lost a great conservationist when Russ Bazyn passed away June 24.

Russ Bazyn

Bazyn was a very active volunteer in scouts and little league baseball, but his number one priority was conservation.

As an Izaak Walton member, he carried out his goals. Bazyn was a chief hunter safety instructor, conservation treasurer of the Waterloo Chapter, and he was just elected state president and also national director of the Izaak Walton. Bazyn did not just hold positions, he worked hard on all of them. As chief hunter safety instructor, he helped over 400 youngsters get their hunter safety certificates.

As a state officer of the Izaak Walton League for the past eight years he helped with the Conservation Youth Camp and also headed up a team of volunteers to clean and restock ponds. He worked with the Iowa Conservation Commission in helping get some new laws and programs passed, such as the hunter safety law and TIP program.

He was a member of the Waterloo Chapter of the Ikes for 16 years. In that time he ordered and helped plant over 400,000 trees and helped build a tree planter.

Russ Bazyn believed that we are stewards of the land and wanted to leave what we have enjoyed, like clean air, pure water, good soil and protection of our wildlife for future generations.

We will miss Russ, but will never forget him and what he stood for.

Ikettes, Waterloo Chapter

CONSERVATION Winners & Losers

Marshes and other wetlands are natural sponges, holding and purifying water, curbing flooding and maintaining underground water supplies. They are also rich havens for wildlife.

Throughout this century, vast acreages of Iowa wetlands have been drained, with assistance from government programs, so that more crops could be produced. This compounds flooding problems, creating the "need" for stream channelization and large flood control reservoirs.

What a price we must pay.

Along hiway 60

There was the report of the mishap on the 200-acre Anderson Prairie State Preserve at Estherville. A portion of the prairie site was burned this week in a hope this will counteract the effects of an accidental spraying with 2, 4-D and Banvel which "probably destroyed" at least one of three endangered plant species on the preserve.

The day that news account was published was overcast. Whites and violets stood out more vividly than they do in bright sunshine. On the west side, the railroad side, of Highway 60 south of Bigelow, summer color was near its peak. This is land which has been but little-disturbed through a hundred years. Prairie coneflowers, prairie clover, ironweed, blazing stars, Culver's roots and the first goldenrod, among many species, were in brilliant bloom. There were still a few purple coneflowers. All were abundantly apparent for passing motorists. They were in such profusion it could be thought nothing could ever stop them or discourage them.

There is a detour these days at the 9-60 corner north of Sibley. It affords a dramatic contrast. Flowers from the earliest times are in regal bloom along the trackside. But as quickly as a traveler leaves Highway 60 and begins west on Highway 9: nothing. The flowers are gone. These are ditches which have been plowed and sprayed and mowed and sprayed and leveled — and sprayed. And the fields have only corn or beans.

Living generations are not leaving the earth as they inherited it. People have reduced or eradicated myriad species of plant and animal life. We are the first generations about whom this can be said.

– Worthington Daily Globe

SAFETY POSTER CONTEST ANNOUNCED

School children in grades four through six are encouraged to participate in the Iowa Conservation Commission's sixth annual poster contest aimed at promoting water safety. The contest, cosponsored by the American Red Cross, Des Moines Power Squadron, Coast Guard Auxiliary, and the Des Moines IMT Insurance Company, will feature cash prizes and an opportunity to be a guest of the Governor during the signing of the Safe Boating Week Proclamation.

Fourth, fifth and sixth graders throughout Iowa will be competing for the following prizes:

First prize — $200 savings bond; second prize — $100 savings bond; third prize — $75 savings bond. The winners will also receive a certificate of achievement. Prize money is being donated by the IMT Insurance Company in Des Moines. In addition to the above-mentioned awards, other deserving participants will receive honorable mention.

The theme for this year's contest is canoe safety. Deadline for entries is Feb. 1, 1986. For further information and official entry form, contact the Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319-0034; phone 515/281-6824.

IOWA A LEADER IN M.A.R.S.H. DEDICATION

Iowa is the first state in the Mississippi Flyway and the second in the nation to buy and dedicate a wetland area for waterfowl under major cost-sharing with a new program of Ducks Unlimited.

A 102-acre marsh, two miles west of Ruthven on U.S. 18, has been purchased by the State Conservation Commission and was dedicated in ceremonies Oct. 22 on the site. Peter Coors of Golden, Co., national president of DU, and Larry Wilson, director of the commission conducted the dedication.

To be known as DU Marsh, the area was purchased for $57,123 of which 75 percent came from DU's M.A.R.S.H. (Matching Aid to Restoring States Habitat), and 25 percent from the state duck stamp fund. The Conservation Commission will manage the area and is interested in purchasing additional wetlands in the vicinity.

The M.A.R.S.H. program was begun by DU to improve waterfowl production areas in the lower 48 states, compared to that organization's previous history of spending about all of the money it raises on Canadian habitat projects. Based on the amount of money raised at DU fund raising dinners in Iowa, which is among the national leaders on a per capita basis, and that a portion of the state duck stamp funds are contributed to DU, Iowa qualifies for a total of nearly $90,000 in DU funds to use on the M.A.R.S.H. program.

Faraway People from Faraway Places

Ron Johnston, hatchery manager at Decorah, has met many people during his years of service in "trout country". But he always enjoys the surprises each year when selling trout stamps and fishing licenses. It seems that you can never tell what distant places these anglers come from to try their luck at Iowa trout.

This year people showed up from Illinois, Missouri, and South Dakota which is not too unusual. Ron also sold licenses to people from Great Falls, Montana; Washington D.C.; Bethesda, Maryland; Durham, North Carolina; and Houston, Texas.

But this year's topper has to be angler Christophe Chabenat from Vierzon, France. When Christophe got home do you suppose he thrilled his buddies with tales of fishing the wild North Bear or maybe how he picked up a few fish at Waterloo creek. Isn't that where Napoleon got his?

ALL-TIME TOP TEN RACKS

Shotgun Typical

Name	Address	Year	County Taken	Total Score
Wayne A. Bills	Des Moines	1974	Hamilton	199⅝
George L. Ross	Ottumwa	1969	Wapello	195⅛
*Bob Jackson	Winterset	1983	Madison	191
Gregg Redlin	Iowa City	1983	Johnson	187⅞
Dennis Vaudt	Storm Lake	1974	Cherokee	187⅝
Randall Forney	Glenwood	1971	Fremont	186⅜
Jack W. Chidester, Jr.	Albia	1976	Monroe	186⅛
Franklin Taylor	Blencoe	1976	Monona	185⅞
Taylor Wilson	Exira	1982	Audubon	185⅝
Marvin Tippery	Council Bluffs	1971	Harrison	185⅛

Bow and Arrow Typical

Name	Address	Year	County Taken	Total Score
Lloyd Goad	Knoxville	1962	Monroe	197⅝
Robert Miller	Wyoming	1977	Jones	194⅜
Richard Swim	Des Moines	1981	Warren	190⅝
Gary Wilson	Cherokee	1974	Cherokee	175⅛
Gordon Hayes	Knoxville	1973	Marion	175⅛
Don McCullough	Conesville	1980	Muscatine	174⅞
*Ken Dausener	Dubuque	1984	Jones	174⅛
Jack Douglas	Creston	1974	Union	173⅜
Ardie Lockridge	Amana	1965	Iowa	172⅜
Ambrose Beck	Goose Lake	1963	Jackson	171⅛

Shotgun Nontypical

Name	Address	Year	County Taken	Total Score
Larry Raveling	Emmetsburg	1973	Clay	282⅝
Carroll Johnson	Moorhead	1968	Monona	256⅜
David Mandersheid	Welton	1977	Jackson	253⅛
Duane Fick	Des Moines	1972	Madison	228⅜
LeRoy Everhart	Sumner	1969	Van Buren	224⅛
Todd Hawley	Panora	1982	Guthrie	224⅛
Donald Crossley	Hardy	1971	Humboldt	221⅛
Mike Pies	Ackley	1977	Hardin	221⅛
George Foster	Creston	1968	Union	220
John Meyers	Council Bluffs	1969	Pottawattamie	218⅛

Bow and Arrow Nontypical

Name	Address	Year	County Taken	Total Score
Jerry Monson	Clear Lake	1977	Cerro Gordo	220⅞
Blaine Salzkorn	Sutherland	1970	Clay	218⅛
Chris Hackney	Alberton	1983	Wayne	211⅝
Phillip M. Collier	Burlington	1978	Des Moines	203⅝
Bill Erwin	Sioux City	1966	Woodbury	202⅝
Dorrance Arnold	Oelwein	1977	Clayton	200⅝
Dennis Ballard	Iowa City	1971	Johnson	197⅛
Marsha Fairbanks	Martelle	1974	Jones	197⅛
Tim Digman	Dubuque	1981	Lee	190⅝
Jim Monat	Waterloo	1981	Clayton	189⅜

*new top ten entry

1986 Application for Seedlings

Our State Forest Nursery grows tree and shrub seedlings for conservation uses on Iowa lands. We encourage you to plant for reforestation, wildlife habitat and erosion control.

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The Nursery notifies pickup orders by postcard when the order is ready. Bring the postcard when you come to the Nursery.

Please remember that a seedling's success depends upon proper planting and protection from weeds and livestock.

If you have any questions, write the Nursery at 2404 South Duff Avenue, Ames, Iowa 50010, or call 515/294-4622, Monday through Friday, 8:00 a.m. to 4:30 p.m.

GENERAL INFORMATION

Species	Mature Size Range	Moisture			Light		Remarks
		Dry	Well Drained	Moist	Full Sun	Some Shade	
White Pine	50-80'		X	X	X	X	Intolerant of air pollutants. Good timber tree. Adaptable to most sites. Native to NE Iowa.
Scotch Pine	30-60'	X	X		X		Hardy. Adaptable.
Red Pine	50-80'		X		X		Requires cool sites. Good timber tree.
Ponderosa Pine	60-100'	X	X		X		Recommended for Western Iowa only.
Jack Pine	35-50'	X	X		X		Hardy and adaptable. Good cover for coal spoil banks.
Red Cedar	40-50'	X	X	X	X		Tolerates poor, gravelly soils; prefers airy site. Very drought resistant. Good wildlife food and habitat. Native.
Black Walnut	50-70'		X		X		Valuable wood products tree. Good firewood. Requires deep, rich, well-drained soil. Native.
Green Ash	50-60'		X	X	X		Valuable wood products tree. Very good firewood. Native.
Shagbark Hickory	60-80'		X		X		Wood products. Excellent firewood. Native to all but NW corner of state.
Silver Maple	60-80'		X	X	X	X	Bottomland sites. Valuable wood products trees. Good firewood. Native.
Red Oak	60-80'		X	X	X		Valuable wood products tree. Excellent firewood. Native to all but NW corner of state.
Bur Oak	70-80'	X	X	X	X		Adaptable to various soils. Excellent firewood. Staves and railroad ties. Native.
Mixed Oak							May contain red oak, white oak and bur oak in varying proportions.
Russian Olive	12-25'	X	X		X	X	Very hardy plant. Good food for wildlife. Drought resistant.
Autumn Olive (Cardinal strain)	12-18'		X		X	X	Good wildlife food and habitat. Plant on protected site.
Tatarian Honeysuckle	10-12'	X	X		X	X	Very hardy. Dense growth. Good wildlife habitat and food for birds. Fruit available July-August.
Amur Honeysuckle	12-15'	X	X		X	X	Occasional winter killing of branches in northern Iowa. Fruit available in September-November. Good wildlife habitat and food for birds.
Ninebark	5-9'		X	X	X	X	Very hardy. Good wildlife habitat. Native to most of state.
Redosier Dogwood	7-9'		X	X	X	X	Producers cluster of stems from ground. Good wildlife food and habitat. Native to NE Iowa.
Gray Dogwood	10-15'	X	X	X	X	X	Hardy. Forms large colony of plants from original. Good cover. Native.
Osage Orange	20-40'	X	X		X		More adaptable to southern Iowa. Withstands poor soil extremely well. Thorny, useful for wildlife habitat.
Common Lilac	8-15'		X		X		Hardy. Shrub border or in groupings. Good wildlife habitat.
Common Chokecherry	20-30'	X	X	X	X	X	Hardy. Good food for wildlife native.
Hybrid Poplar	40-60'	X	X	X	X		Mixed hybrids of cottonwood selected for Iowa. Good for fuelwood plantations.
Shellbark Hickory	60-80'		X	X	X		Bottomland sites. Wood products. Excellent firewood. Large nutmeats. Native to SE Iowa.
Wild Plum	12-15'	X	X	X	X	X	Hardy. Forms thicket. Good wildlife habitat.
Siberian Crab	20-50'		X		X		Large widespreading crabapple with small fruit. White flowers. Excellent wildlife species.
Wildlife packet							200 plants valuable to wildlife. 50 conifers, 50 hardwoods, 100 shrubs chosen by the nursery.
Songbird Packet							Mixed variety of 20 shrubs beneficial to songbirds.

1986 APPLICATION FORM

IOWA CONSERVATION COMMISSION

2. ADDRESS
(Please Print)

(LANDOWNER NAME — **PLEASE PRINT**)

(MAIL ADDRESS)

(CITY) (STATE) (ZIP)

(PHONE NUMBER)

3. Check pickup or ship box.

☐ **I will pick up my order at the nursery when notified.**

☐ **I want my order shipped to the address above.**

SHIPPING ADDRESS
(If different from above)

(NAME — **PLEASE PRINT**)

(MAIL ADDRESS)

(CITY) (STATE) (ZIP)

(PHONE NUMBER)

4. Please Answer Each Question

1. These trees are to be planted in _____ County.
2. Are you a tax-exempt government? Yes ☐ No ☐
3. Have you purchased plants from the Nursery before? Yes ☐ No ☐
4. I RECEIVED ASSISTANCE IN PLANNING THIS ORDER FROM: 1. ☐ No one, 2. ☐ Soil Conservation Service, 3. ☐ ASCS, 4. ☐ County Extension Service, 5. ☐ District Forester, 6. ☐ Conservation Officer, 7. ☐ Wildlife Biologist, 8. ☐ County Conservation Board, 9. ☐ State Nursery
5. MAIN PURPOSE OF PLANTING: 1. ☐ general forestry, 2. ☐ wildlife habitat, 3. ☐ erosion control, 4. ☐ Christmas trees, 5. ☐ other.
6. THE PLANTING LOCATION IS: 1. ☐ farm, 2. ☐ city, 3. ☐ acreage, 4. ☐ government land, 5. ☐ other.

5. Sign the agreement. Fill in your mailing address.

I agree to plant and use the nursery stock requested upon the described property for establishing or improving existing forests, erosion control, game or water conservation, with these restrictions: I agree NOT to resell or give these plants away with roots attached to any person, firm, corporation or agency nor to plant any of them for new windbreak, shade, or ornamental purposes. I agree to protect all plantings from fire and domestic livestock grazing. I agree to forfeit for destruction any trees planted or used in violation of the above restrictions.

Landowner Signature

PLEASE PRINT

Gift for _____

Street/R.F.D._____

City/State_____ Zip_____

☐ 1 YEAR $5.00 ☐ 3 YEARS $10.00

Gift for _____

Street/R.F.D._____

City/State_____ Zip_____

☐ 1 YEAR $5.00 ☐ 3 YEARS $10.00

Gift From _____

Street/R.F.D._____

City/State_____ Zip_____

☐ 1 YEAR $5.00 ☐ 3 YEARS $10.00

ALL GIFT ORDERS MUST BE PREPAID. Mail this form with your remittance in the envelope.
Please make checks payable to IOWA CONSERVATION COMMISSION
Please allow 8 weeks for delivery of first issue.
☐ Upon request, gift cards will be sent.

Redosier Dogwood	8-18"	8.00	18		
Gray Dogwood	6-12"	8.00	07		
Osage Orange	8-16"	8.00	14		
Common Lilac	6-12"	8.00	47		
Choke Cherry	8-16"	8.00	39		
Hybrid Poplar (rooted cutting)	8"	8.00	53		
Shellbark Hickory	4-12"	8.00	09		
Wild Plum	10-18"	8.00	31		
Siberian Crab	6-12"	8.00	55		

Wildlife and songbird packets can be ordered separately.

	Cost/ Packet	Code	Number of Packets Wanted	Office Use Only
Wildlife Packet	$19.00	96		
Songbird Packet	10.00	95		

1986 Applicatic

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Species	Mature Size Range						
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Red Pine	50-80'						
Ponderosa Pine	60-100'						
Jack Pine	35-50'						
Red Cedar	40-50'						
Black Walnut	50-70'						
Green Ash	50-60'						
Shagbark Hickory	60-80'						
Silver Maple	60-80'						
Red Oak	60-80'						
Bur Oak	70-80'						
Mixed Oak							
Russian Olive	12-25'						
Autumn Olive (Cardinal strain)	12-18'						
Tatarian Honeysuckle	10-12'						
Amur Honeysuckle	12-15'						
Ninebark	5-9'						
Redosier Dogwood	7-9'		X	X	X	X	Producers cluster of stems from ground. Good wildlife food and habitat. Native to NE Iowa.
Gray Dogwood	10-15'	X	X	X	X	X	Hardy. Forms large colony of plants from original. Good cover. Native.
Osage Orange	20-40'	X	X		X		More adaptable to southern Iowa. Withstands poor soil extremely well. Thorny, useful for wildlife habitat.
Common Lilac	8-15'		X		X		Hardy. Shrub border or in groupings. Good wildlife habitat.
Common Chokecherry	20-30'	X	X	X	X	X	Hardy. Good food for wildlife native.
Hybrid Poplar	40-60'	X	X	X	X		Mixed hybrids of cottonwood selected for Iowa. Good for fuelwood plantations.
Shellbark Hickory	60-80'		X	X	X		Bottomland sites. Wood products. Excellent firewood. Large nutmeats. Native to SE Iowa.
Wild Plum	12-15'	X	X	X	X	X	Hardy. Forms thicket. Good wildlife habitat.
Siberian Crab	20-50'		X		X		Large widespreading crabapple with small fruit. White flowers. Excellent wildlife species.
Wildlife packet							200 plants valuable to wildlife. 50 conifers, 50 hardwoods, 100 shrubs chosen by the nursery.
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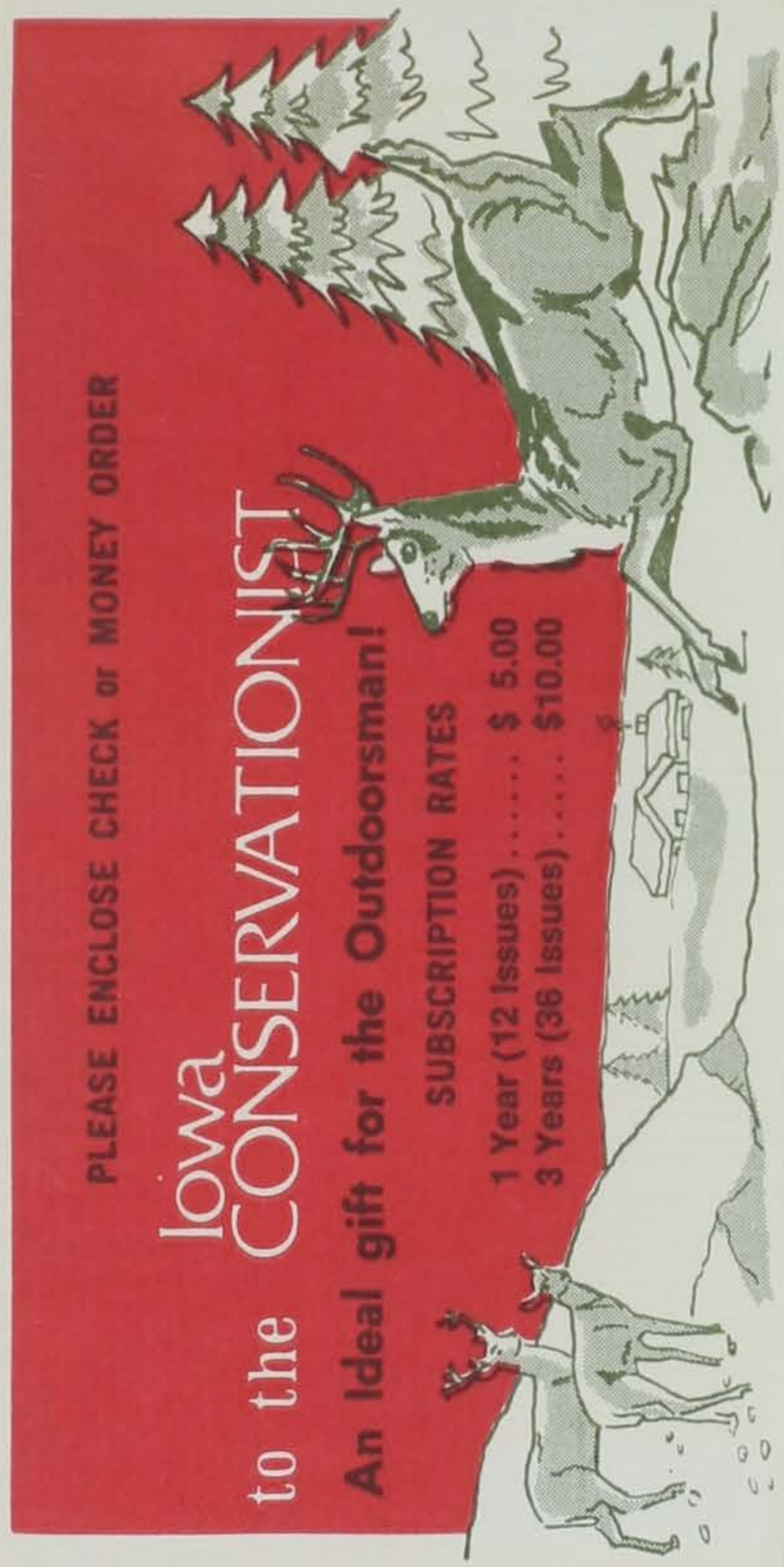
IMPORTANT Tear off Flap on perforation before sealing

REMEMBER TO ENCLOSE PROPER REMITTANCE WITH ORDER



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Red Pine

Ponderosa Pine

Jack Pine

Red Cedar

Black Walnut

Green Ash

Shagbark Hickory

Silver Maple

Red Oak

Bur Oak

Mixed Oak

Russian Olive

Autumn Olive (Cardinal strain)

Tatarian Honeysuc

Amur Honeysuckle

Ninebark

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 781 DES MOINES, IOWA

POSTAGE WILL BE PAID BY

Iowa CONSERVATIONIST

WALLACE STATE OFFICE BUILDING
DES MOINES, IOWA 50319-0034

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

Redosier Dogwood	7-9'		X	X	X	X	Producers cluster of stems from ground. Good wildlife food and habitat. Native to NE Iowa.
Gray Dogwood	10-15'	X	X	X	X	X	Hardy. Forms large colony of plants from original. Good cover. Native.
Osage Orange	20-40'	X	X		X		More adaptable to southern Iowa. Withstands poor soil extremely well. Thorny, useful for wildlife habitat.
Common Lilac	8-15'		X		X		Hardy. Shrub border or in groupings. Good wildlife habitat.
Common Chokecherry	20-30'	X	X	X	X	X	Hardy. Good food for wildlife native.
Hybrid Poplar	40-60'	X	X	X	X		Mixed hybrids of cottonwood selected for Iowa. Good for fuelwood plantations.
Shellbark Hickory	60-80'		X	X	X		Bottomland sites. Wood products. Excellent firewood. Large nutmeats. Native to SE Iowa.
Wild Plum	12-15'	X	X	X	X	X	Hardy. Forms thicket. Good wildlife habitat.
Siberian Crab	20-50'		X		X		Large widespreading crabapple with small fruit. White flowers. Excellent wildlife species.
Wildlife packet							200 plants valuable to wildlife. 50 conifers, 50 hardwoods, 100 shrubs chosen by the nursery.
Songbird Packet							Mixed variety of 20 shrubs beneficial to songbirds.

1. Fill in the "number wanted" column.
PLANTS AVAILABLE

Species	Height	Cost/ Hundred (taxes, shipping, and handling are included)	Code	Number of plants in units of 100	Office Use Only
(Do not order less than 500 plants, and order in units of 100)					
White Pine	5-12"	$8.60	30		
Scotch Pine	5-12"	8.60	20		
Red Pine	6-14"	8.60	17		
Ponderosa Pine	5-12"	8.60	15		
Jack Pine	6-14"	8.60	10		
Red Cedar	6-12"	8.60	16		
Black Walnut	10-18"	8.60	24		
Green Ash	8-18"	8.00	08		
Shagbark Hickory	4-12"	8.00	52		
Silver Maple	8-18"	8.00	21		
Red Oak	8-18"	8.00	41		
Bur Oak	8-18"	8.00	04		
Mixed Oak	8-18"	8.00	51		
Russian Olive	8-16"	8.00	19		
Autumn Olive	8-16"	8.00	03		
Tatarian Honeysuckle	8-16"	8.00	23		
Amur Honeysuckle	8-16"	8.00	01		
Ninebark	8-16"	8.00	12		
Redosier Dogwood	8-18"	8.00	18		
Gray Dogwood	6-12"	8.00	07		
Osage Orange	8-16"	8.00	14		
Common Lilac	6-12"	8.00	47		
Choke Cherry	8-16"	8.00	39		
Hybrid Poplar (rooted cutting)	8"	8.00	53		
Shellbark Hickory	4-12"	8.00	09		
Wild Plum	10-18"	8.00	31		
Siberian Crab	6-12"	8.00	55		

Wildlife and songbird packets can be ordered separately.

	Cost/ Packet	Code	Number of Packets Wanted	Office Use Only
Wildlife Packet	$19.00	96		
Songbird Packet	10.00	95		

1986 APPLICATION FORM

IOWA CONSERVATION COMMISSION

2. ADDRESS
(Please Print)

(LANDOWNER NAME — **PLEASE PRINT**)

(MAIL ADDRESS)

(CITY) (STATE) (ZIP)

(PHONE NUMBER)

3. Check pickup or ship box.

☐ **I will pick up my order at the nursery when notified.**

☐ **I want my order shipped to the address above.**

SHIPPING ADDRESS
(If different from above)

(NAME — **PLEASE PRINT**)

(MAIL ADDRESS)

(CITY) (STATE) (ZIP)

(PHONE NUMBER)

4. Please Answer Each Question

1. These trees are to be planted in _____ County.
2. Are you a tax-exempt government? Yes ☐ No ☐
3. Have you purchased plants from the Nursery before? Yes ☐ No ☐
4. I RECEIVED ASSISTANCE IN PLANNING THIS ORDER FROM: 1. ☐ No one, 2. ☐ Soil Conservation Service, 3. ☐ ASCS, 4. ☐ County Extension Service, 5. ☐ District Forester, 6. ☐ Conservation Officer, 7. ☐ Wildlife Biologist, 8. ☐ County Conservation Board, 9. ☐ State Nursery
5. MAIN PURPOSE OF PLANTING: 1. ☐ general forestry, 2. ☐ wildlife habitat, 3. ☐ erosion control, 4. ☐ Christmas trees, 5. ☐ other.
6. THE PLANTING LOCATION IS: 1. ☐ farm, 2. ☐ city, 3. ☐ acreage, 4. ☐ government land, 5. ☐ other.

5. Sign the agreement. Fill in your mailing address.

I agree to plant and use the nursery stock requested upon the described property for establishing or improving existing forests, erosion control, game or water conservation, with these restrictions: I agree NOT to resell or give these plants away with roots attached to any person, firm, corporation or agency nor to plant any of them for new windbreak, shade, or ornamental purposes. I agree to protect all plantings from fire and domestic livestock grazing. I agree to forfeit for destruction any trees planted or used in violation of the above restrictions.

Landowner Signature

Nature Tale for Kids

OTUS, THE URBAN SCREECH OWL

By Dean M. Roosa

The tremulous call of the screech owl, frightening to some humans, comforting to others, is a regular part of the sounds heard in Iowa, especially in those few hours after sunset. These small owls are less than ten inches long and have a wingspan up to two feet. They are very beneficial, permanent residents in Iowa. Often nesting in orchards and woodlots and residential areas in towns, they use cavities of trees or nest boxes, and feed on a variety of items, but mainly small mammals. Our story begins on a small Iowa farm.

* * *

Screech owls, known to ornithologists as *Otus asio*, occur in two color phases, red and grey. Birds in the same nest may be of different color phases, which is a response to their thermal efficiency and need not concern us, except to say that Otus, the subject of our story, was red.

Otus hatched in the cavity of an old basswood tree just outside the door of a friendly family on a small farm near a city in east-central Iowa. The family in the nearby house was no ordinary family. The presence of a screech owl family in their yard sent them scurrying to the library to learn about the birds.

When Otus fell from the nest, they took him into their home for a day to make sure he wasn't injured, then returned him to his cavity-nest. Otus enjoyed that experience. He stood on the kitchen table and begged for food. The family didn't even mind if Otus made a little mess here and there! The parent owls were not all that enthusiastic about one of their youngsters being taken into the house, even by the well-meaning family. Needless to say they were relieved when Otus was popped back into the nest. Otus was soon back out, this time perched on the porch railing. The worried parents were "dive-bombing" anyone who came close, even giving the old, gentle housecat a face full of talons and feathers as he emerged from the house. Otus was again returned to the nest, but an hour later was perched on the clothesline pole. Before long, much to the parent's relief, Otus and his four nest-mates learned to hunt. They all became self-sufficient and scattered to the countryside.

Illustration by Brian Bemisdarfer

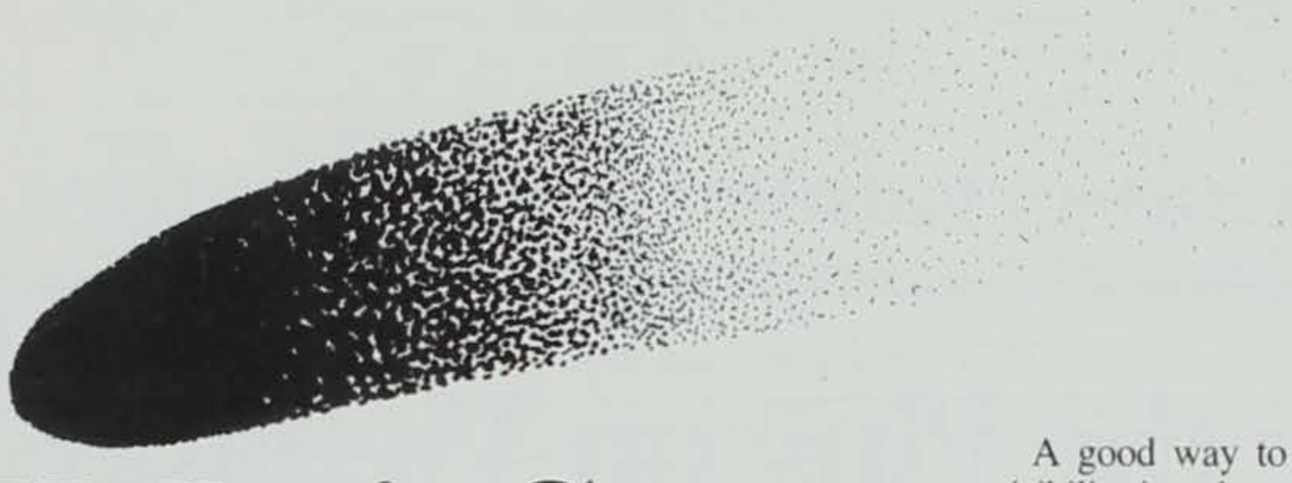
While his brothers and sisters remained near the farm in other farm groves, Otus started wandering toward the large town in the distance. At the city park, a great-horned owl tried to make supper out of him one evening. He then visited a residential district, where he was chased away by a screech owl family. Soon he was seen in the heart of the downtown business district. Otus had always somewhat enjoyed being near humans and didn't mind the hundreds of people passing by each day. By night he would hunt the alleys and the river that flowed close by. His calls often startled people working late at City Hall, but eventually they grew accustomed to it and even liked it.

Otus spent one summer, fall and winter in this urban setting, his solitary silhouette becoming a familiar sight to urban dwellers. A picture of him, sitting atop the flagpole at City Hall, appeared in the local paper. One cold January day his sudden appearance at a window at City Hall disrupted a city council meeting for ten minutes.

In late winter, workers thought they saw two owls. Sure enough, a female owl from a woodland by the river, had responded to Otus' calls. Otus, a red-phase owl, and his mate, a grey-phase owl began to search for a suitable nest site. They found a cavity behind loose boards in an abandoned builidng just across the street from City Hall, and soon only one owl was seen as incubation began.

In mid May, City Hall workers noticed that the little red owl suddenly became a little red tyrant, "dive-bombing" them as they passed the old abandoned building. They didn't know the reason, and began to avoid the area. It all made sense two weeks later, when four fuzzy owlets were lined up on the building roof. Sadly, one was hit by a car, but the other three soon were seen flying and hunting. They dispersed to nearby woodlands, leaving Otus and his mate to guard City Hall.

As you enter City Hall in a large eastern Iowa town, you may see a tiny owl with "horns" sitting close by. Doff your hat to Otus, the urban screech owl. Should he "dive-bomb" you, he's only doing what the centuries have taught his race. Give him my regards.



Hail to Halley's Comet

By Marlyn Smith

Watch it! Here it comes, zooming through space at 118,000 miles per hour. This incredible flying object will grow and glow before your eyes. Not since 1910 has this once-in-a-lifetime show been viewed by human eyes. This show is free. It's Halley's Comet!

Possibly as old as the earth itself, Halley's Comet will be passing earth this next year while keeping its regular rendezvous with the sun. Every 76 years since 240 B.C., people have recorded Halley's Comet in fear and wonder. Many have viewed it as a messenger of doom. New worries surfaced with the 1908 discovery that a comet's tail contained cyanogen gas, which is poisonous and flammable. And, in 1910 the earth was to pass through the comet's tail. Would this truly be the end of the world? Scientists said nothing would happen, since the gaseous tail could not penetrate the earth's atmosphere. Still people prepared themselves for the worst. They latched their windows and locked their doors tight. Enterprising individuals profitted by selling gas masks and "comet pills" to the fearful.

The earth did pass through the comet's tail. Scientists were right — nothing happened. So beware of "comet pill" pushers this year and start preparing for a relaxed, educational and enjoyable view of this heavenly traveller.

While there is still much to learn about comets, our knowledge has grown. Every 77 years Halley's Comet (rhymes with alley or jolly — there is still disagreement) travels greater than six billion miles on its elliptical journey around the sun. Resembling a huge, dirty snowball, the comet consists of frozen gasses and dust particles. At the far end of its orbit — more than three billion miles from the sun — the comet's diameter is only three to four miles. As it approaches the sun, the frozen gasses "melt" and expand to their gaseous state, carrying the dust with them. This dusty, gas cloud forms the comet's head, and may swell to 100,000 miles in diameter. When the comet travels in the winds blowing away from the sun, gasses and dust from the head are caught in the solar wind and are carried away from the comet's head, creating the tail. This is why a comet's tail always extends away from the sun.

The 1985-1986 return of Halley's Comet was first confirmed in 1982 through a 200 inch telescope — the largest in the United States. Most of us, however, will first experience it in December 1985 with binoculars, or in January when the comet becomes visible to the naked eye. It will look like a dim fuzzy star and will be found low in the evening sky. As January progresses the comet will look fuzzier and its tail will lengthen. Unfortunately, the comet then passes behind the sun in late January not to reappear until early March, low in the southeastern morning sky. Best viewings should be in late March and early April in the morning sky.

Because of the earth's and the comet's orbital motions around the sun, Halley's Comet will be less spectacular than in 1910. It will probably be no brighter than the Northern Star. Unfortunately for us northerners, the comet's best viewing will be in the southern lattitudes. If you've been thinking about vacationing in Australia or New Zealand, the comet should be a big plus for planning your trip this year.

Don't be discouraged, however, if distant travels are not in your plans. Halley's Comet will be visible in Iowa, but low on the horizon. Because of the more difficult viewing, it is important to locate a good observation site far from city lights or the haze of pollution. This may be your backyard (with all the lights turned off), a field, or a county or state park. Many Iowa parks offer good viewing, especially those in the southern part of the state, since the comet will be close to the southern horizon at its peak viewing time.

A good way to check a site's night visibility is to let your eyes adjust to the dark (give them 10 to 20 minutes) and then search for the Milky Way (make sure you know where to look for it). If it can be seen, you are half way there. Since Halley's Comet will appear low on the horizon in Iowa, the next thing to check for are unobstructed views. January viewings need a clear western horizon, while March and April require clear southeastern views. While in search for a good observation site, familiarize yourself with the stars and constellations. Stargazing is a fascinating hobby and the more you know about the sky, the easier spotting Halley's Comet will be.

Many organizations are gearing up for this astronomical event. Halley's Comet provides a unique opportunity for night sky interpretation. Two Cedar Rapids organizations, for example, are already anticipating the growing interest in the sky as Halley's Comet approaches. Indian Creek Nature Center has already had one comet program this fall and on November 16, the center will sponsor "Halley's Comet and Optics for Viewing It". It is a program more specifically about Halley's Comet and how to see it from Iowa.

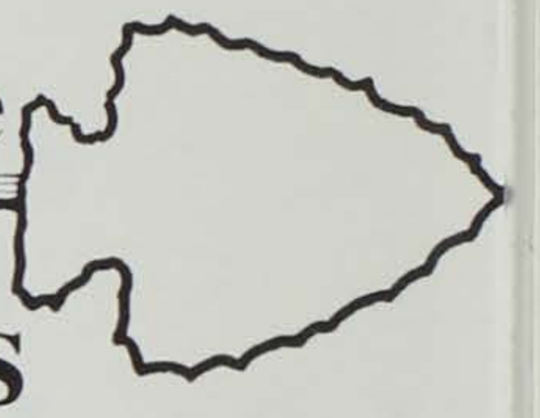
A second group, the Cedar Astronomers, has launched a fund drive for setting up an observatory east of Cedar Rapids. They hope to have it completed in time for observing Halley's Comet.

Events and programs will be planned throughout the state. To find out what's happening near you, check with your county naturalist, the local papers, state parks, nature center and astronomy societies.

For 22 centuries people have observed and recorded the passage of Halley's Comet. Improved technology since 1910 will give us a chance to learn about and enjoy this comet as never before. Take advantage of this once-in-a-lifetime opportunity. Here is comes — watch it!

Marlyn Smith is an intern at the Indian Creek Nature Center, while completing her M.S. in environmental education and interpretive services administration from George Williams College, Downers Grove, Illinois.

County Conservation Board Feature



Pulling the Plug on Wetlands

By Paul Totten

Wetlands. Rather a vague term for everything from lakes and rivers to wet meadows and seeps, wetlands represent a vital part of our environment. Once universally regarded as wasteland, wetlands have long been the focus of intense efforts to convert them into "productive" areas.

Vast acreages of swamps, shallow lakes, marshes and prairie potholes have been filled, or tiled, ditched and drained to allow cultivation of the fertile soils beneath them. Winding streams and rivers have been straightened to speed the removal of excess surface water and runoff. To prevent flooding of low-lying areas, artificial riverbanks have been constructed which restrict the spread of water.

Man has redesigned an extremely complex system, permitting more intense human activity. In that, at least, we have been successful.

Millions of acres of fertile cropland have been made available for agricultural pursuits. Bottomlands once periodically inundated by floodwaters have been "reclaimed" for homes, farms and communities. But what has it cost? Let's look at the other side of the ledger.

What are wetlands? What is their value? How has this mass reclamation affected the roles that wetlands play in the ecology of our planet?

Often referred to as swamps, sloughs, marshes, potholes, wet meadows, lakes, bogs and seeps, wetlands are low-lying areas where water stands, or flows continually or periodically. The diversity and abundance of aquatic plants, varying water levels, the intermingling of wetland areas with grasslands, forests and agricultural areas all contribute to the perpetuation of wildlife species dependent on wetland habitat. It is generally recognized that wetlands are the most productive of all wildlife habitats.

Offspring of the 10-12 million ducks that breed annually in the lower 48 states are direct products of wetlands. Most of these waterfowl breed in the prairie pothole region of the upper midwest alone.

Many fish and furbearing mammals are also products of wetlands, as are millions of other water birds, shore birds and songbirds. Early accounts of flora and fauna in the midwest repeatedly refer to the awesome abundance of wildlife.

Of the more subtle contributions of wetlands to the health of our environment, two critical roles have just recently been realized — those of flood control and water purification. *Our Nations Wetlands*, an Interagency Task Force Report drafted in 1978 by the U.S. Departments of Agriculture, Defense, Commerce, Interior and the Environmental Protection Agency, makes the following statements:

"Wetlands frequently play an important role in natural flood protection. The preservation of wetlands upstream from developed areas provides overflow areas where floodwaters do little damage. The wetlands reduce the severity of floods by allowing floodwaters to spread out, by slowing their flow and by temporarily storing water. Thus, downstream floods may last longer, but they will peak at lower levels.

"One of the most vital hydrological functions of wetlands is detention storage. At times of heavy rainfall, water flows into the marshes which overrun their margins onto a wide area of land. There the water is retained for slow release into streams; sometimes it percolates into aquifers to increase ground water supplies.

"A flood may be less destructive when marshes and swamps slow velocity and desynchronize peaks of tributary streams as the waters flow through their impeding vegetation and into the main stream. If wetland areas are filled and streams channelized, floodwaters will flow unimpeded to downstream areas, often causing severe damage from high velocities and flood heights.

"The role of wetlands in reducing the pollution levels in water has recently become one of the most compelling arguments for their preservation. Because wetland ecosystems hold nutrients, they simultaneously act as a pollution filtration system. Water arriving from such 'point' sources as wastewater treatment plants and from such 'non-point' sources as runoff from agricultural fields and city streets carried a high level of pollutants, particularly excess levels of nitrogen and phosphorus. As the water circulates through a wetland, the plants take up and use these pollutants as nutrients."

Another byproduct of an undisturbed wetland ecosystem is in minimizing soil erosion. Because natural river courses are winding, normal currents are slowed as they wash against the outer banks at each bend. Also, river banks, bends and corresponding bottomlands produce a substantial vegetative buffer which acts to absorb runoff and to impede the infusion of excess water into the main stream. Runoff is slowed, reducing its erosive potential on shorelines, banks and adjacent lands.

As stated earlier, wetlands were initially regarded as non-productive wasteland. Federal legislation passed in the mid 1800's appropriating funds for states to begin the reclamation of "swamps". In Iowa, marshes and prairie potholes were first targeted for these efforts. As these were drained, the volume of water once stored by this system and slowly released into the major waterways and aquifers was diverted directly into the rivers and streams by tile lines and ditches.

These efforts, coupled with accelerated forest removal and cultivation, greatly increased runoff into the waterways. Unable to absorb and carry off this increased volume, flooding became more frequent and severe.

It then became necessary to alter the watercourses themselves to allow this excess water to be removed more quickly. Stream straightening, or channelization, was seen as the answer. In Iowa, 3000 miles of inland streams were eliminated in this transformation. This prac-

tice also provided additional farmland where river bends and their forested bottomlands once existed.

To further control flooding, levees were constructed to contain the higher water levels within the new channels. Once meandering, lazy rivers became fast-flowing, straight-line ditches, chuting water away downsteam.

Waterways that had carried little sediment and other pollutants, receiving little and dropping off much of what they did receive in flooded bottomlands and backwater areas, became charged with soil churned up by rampant runoff and scoured off riverbanks. The faster flows also cut the river bottoms deeper, lowering adjacent water tables already denied replenishment by the draining of other wetlands. Shallow wells dried up and smaller tributaries began to run dry during periods of drought.

Declining waterfowl populations were among the first obvious indications that man's activities were having an impact on the environment. Fish populations were also affected. In one study of a channelized stream, the Chariton River, pounds of fish per acre of water was only 53 pounds, 40 years after channelization, compared to 304 pounds in an unchannelized section. Catchable-sized food and sport fish were almost 90 per cent less in the channelized reach.

It would seem that wetlands aren't wastelands after all. In fact, they contribute generously, or used to, to our well-being and to the health and wholeness of our environment.

Acre for acre, wetlands produce more wildlife — in numbers and variety — and more plant growth than *any other habitat*. Wetlands provide areas for waterfowl breeding, feeding and for resting during migration. Wetlands provide clear water needed by spawning fish and submerged plants, and nursery areas for fish that live in larger bodies of water.

Wetlands serve as filters for silt-laden runoff water. Solids are removed, resulting in cleaner water entering our steams and lakes. Wetlands recharge ground water supplies and flowing springs. They act as temporary storage basins for flood waters and so control extremes of stream flow. They serve as traps for phosphates, nitrates, pesticides and toxic metals before the water reaches lakes and streams.

Wetlands help protect shorelines and banks from soil erosion. They provide unique and valuable recreational, scientific and educational opportunities.

Wetlands are still being destroyed.

Despite all we know and all we are learning about the strands that wetlands represent in the web of life, some still regard them as something to be done away with. Even in the eyes of Iowa law (Chapter 455.2, Code of Iowa), the following presumption is made:

"The drainage of surface waters from agricultural lands and all other lands or the protection of such lands from the overflow shall be presumed to be a public benefit and conducive to the public health, convenience and welfare."

This perception is sorely in need of review. Over 95 percent of Iowa's original wetlands have been destroyed, and it is inconceivable that the disruption of natural processes and wildlife habitat that have resulted from this destruction could possibly be interpreted as a "public benefit".

We need to re-examine our disregard for the value of wetlands, and commit ourselves to protecting this endangered resource from any further attempts at "reclamation".

Paul Totten is a park ranger. He holds an Associate degree in applied science in parks and natural resources from Kirkwood Community College in Cedar Rapids.

Ty Smedes

Another Record Year f

By Roger Sparks

Some 120 thousand Iowa deer hunters are looking down the barrels and broadheads of another outstanding year. The shotgun seasons run from Dec. 7 to Dec. 11 or from Dec. 14 to Dec. 20. The special muzzleloader season begins Dec. 21 and ends Dec. 27. Bow hunters began Oct. 12 and will call it quits Dec. 6.

Last year's kill for both gun and bow hunters was just under 40,000. That was the all-time record deer harvest in Iowa. This year, according to Lee Gladfelter, wildlife research biologist for the Iowa Conservation Commission, should be even better.

"The deer population has increased by about eight percent statewide since last year," he said. "And there will be more hunters in the field. But the biggest factor in our expectations of a record harvest this season is the increase in any-sex license quotas."

Gladfelter noted that, in an effort to stabilize the growth of the deer herd in certain areas, more any-sex permits rather than the more restrictive buck-only licenses were sprinkled throughout several choices of zones and seasons. He also said that all hunters who applied for the free landowner-tenant permits during the second gun season will receive any-sex licenses. This adds up to a 40 percent increase in any-sex permits throughout all gun seasons, which should increase the kill of antlerless deer.

"The only thing that could keep us from another record harvest this fall would be extremely bad weather," Gladfelter said.

One thing is certain — professional deer management has been working in Iowa. Since the first modern deer season in the early 1950's, the herd has continued to grow. In response to this herd growth, there has been an increase in recreational opportunity with more licenses issued and longer hunting seasons.

"Our management seeks to balance the high demand for hunting and viewing deer with the need to control populations. The deer herd must be kept compatible with agricultural interests and habitat limitations," Gladfelter said. "We know we can do that by manipulating any-sex license quotas, seasons and limits in specific zones. Right now, our population surveys and other information tell us we need to stabilize or slightly decrease deer numbers in some areas, and increase populations in others."

Things aren't always that simple, though. Gladfelter pointed out that many factors in addition to hunting can affect the herd. Mother Nature occasionally shows her ugly side to Iowans in winter. Although deer rarely die of starvation here as they do in some northern states, many does become stressed during those periods and may have just one fawn rather than two the following spring. There is always the threat of disease on deer populations, and poaching and highway kills take a big toll.

The loss of habitat is a long-range threat to the whitetail in Iowa. The conversion of timber and brush lands to row crop and pasture continues, despite the overproduction and low prices of farm commodities. These factors, plus public acceptance of deer population levels must constantly be monitored. Research and management biologists and conservation officers throughout the state do just that, in determining year-to-year management directions.

"We have to remain flexible," Gladfelter said. "We adjust our objectives in response to changes in public attitudes and other sociological factors, as well as biological data."

When all the information finally sifts through, another quality must be exercised. Gladfelter and company have the tools to dramatically increase or drastically reduce the deer population in a given zone, and are often "pressured" to do one or the other by hunters, landowners and others. That calls for the "prudent use of a little patience."

"When it comes to deer," said Gladfelter, "nobody has a mild opinion."

1985 Records

SHOTGUN TYPICAL

(Minimum Qualifying Score — 150 Points)

Name	Address	Year	County Taken	Total Score
*Bob Jackson	Winterset	1983	Madison	191
Dennis Moose	McGregor	1984	Clayton	184⅝
Noel Harlan	Keosauqua	1984	Van Buren	178⅞
Jim Polo	Chariton	1984	Lucas	177⅝
Byran Comer	Mt. Ayr	1984	Ringgold	175⅜
Dean Grimes	Grand Mound	1984	Clinton	174⅝
Jerome Dittmer	Lacona	1984	Warren	172⅝
Terry Cunard	Missouri Valley	1982	Harrison	171⅛
George Ellis	Mt. Auburn	1984	Wapello	170⅞
Doug Jeanes	Lamoni	1981	Decatur	170⅝
Cecil Erickson	Cumberland	1975	Cass	170⅛
Gale Johnston	Greenfield	1984	Adair	170⅛
Randall Maloy	Ottumwa	1984	Wapello	169⅛
Kenneth Stansbery	Chariton	1984	Lucas	169⅜
Gene Hewlett	Grand River	1984	Decatur	168⅜
Marvin Boyd	Chariton	1984	Lucas	168
Hank Strickler	Centerville	1976	Appanoose	167⅝
Jim Cushing	VanMeter	1984	Madison	167⅛
Steve Davis	Crawfordsville	1984	Washington	166⅝
Dale DeBruin	Oskaloosa	1984	Mahaska	166⅛
Ken Primus	Steamboat Rock	1984	Hardin	166⅛
Steve Mitchell	Monona	1984	Allamakee	166⅛
Jeff Lingel	Solon	1984	Linn	165⅛
Robert Wiedner	Elkader	1983	Clayton	164⅞
Ken Bergfeld	Dubuque	1984	Dubuque	164⅝
Richard Grady	Otho	1984	Webster	164⅜
James Currans	Spencer	1955	Palo Alto	164⅛
Dan Brawe	Massena	1984	Adams	164
Steve Neeley	St. Ausgar	1978	Mitchell	163⅝
Bradley DeLance	Soldier	1984	Monona	163⅝
Ron Vick	McGregor	1984	Winneshiek	163⅜
Gene McMullen	Red Oak	1984	Page	163
Harry Wells	Sloan	1968	Woodbury	163
Howard Christiansen	Denison	1962	Crawford	161⅜
Tom Micetich	Numa	1984	Appanoose	161⅜
Gary Strickley	Udell	1975	Appanoose	161
Mel Stevens	Victor	1984	Not Known	160⅞
David Hergesteg	Northwood	1984	Worth	160⅝
Ted Schneider	Des Moines	1984	Warren	160⅛
Steve Kenkel	Earling	1984	Crawford	159⅛

ar for Deer

SHOTGUN TYPICAL *Continued*

Clarence Ray	Shenandoah	1984	Fremont	159⅛
Ronald Kline	Waterville	1975	Allamakee	159⅛
Ronald Flick	New Hampton	1984		158⅝
Brian Volker	Ryan	1983	Clarke	158⅜
James Kemp, Jr.	Sprague ville	1984	Jackson	158⅛
Max Radford	Glenwood	1984	Mills	158⅛
Mike Stegen	Fort Dodge	1984	Clayton	158⅛
Robert Ferguson	Des Moines	1984	Decatur	157⅞
Dean Anderson	Rembrandt	1983	Buena Vista	157
Allen Ihde	Bondurant	1984	Wayne	157
Cliff Curtis	Pacific Junction	1984	Mills	156⅞
Rick Kirby	Marquette	1984	Clayton	156⅝
Steve Collen	Dayton	1984	Webster	156⅜
Tim Nuckolls	Shenandoah	1984	Page	156⅜
John Taylor	Oakland	1984	Pottawattamie	156⅜
Kelly Laursen	Sac City	1984	Sac	155⅞
Scott Beam	Dow City	1984	Monona	155⅝
Loren Johnson	Arlington	1984	Fayette	155⅛
Ronald Klobnor	Hamilton	1982	Jefferson	154⅞
Brick Madison	Glenwood	1984	Mills	154⅝
Rodney Boock	Wheatland	1984	Clinton	154⅜
Larry Walker	Wapello	1984	Louisa	154⅜
Ronald Colling	Manning	1983	Crawford	154
Alan McKeever	Batavia	1984	Wapello	153⅞
Larry Dunn	Ottumwa	1984	Wapello	153⅝
Steve Becken	Schleswig	1984	Crawford	153⅝
Marvin Robinson	Waterloo	1983	Winneshiek	153⅝
Doug Conard	Spencer	1984	Cherokee	153⅜
Steven Kroger	Inwood	1982	Lyon	153⅜
Lyle Ekstrom	Lanyon	1983	Greene	153
Gary Brotherton	Keokuk	1984	Lee	152⅞
Pat Ogden	North Liberty	1984	Johnson	152⅝
Mark Paulson	Grinnell	1984	Jasper	152⅝
Milton Borcherding	Strawberry Point	1984	Fayette	152⅜
Duane Johnson	Ft. Dodge	1984	Webster	151⅞
Jim Cavanaugh	Charles City	1975	Chickasaw	151⅝
Elvin Waugh	Fort Dodge	1979	Ringgold	151⅝
Bryan Bunting	Ollie	1984	Washington	151⅛
Vince Smith	Washington	1984	Washington	151⅛
Loren Nelson	Denison	1970	Crawford	150⅞
Dick Robinson	Lenox	1982	Ringgold	150⅝
Bruce Grill	Denison	1984	Crawford	150⅝
Ralph Lyons	Hamburg	1963	Fremont	150⅜
Joe Moyer	Hamburg	1984	Fremont	150⅜
Delmer Burk	Bussey	1983	Mahaska	150⅛
Jeff Kinley	Marquette	1984	Clayton	150⅛
Marvin Wehrman	Blakesburg	1979	Monroe	150

SHOTGUN NONTYPICAL

(Minimum Qualifying Score — 170 Points)

Name	Address	Year	County Taken	Total Score
Larry Bain	Altoona	1984	Madison	212⅜
Glenn Carter, II	Montrose	1984	Lee	209
Rob Cadwallader	Sioux City	1984	Monona	208⅜
Fred Siverly	Benton	1984	Ringgold	200
Kenneth Barker	Keosauqua	1984	Van Buren	196⅝
Dewight Jones	Floris	1984	Davis	193⅛
Doug Hopp	Donnellson	1984	Lee	191⅜
Dave Maddison	Albia	1984	Monroe	187
Tom Clasen	Lamotte	1984	Jackson	178⅝
David Waters	Clive	1984	Guthrie	176
Ernest West	Maysville	1981	Clinton	171⅛

BOW & ARROW NONTYPICAL

(Minimum Qualifying Score — 155 Points)

No Entries

BOW & ARROW TYPICAL

(Minimum Qualifying Score — 135 Points)

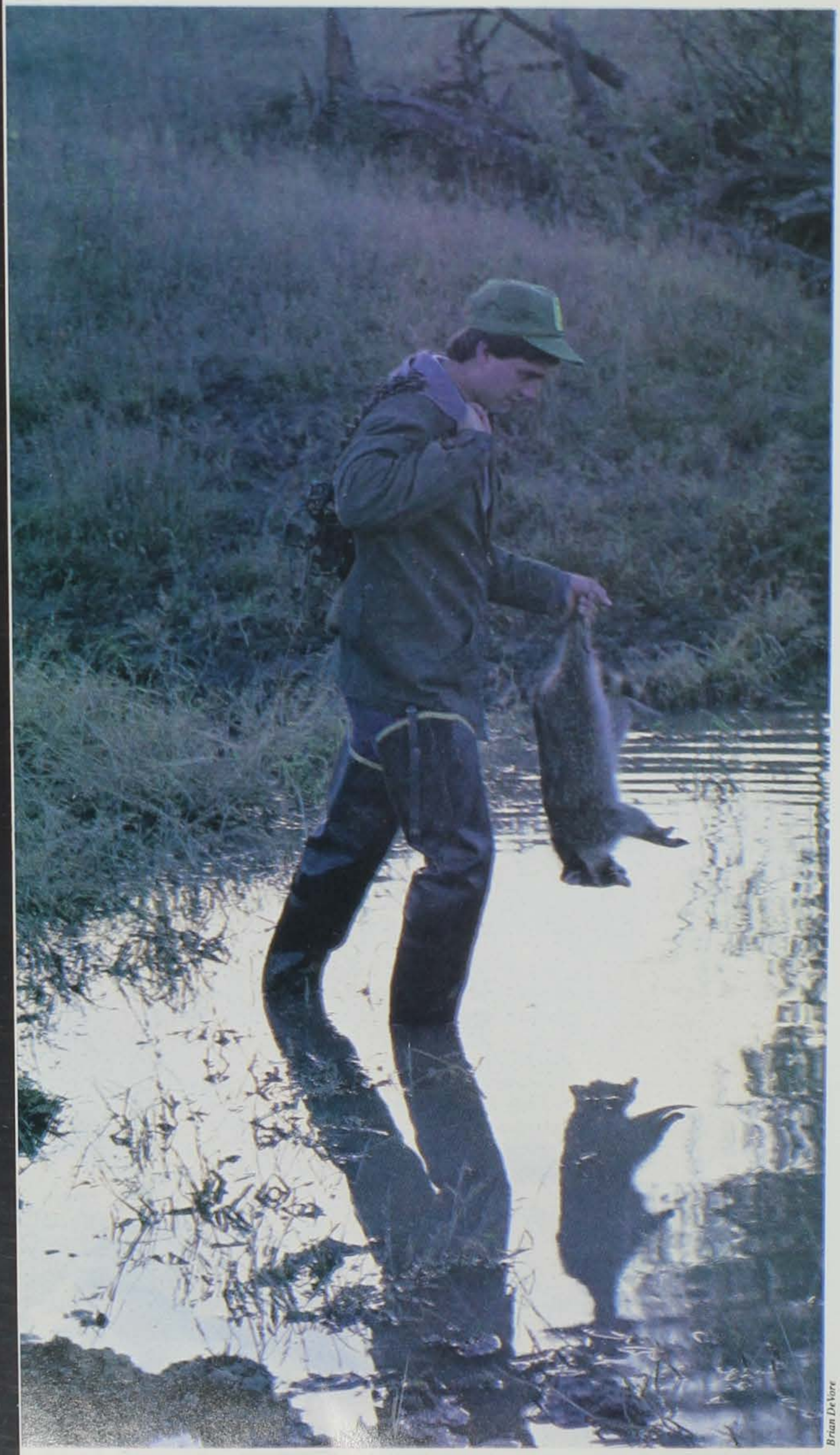
Name	Address	Year	County Taken	Total Score
* Ken Dausener	Dubuque	1984	Jones	174⅛
Al Weidenbacher	Dubuque	1984	Jackson	168⅞
Bryan Whatley	Riverside	1984	Johnson	168
Lloyd Hevlin	Chariton	1984	Lucas	167⅛
Roger Gipple	Columbus Junction	1984	Louisa	164⅜
Dale Spaur	Bussey	1983	Marion	163⅞
Dale Kartman	Strawberry Point	1984	Clayton	162⅝
John Kulper	Garber	1984	Clayton	161⅛
Jeff Lingel	Solon	1984	Linn	159⅛
Chris Doran	Boone	1984	Boone	158⅛
Richard Reed	Creston	1984	Adams	157⅞
Tom Chebuhar	Des Moines	1984	Appanoose	157⅝
Ken Thorndyke	Davenport	1984	Des Moines	157⅝
Robert Russell	Burlington	1984	Des Moines	157⅜
Robert Fales	Council Bluffs	1984	Pottawattamie	154⅜
Pat Ogden	North Liberty	1984	Johnson	152⅝
Ronald Ulstad	Fort Dodge	1977	Webster	152⅜
Mark Beckert	Fort Madison	1984	Lee	152⅛
Jim Whatley	Riverside	1984	Des Moines	152
John Downard	Blue Grass	1984	Louisa	149⅜
Dennis Daniels	Moulton	1984	Appanoose	148⅞
Ralph Livingston	Guttenberg	1984	Clayton	148⅛
C.B. Winey	Denison	1961	Crawford	146⅝
Tom Wilhelm	Dyersville	1984	Delaware	145⅛
Gary Creger	Cresco	1984	Winneshiek	145
Larry Zach	Ankeny	1984	Fremont	144
Jerry Lee	Dakota City	1982	Humboldt	143⅛
Dave Cavanaugh	Ionia	1984	Chickasaw	143⅜
Edward Ulicki	Lehigh	1984	Webster	143⅜
Todd Simmons	Sprague ville	1984	Jackson	142⅜
Jeff Olberding	Fort Dodge	1984	Webster	141⅞
Dan Dillavou	Boone	1984	Boone	141⅜
Clarence Mincks	Cresco	1983	Howard	139⅝
Dennis Lent	Dubuque	1984	Dubuque	139⅜
Hugh Shaw	Anamosa	1984	Jones	138⅛
Tom Sorenson	Onawa	1984	Monona	137⅞
Duane Sturm	Oakland	1984	Adams	137⅛
Gary Baumler	Decorah	1984	Winneshiek	137⅜
Jim Cavanaugh	Charles City	1979	Chickasaw	137⅜
Kevin Patterson	Newton	1984	Jasper	137⅛
Kirk Henry	West Burlington	1983	Des Moines	137
Tom Schilke	Waterloo	1984	Mahaska	135⅝

*top ten entries

(*see Conservation Update section*)

Iowa

By Brian DeVore



Brian DeVore

There is a world of difference between the cornfields and creeks of Iowa and the gaudy, neon-lit fashion shows of Europe. However, the furbearer plays an important role in forming a strong relationship between these two worlds — a relationship that has made the sport of trapping/hunting furbearers and the business of high fashon fur garments very dependent upon each other for mutual survival.

Fur harvesting is an outdoor sport that rivals bass fishing in terms of the equipment and strategy required. In fact, trapping and hunting furbearers is an activity that seems to be increasing in popularity with Iowans young and old. However, once that hard-earned muskrat or raccoon changes hands at the country fur buyer, a pelt ceases to be part of a sport and becomes part of a business — an international, money-making business.

In fact, approximately $8.6 million worth of fur was sold by hunters and trappers in this state alone during the 1984-85 season. This is down from the 1980-81 season when a record-breaking $15.5 million changed hands between hunters/trappers and fur buyers but the 1984-85 figures are still good enough to rank Iowa fifth or sixth nationally in terms of dollar value of fur harvested each year, according to Ron Andrews, Iowa Conservation Commission furbearer biologist.

Iowa also ranks well nationally and internationally in terms of the quality of fur it produces. This is especially true of the raccoon, this state's top money-making furbearer (334,000 skins were sold for a total of $6.3 million during the 1984-85 season).

"Iowa has the Cadillac of the coon," says Ludvick Sheda, a Chelsea-based fur buyer who does business with hunters and trappers from throughout the state.

Frank Cownie, vice president and general manager of Cownie Furs, a major furrier in Des Moines, agrees, adding that "People in the international market look for Iowa section coons."

Iowa raccoon is considered to have a semi-heavy fur that is used mostly for trim since it is considered too heavy for full-length garments. However, Italy, the world's largest consumer of raccoon fur, does use many Iowa raccoons for full-length coats.

Furs

Sheda says the Iowa raccoon's popularity stems from its softness, durability and color (black with silver intermixed).

But according to Parker Dozhier of the American Fur Resources Institute, Iowa does not rate in the top category with all its furs. For example, the pale color of the Iowa muskrat has doomed it to be one of the less sought after furs on the market. Dozhier says muskrats from the northern and eastern parts of the country are usually much darker and thus are in more demand at this time.

Iowa red fox is considered to have good color and the weight is good for making full-length garments, making it a popular item on the international market, according to Dozhier. On the other hand, Iowa's other wild candid, the coyote, is considered "a real drag on the market" because of the coarse texture of its fur, he says.

But no matter if it ia a $45 fox, a $25 raccoon or a $1.50 muskrat, there is a tremendous increase in the value of that pelt from the time it leaves the trapper's hands to the time the consumer tries it on at the department store.

According to Steve Dreisin of the Copenhagen Fur Center, New York, this fur price inflation is the result of the several steps it takes to make a raw fur pelt into a fine garment. As an example, Dreisin describes the step-by-step process a raccoon pelt goes through to be made into a garment and where each example of added cost comes in.

The first leg of the fur journey takes place between the trapper/hunter and the country fur buyer. At this point, the fur can be sold in the "round" (still on the carcass) or it can be skinned and stretched. Either way, the pelt must be skinned, fleshed (all fat removed), stretched and dried before it can be resold by the fur buyer.

In this example, the fur buyer will pay $18 for the raccoon. A larger buyer who travels to different areas and buys from several country fur dealers will then purchase the pelt for $22. According to Dreisin, although in this example there is a $4 discrepancy between the amount the trapper/hunter receives and the country fur buyer receives, the fur buyer is actually making only $2 on the deal after expenses for labor, transportation and damaged pelts is subtracted.

Once the larger buyer, who is usually based out of Canada, New York or Europe, has collected a large lot of furs, the raccoon will be sold to a manufacturer for $24 either through one of the large auctions or via a direct transaction. The manufacturer then has the pelt dressed (tanned to a soft leather) at a cost of $6. Interest, expenses, freight costs and matching expenses bring the cost up to $32-$35 a skin.

To make a full-length coat, approximately 25 raccoon skins are needed. At $33 a shot that makes our fictitious raccoon coat worth about $825. After labor and the addition of a lining, the cost jumps to almost $1,400. It will then be sold wholesale at about $1,700 and retail at anywhere between $3,400-$3,600.

Not bad for an animal that was considered a worthless pest by many people only a few years ago.

Dreisin says retailers raise the price of the garment considerably because of the high overhead they incur from advertisement, rent, promotion and because they do not deal in large numbers of sales. But one of the major costs comes when the labor bill is figured in. Dreisin says making a tanned pelt into a garment is an expensive process because mechanization has very limited applications.

"It's one of the few things done in the world which is still done meticulously and handcrafted," he says.

Almost every segment of making a fur garment is done by hand from picking and matching the pelts according to color and quality grade, to cutting them into long, workable strips, to sewing them back together. this type of work requires skilled craftsmen who work out of Canada or Europe — two of the largest fur marketing centers in the world.

Dozhier says countries like Japan are also manufacturing furs now. However, they only deal with the cheaper grades and the top quality garments are still being produced in the major fur centers in the United States and Europe, he says.

With all the money that exchanges hands from "'coon to coat," who is making the real profit? Dreisin says many people have a misconception about who makes how much in the fur trade.

"Generally, people think the buyers make a huge profit but most of the profit is made by the hunters and trappers themselves," he says. "Usually, (the buyer) will try to get about 10 percent (profit) but sometimes he makes a little more and sometimes he loses money."

Dozhier agrees, adding that the country and larger buyers are the "true gamblers, the true speculators" in the trade in that the fickle fur markets can often hurt them more than any other participant in the industry.

Ron Johnson

Iowa produces some of the highest quality raccoon fur. Although most of Iowa's raccoon fur goes mainly for trims, some are used for full-length coats such as this one, courtesy of Cownie Furs of Des Moines.

Ron Johnson

Iowa's number one furbearer — the muskrat.

Iowa Furs *continued*

The financial dangers of the fur industry were brought painfully home to many fur buyers during the 1984-85 season when they bought large numbers of pelts at high prices early in the season, Dozhier says. In addition, a mild winter in many parts of the United States glutted the market with pelts early on. The problem is that most of the major fur auctions do not take place until after the first of the year. As a result, buyers have no idea what prices will be by the time they are ready to sell their product.

Last year, "the buyers didn't pick up the signals so they kept the prices high," Dozhier says. "A lot of them took a real beating on prices especially when that dollar took a record soar the first week in February."

The effect the U.S. dollar had on fur prices during the 1984-85 season is a perfect example of how much the price of money controls the price of fur from year to year. In fact, Dreisin says that along with the state of economic conditions in Europe, the value of the U.S. dollar is the dominating factor in the fur market.

Like any other major export, when the price of the dollar is low, foreign countries can afford to buy more U.S. goods. But when the dollar's value becomes inflated, as is what happened earlier this year, foreign countries cannot afford to exchange their money for American dollars.

As a result of this inverse relationship, it may pay for fur harvesters to keep as close an eye on international trade and politics as they do on the number of raccoon tracks at the local creek.

"Just like your farmers are depending on what the world market grain prices are," Dozhier says. "Trappers are depending upon what the world dollar market is."

According to Dreisin, one other factor that makes the fur market so difficult to predict is that it does not adhere to the normal law of "supply and demand."

"Usually if there is a very strong demand for a certain fur no matter how much is produced, there's not enough," he says. "And if it's out of fashion or there's not a demand for it, no matter how much there is produced, there's too much."

But "supply and demand" does seem to come into the picture in at least one way. There will always be a demand for the outdoor fun that comes with hunting and trapping furbearers no matter what the supply of money is. And that makes it a sport again.

Brian DeVore is from Cumberland and has written outdoor articles for Fur-Fish-Game, The Trapper, Iowa Agriculturist and the Iowa State Daily.

The rays of the morning sun spread into the abandoned badger den promising a day of sunshine and food for the old red fox nesting against the dirt wall. He has seen many winters but this one has caught him unprepared because his instincts neglected to warn him of early snows and bone-chilling temperatures. He has failed to find a mate this season to help provide body warmth and food for the den, so he now lies alone, cold and hungry in his earthen shelter.

The old fox stirs as those rays reach his body, and he yawns, exposing his worn but still effective teeth and curled tongue to the morning air. He slowly crawls to the entrance of his borrowed shelter where he stretches his long, lean muscles to ease the stiffness of the chilling night's sleep. He faces the sun, extending his pointed snout, praising it for this new day of life.

Experience has taught him to always be keenly alert to the scents and movements of his surroundings. He deeply inhales the crisp air which stings his throat and lungs causing him to snort. Droplets of moisture from his nose freeze to the hairs of his upper lip, and with a sweep of his tongue, he erases them. His eyes catch a glimpse of a subtle movement under a distant barren tree with his nose verifying the scent of food. His hunger pains sharpen as saliva oozes from the corners of his mouth. Seeing another movement, the fox streaks through the glistening snow toward his intended victim. A surge of long-lost youthfulness is present in his body giving him a sense of unlimited energy. He bristles his red coat and flashes his white-tipped tail like he did when a pup practicing the art of animal killing. Now the urgency for food overpowers his vitality as he desperately pounds the snow-clad earth intent on the kill.

Under the barren tree a frightened cottontail begins to hop in a terrified frenzy trying to escape from the threatening red beast bounding across the field, his mouth still clinging to the few blades of grass he has foraged from the earth beneath the snow cover. He frantically searches for refuge from his impending death but only fate can save him now, with no hiding places apparent. Hysteria overcomes him as the sharp, white teeth tear their way through the skin of his back, penetrating into his muscles and paralyzing his movements. With dying desperation the buck

CYCLES

By Jamie Adair

Illustration by Brian Bemisdarfer

squeals, releasing those blades from his mouth.

The red conqueror proudly displays the lifeless form, dangling from his clenched teeth, to the sun and settles down in a warm spot, before the barren tree, to enjoy his feast. The victorious old fox gnaws at his victim, relishing the flavors of warm blood and meat so badly needed.

Suddenly, the wind shifts, bringing a strange scent to his shiny raven nose. Alarm! A foreign presence! The old fox comes to attention, dropping the morning meal in a heap on the blood-stained snow.

Facing the direction of the prevailing wind, his nose tries to identify the scent as his eyes scan the lifeless trees for movement. Like radar, his eyes zero in on a white mound casting a slight shadow to the right of a far tree. That mound is motionless and appears much like a snow drift except for the black circles.

Instinct foretells danger as the fox's red body tenses. The wind dies; there is no movement, no scent; the threat of danger subsides; the old fox settles down once again to finish his meal.

He never lives to hear the sharp sound that rips through the air leaving a wisp of smoke reeling from one of those black circles. Something sharp pierces his flesh and crashes into his skull just above the eyes. His body is thrust to the ground where he tautens his muscles as the blood flows to his pointed snout and stains the snow. The partially gnawed remains of the rabbit lie at his feet as if an offering to a dead god.

The hunter rises, shaking his cramped legs; he has been squating behind the old tree for hours waiting for a fox to appear. Endless asthma attacks, corrective shoes, rising food and fuel bills drive this hunter to awaken well before dawn, dress his body in white camouflage, and traipse across the cold, snow-covered fields to search for a fox whose pelt can help provide the extra income needed to support his family.

The hunter carefully approaches the death scene lowering his gun to nudge the motionless body. He raises the veil covering his face and admires the dead fox as he stoops to stroke the eloquent fur. He lifts the lifeless form to his shoulder, kicking the half-eaten rabbit aside, and walks in the direction of the sun, proudly displaying his prize.

In another den a young red fox awakens from a deep sleep and shakes off the cold night air. As he stretches his tightened muscles at the entrance of his sleeping place, he spies in the distance the movement of a small creature nibbling on a branch.

A hunter rises before dawn and dresses his body in white.

Jamie Adair is a teacher from Griswold. She holds a B.A. degree in education from the University of Northern Iowa.

Plant Tale

SUMAC

By Dean M. Roosa and Bill Pusateri

One of the first signs of the arrival of autumn is the turning of the sumac leaves from green to fiery shades of red. It may surprise you that these belong to the cashew family (Anacardiaceae), better known as the sumac family. Most Iowans are familiar with this family because one of its members is poison ivy *(Rhus radicans)*. There are four species of sumac in Iowa, ranging from very common to very rare.

The most common sumac is smooth sumac *(Rhus glabra)*, which is found statewide, growing at woodland edges in well-drained soils, sometimes encroaching into pastures. It grows to over ten feet and has compound leaves which may reach a length of over a foot. Male and female flowers occur on separate plants and the fruits are smooth and occur in a cluster at the top of the plant.

A second sumac is mainly restricted to northeastern and eastern Iowa. It is staghorn sumac *(Rhus typhina)*, which is larger, growing to heights of 20 feet or more. It also has large compound leaves and can be separated from the previous species by the dense, rust-colored hairs on the twigs and fruits. It is an attractive plant, often being used in ornamental plantings.

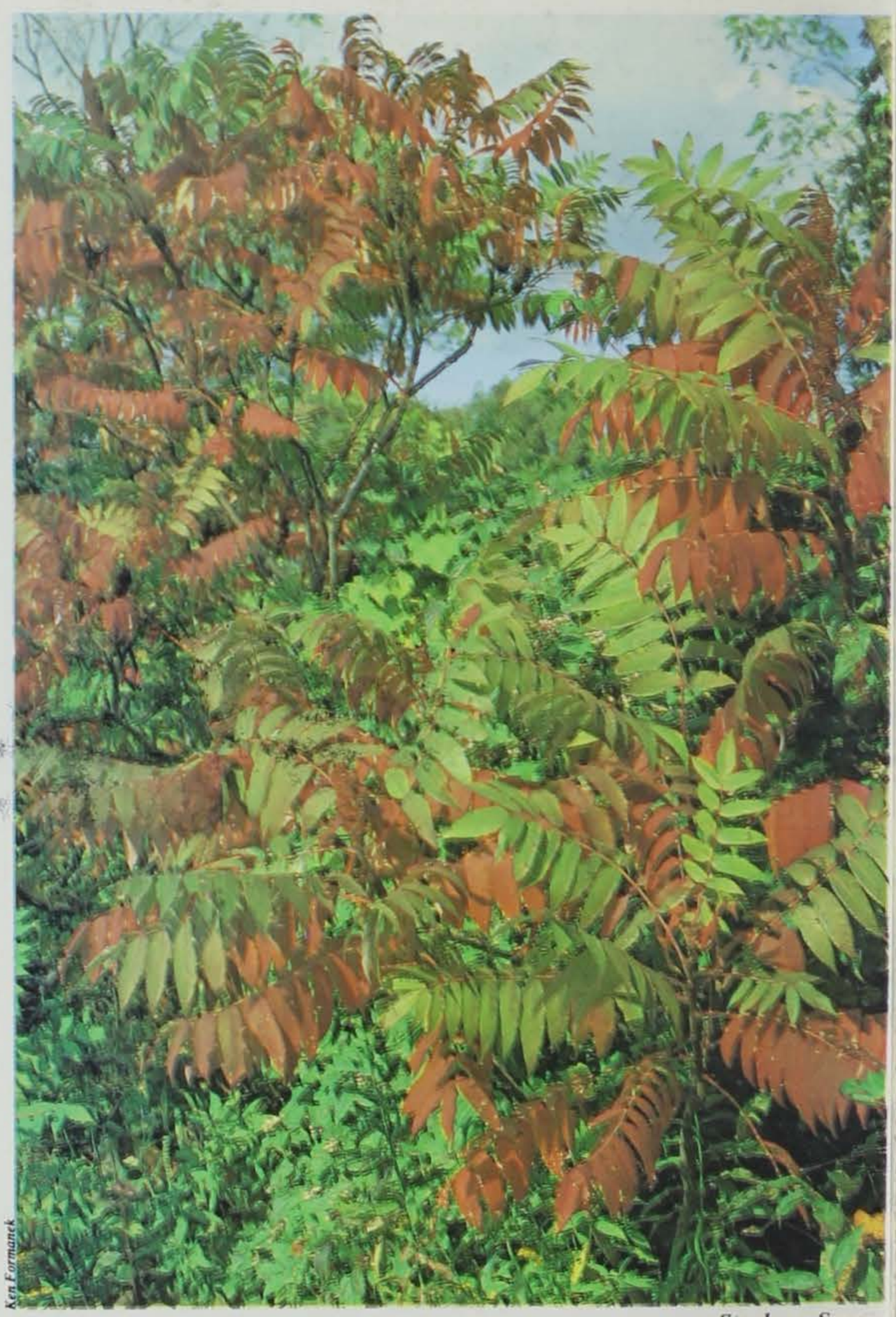
A third species is winged sumac *(Rhus copallina)*, which looks very much like smooth sumac, but has "wings" on the leaf midvein, connecting the leaflets. It has been found only in Madison, Davis, and Van Buren counties. There is a possibility that these populations were planted, so we are not certain this species is a member of the states's native flora.

A fourth species is fragrant sumac *(Rhus aromatica)*, which occurs on sandy prairies mainly in southeast and southcentral Iowa. It is a low-growing shrub. The crushed leaves give off a strong odor. Due to this odor, it is also called "skunk brush". Because the leaves are trifoliate, this species may be mistaken for poison ivy, but the fruits of poison ivy are white.

Another species, poison sumac *(Rhus vernix)*, has been reported from northeastern Iowa but no voucher specimens exist. It is known to occur in southwest Wisconsin, not far from the Iowa border.

These species of sumac provide a great amount of color to the autumn landscape, but have also been used in pioneer medicine. The dried fruits of smooth sumac have been used to prepare an astringent and a gargle. The fruits are slightly acidic and when steeped in warm water, make an excellent tea. The fruits are also widely eaten by wildlife.

So, as you traverse our state in the fall keep in mind that some of the brilliant leaf coloration is Iowa's "cashew contingency" preparing for winter.



Ken Formanek

Staghorn Sumac