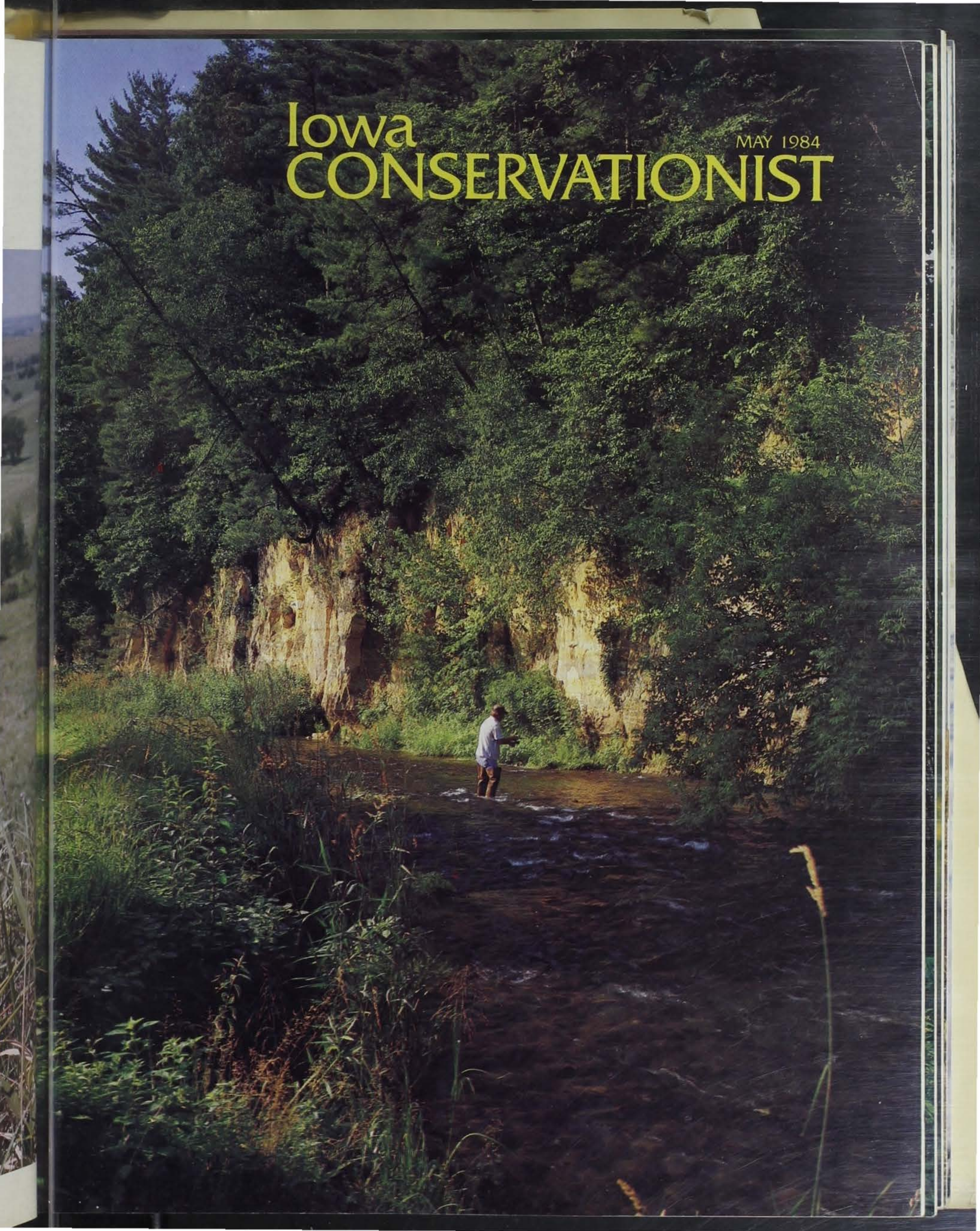


Iowa CONSERVATIONIST

MAY 1984



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CONTENTS

- 2 Camping in Iowa
- 4 Trout Management
- 6 Wildlife for Everyone
- 9 Conservation Update
- 12 Nature Tale
- 13 Classroom Corner
- 14 Warden's Diary
- 14 The Country Creek
- 16 Soft Plastic Lures
- 18 Morels and False Morels
- 20 Fort Madison
- 24 Wildflower

FRONT COVER: Northeast Iowa trout fishing scene. Photo by Ron Johnson.

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By Julie Holmes

State Park

With the recent recession and rising travel costs, many Iowa families are vacationing closer to home. They are enjoying an inexpensive way to discover the state — by camping.

Depending on the individual's definition of "roughing it," camping can mean anything from sipping champagne on the balcony of a Hilton hotel room to sleeping under the stars with a bedroll and blanket. Although Iowa's state areas can't offer the Hilton, they do provide a variety of accommodations for summer vacationers.

Iowa's state camping facilities are divided into two types — modern areas, which are furnished with showers and flush toilets, and nonmodern areas which have pit toilets, but no showers. Most modern areas and some nonmodern areas have electrical hookups. Modern areas cost \$5 per night per basic unit (portable shelter used by one to six persons). Electricity costs \$2 per day. Nonmodern areas are \$4 per night, plus electricity where available.

In 1982, self-registration was initiated in a number of state park campgrounds. Because it was so well received, the procedure was incorporated in all state parks, recreation areas and forest campgrounds in 1983. Self-registration information, envelopes and depositories are located at either the entrance to the park itself or campground area. No reservations are accepted for camping.

RETURN OF THE TENT

Recent trends indicate that an increasing number of vacationers are turning to a more rustic form of camping — particularly tent camping. For these people, many parks offer the nonmodern and primitive areas. The three state forests, Shimek, in Lee and Van Buren Counties, Stephens in Lucas County, and Yellow River in Allamakee County, are popular spots for tent camping. So are Volga State Recreation Area in Fayette County and Pleasant Creek State Recreation Area in Linn County. Pammel State Park in Madison County and Bellevue State Park in Jackson County are good choices for tent camping.

Springbrook State Park in Guthrie County has a special area for walk-in

camping. Ledges State Park in Boone County has been closed to camping for the past two to three years due to redevelopment, but will reopen this July.

CABINS

It's a bit late to rent a cabin this year but it is certainly worth considering for next season. Six state parks have rental cabins — Backbone (Delaware County), Lake of Three Fires (Taylor County), Lake Wapello (Davis County), Palisades-Kepler (Linn County), Lacey-Keosauqua (Van Buren County) and Springbrook. Each cabin sleeps four and is equipped with water, electricity, stove, refrigerator, dishes and cooking utensils. The cabins aren't fancy but they're clean, rustic and inexpensive. Renters provide their own bedding, towels and toilet items. Park rangers begin taking reservations January 1. Advanced reservations are for a minimum of one week. The cabins also rent for less than a week (two-day minimums) on a first-come first-served basis.

EQUESTRIAN CAMPING

Horseback riding is a popular activity at a number of state parks, recreation areas and forests. Equestrian camping opportunities and extensive horseback trails are available at Waubesa (Fremont County), Stone (Woodbury County) and Elk Rock (Marion County) State Parks; Volga State Recreation Area and Brushy Creek Recreation Area (Webster County); and Stephens, Shimek and Yellow River State Forests. Several other parks and recreation areas offer special bridle trails and riders may use all state park roadways.

SPECIAL PROGRAMS AND EVENTS

To develop appreciation of Iowa's parks, special programs are being developed. Over twenty parks have nature trails both guided and self-guided (with the aid of a brochure). The trails are designed to help visitors interpret the natural features of the park.

Major campgrounds at Macbride in Johnson County, Rock Creek in Jasper County, Viking in Montgomery County, Ahquabi in Warren County and Wilson Island in Harrison County have outdoor

urCamping *Plenty To Do This Summer*

movie screens and during the summer season will show various nature-related slides and movies to weekend and holiday campers.

During the 1983 camping season, several larger state parks participated in "Art In The Park," a program sponsored by the Iowa Conservation Commission and Iowa Arts Council. Painters, musicians, photographers, sculptors and other artists incorporated themes of nature and wildlife into their work while spending a few days in the park. Park visitors were encouraged to talk to the artists, enjoy their work and become involved in the program. Several of Iowa's parks will again feature an artist this season.

In 1977, the Conservation Commission, in cooperation with the Iowa Development Commission and the Iowa State Preserves Board, hosted the first annual "Fort Atkinson Rendezvous," a two-day special event at the historic

Fort Atkinson State Preserve in northeast Iowa. The Rendezvous has become a popular tradition, attracting visitors from across Iowa and from other states as well. The Rendezvous is a recreation of life on the 1840 Iowa frontier. The partially restored fort site hosts "buskskinners" living in authentic tipis and lean-tos and a troop of 1840 U.S. Army Dragoons. Craftspeople demonstrate such frontier skills as blacksmithing and rope-making at the Rendezvous. Black powder shooting, tomahawk-, knife-, and skillet-throwing contests are held, and an old-fashioned melodrama is presented. In addition, the fort museum is open during the event, and talks and movies on the fort's history are presented. The Rendezvous is held during the last full weekend in September.

In July, 1981, the first annual "Forest Craft Festival" was held at scenic Lacey-Keosauqua State Park in south-

east Iowa. The event was sponsored by the Iowa Conservation Commission, the Iowa Development Commission, and the local community. The purpose of the event is to help make the public better aware of Iowa's timber resources, their management, and uses. This year the festival will be held October 13 and 14, a beautiful time to enjoy southern Iowa. During the event, visitors will have opportunities to try their hand at using an old-fashioned crosscut saw, to see exhibits on tree planting and fire control, watch craftspeople at work fashioning various items from wood, and learn about woodland wildlife management.

These are just a few of the areas worth visiting this summer. For complete information on camping in Iowa's state parks, forests and recreation areas, write the Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50312.



C. J. Smith



Ron Johnson

I think back to a trout season that ended, and just as quickly, I think about a new one coming up. Fishing seems to linger in an angler's mind. For me, fishing is an important consideration at all times, because I'm a fisheries biologist working with Iowa's trout program. The work doesn't stop when trout stocking ceases at the end of the season. On the contrary, management plans must be formulated for another year, trout stocking quotas are set and equipment is readied for another action-packed spring and summer.

How does all this affect the trout angler? Let's take a look at the program and the management involved. Trout naturally reproduce in only a few of Iowa's cold-water streams. Since the inception of the trout program, the Iowa Conservation Commission has used the stocking approach to provide sport fishing where none previously existed or where natural reproduction does not support trout populations. Trout stocking is an important part of the program, but it's not the total picture. Fishery managers are also engaged in stream habitat improvement and trout stream acquisition projects, both of which have long-lasting benefits to the cold-water resource.

Stocking

This year 300,000 catchable-size rainbow and brown trout are being propagated for release into 50 put-and-take trout streams in northeast Iowa. Stocking begins in April and continues through November with the exception of a few streams that warm excessively during the summer months. Most catch-

able streams are stocked one or more times a week with 10- to 12-inch trout. These fish are distributed throughout the stream segment, giving everyone an opportunity at a fine rainbow or brown.

The catchable trout streams are a major part of the trout fishery. These streams receive most of the fishing pressure because of easy access and close proximity to many state and county parks. Nevertheless this program wasn't designed for all trout fishermen. Over the years, the Iowa Conservation Commission created diversity in the trout program to appeal to the varied interest of trout anglers.

Put-and-Grow

A fingerling release program was initiated in 1968 on 35 cold-water streams as an alternative to put-and-take fishing. Currently 37 put-and-grow trout streams are stocked in May with 13,000, 3-inch brown trout. Browns are especially adapted to these streams because they are more tolerant of high water temperatures than rainbow or brook trout.

Almost all of the put-and-grow streams are located on private property. Once permission is secured from the landowner, the trout angler has a solitary and often rewarding experience.

Special Trout Streams

Four special-regulation trout streams were established to provide anglers trophy fisheries. Portions of Spring Branch, French Creek and Bloody Run are managed as brown trout trophy streams. South Fork, Big Mill Creek, on the other hand, is managed in its



Roger Sparks

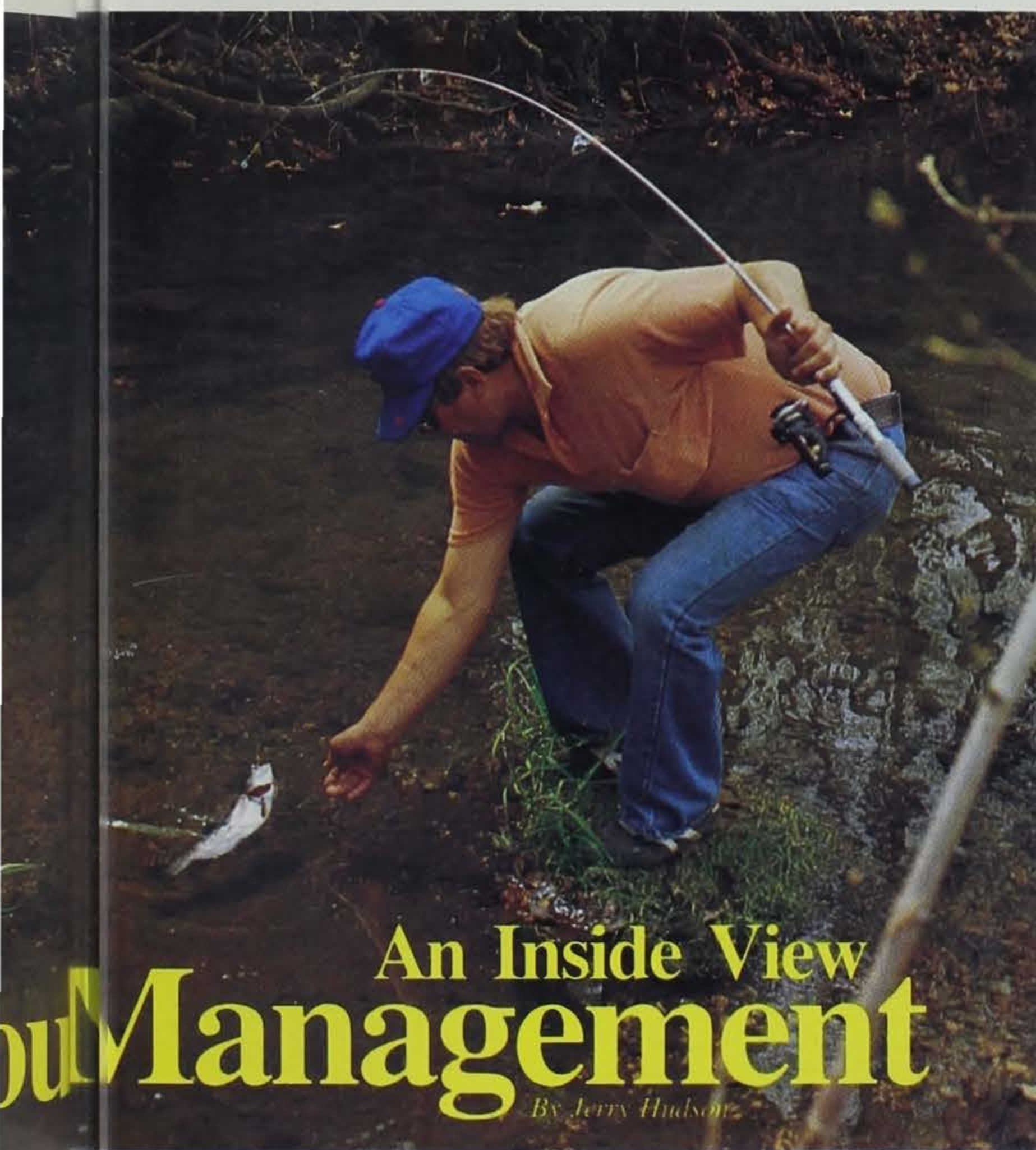
Trout

entirety as a brook trophy stream. Stocking is limited to fingerling release in the springtime.

Fishing is governed by special regulations including length limits and bag restrictions as posted along each stream. These regulations are also listed in the "Iowa Trout Fishing Guide" and in the fishing laws brochure.

Stream Habitat Improvement

The Iowa Conservation Commission has taken a positive approach to trout habitat improvement. Good soil conservation practices are initiated on all newly-acquired trout stream lands. Fencing is used to exclude livestock from the stream corridor, allowing natural vegetation to reestablish whenever possible on private lands. Streambanks then stabilize naturally, preventing further erosion. Revegetated grasses usually do an adequate job of shading the stream during the hot summer months; however, badly eroded streambanks present a different problem needing different solution. These streambanks are sloped, covered with large quant-



An Inside View of Trout Management

By Jerry Hudson

rock, then reseeded with long-stem prairie grasses.

Once streambanks are stabilized, instream habitat structures are installed to increase the stream's ability to hold fish. Bankhides, half-logs and deflectors are placed in the stream to provide overhead cover and form pools which afford a much-needed sanctuary for trout. Stream current is increased, keeping the gravel bottom free from silt. Aquatic insects repopulate the bottom gravel, creating an abundant food source for all fish.

A number of habitat improvement projects are completed each year on various cold-water streams in northeast Iowa. It is time consuming and expensive, but it is a program that is a positive and long-lasting benefit to the trout fishery. Our goal is to improve quality trout habitat and improve fishing for the angler.

Stream Acquisition

Trout stream acquisition is an ongoing process which started before the turn of the century, but it wasn't until

after 1950 that significant strides were made. Numerous cold-water stream properties were added to the public inventory through fee-title purchase, using hunter and fisherman dollars. During the 1970's, "Open Spaces" monies were appropriated for land purchases as a result of state legislative action. Several more trout stream properties were added to public domain with this and Bureau of Outdoor Recreation funds. Unfortunately, much of this funding has recently been eliminated.

Iowa has 350 miles of cold-water resource with only a small percentage open to public fishing. Many of these areas are suffering from increased fishing pressure and the quality of the resource has diminished through unwise land-use practices. It is these problems

When an angler catches an Iowa trout, it is the result of extensive work at the hatchery and the stream. Eggs are taken from brood fish (opposite page) to begin the process. Hatching and rearing must take place as well as landowner negotiation and stream improvements before the fish is stocked (below) at catchable size.



Ron Johnson

that prompted the Iowa Conservation Commission to identify 71 miles of cold-water streams for acquisition, which would add significantly to the trout program. This long-term acquisition program has been approved for federal cost-share funding and forms the basis of current and future goals.

Trout management is more than acquisition, habitat improvement or stocking; it's part of my everyday job. Because the resource is limited and the popularity is so great, the work never ceases. One thing is certain — all the trout management and hatchery personnel are working hard to make Iowa's trout program an enjoyable experience for all trout anglers, as well as guaranteeing trout fishing opportunities for future generations.

Jerry Hudson is a fisheries biologist from Manchester. He received his B.S. degree from Kansas State University and has been with the commission since 1975.



J. Dunning

WILDLIFE FOR EVERYONE

By Doug Reeves

Every year, Iowans travel long distances to other states and Canadian provinces for recreation. One of the reasons for traveling so far is that people like to see scenery and wildlife. The amusing antics of a chipmunk, blue jay, squirrel, or raccoon are sometimes the best remembered part of a trip. Yet, surprising as it may seem, all of those kinds of wild animals and many more can be found in even the largest of Iowa's cities. For example, on a nice day last February (if any February day can be called nice), I went for a one-half hour walk near my office in the state capitol area of Des Moines. During that walk I saw no less than 10 species of birds. After several more noontime walks, I discovered that there were actually close to 20 different kinds of birds living in the area during winter.

The list included chickadee, junco, downy woodpecker, and cardinal as well as red-tailed hawk, American kestrel, and ring-necked pheasant. I also saw tracks of a cottontail, a fox squirrel, and an opossum in the snow. Raccoons, white-footed mice, and short-tailed shrews are other wild animals that live in the area. Just think of the wildlife I will be able to see on that one-half hour walk in early summer when birds are nesting, butterflies are active, and the first young cottontails are out of the nest. All I had to do was look.

WHERE TO LOOK

You can see the same things. Wild animals of one kind or another live just about everywhere. You can start by looking around your house or apartment. It is a rare day when you can't see some kind of wildlife in your yard.

Even apartment dwellers can look out in the morning and see a robin or other bird hopping around on the grounds or in a neighboring yard. By watching just a bit longer you might discover the location of the nest and then watch the young develop and eventually fly off. Whatever you do, don't disturb the nest.

Once you have become quite familiar with the wildlife in your backyard, the next thing to do is take an occasional walk around your neighborhood. By noting where you see birds and animals you might become quite good at predicting where certain species will be found. If you watch closely enough you will learn about bird behavior too, including territoriality and feeding habits.

You should also plan to visit your city, county and state parks. Animals are found in parks that aren't found



Northern Oriole (opposite page) and opossum are common Iowa inhabitants, even in urban areas. Timbered state, county and city parks may attract white-tailed deer.

ewhere in your community. Parks have larger areas containing the kind of habitat animals require. For example, parks often have ponds, lakes, or rivers where waterfowl can be observed. Squirrels seem to thrive in these areas. Even deer can be seen in many state parks. Also, don't overlook state wildlife areas, prairie preserves, and forests. They provide homes for thousands of wild animals that are never hunted in addition to the featured game species.

Other areas to watch as you go by include vacant lots, railroad rights-of-way, and greenbelts along streams. You will discover even more wildlife habitats as you become used to looking for them.

WHEN TO LOOK

There are certain times during the day when wildlife is most active, and that activity varies with the time of year.

During spring and summer, most animals are active in the morning. Birds sing with greatest intensity during the first hour of daylight. Cottontails can also be seen at this time.

In late fall and winter, birds are most active at mid-day so you can see them at your feeder during the noon hour. What's more, you can view them from the comfort of your office or home. Remember, many birds that come to feeders in winter are different from the species you see in summer.

Some exceptions to these general rules include nighthawks, chimney swifts, and whip-poor-wills that can best be seen at sunset. Owls, while seldom seen, can be heard at night, especially during late winter and spring when they are nesting. Many county conservation boards provide special owl-night activities during February and March. Surprisingly, great-horned owls

live in most cities, but people never even know they are there. They usually pick a dense conifer tree to roost in during the day so they are difficult to see.

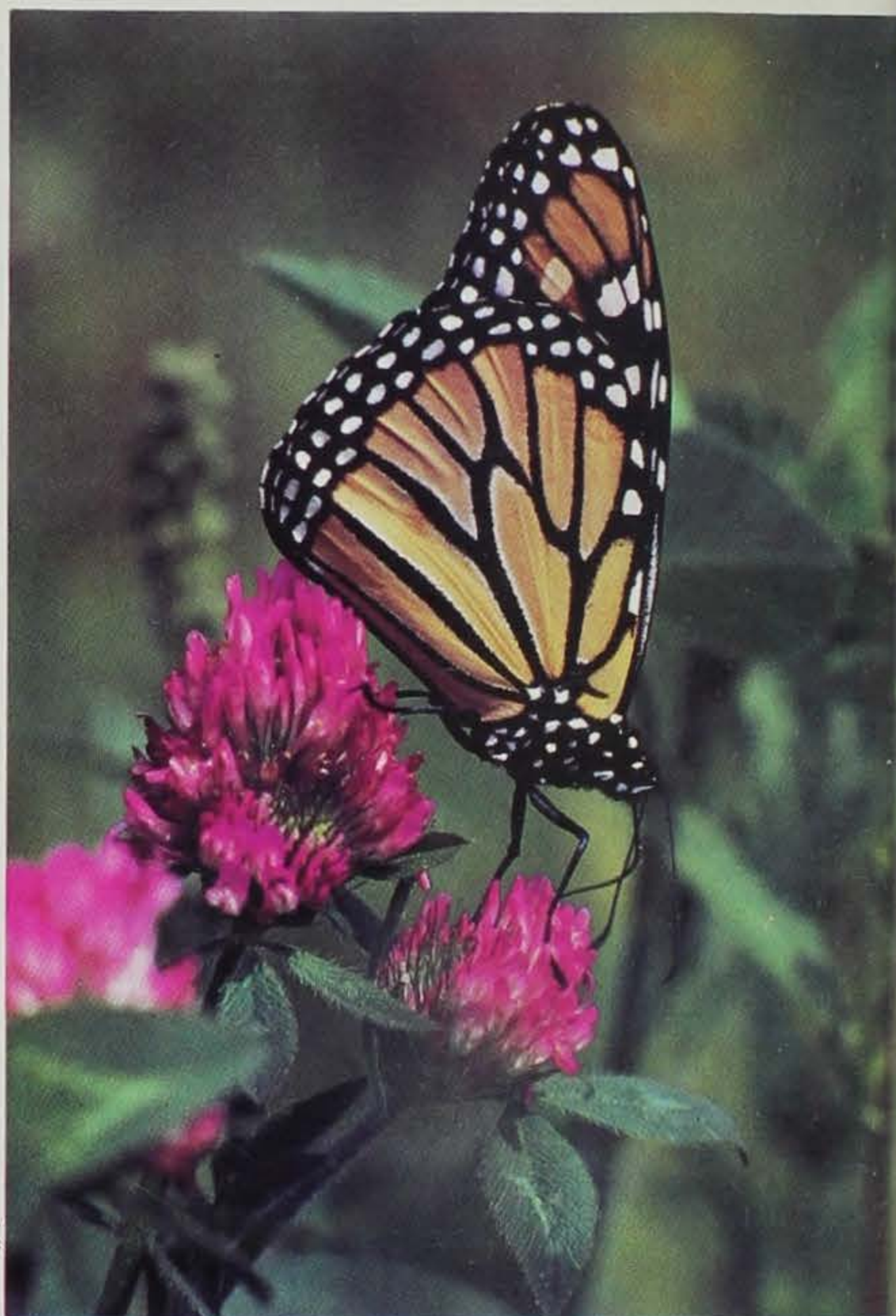
GETTING STARTED

If you like to see wildlife and want to learn more, especially about birds, you should get a field guide. They are available at bookstores for about \$10. Most field guides have a checklist in the front so you can keep track of each species you have seen. You will enjoy keeping the list up-to-date, especially during spring when birds are migrating and new varieties can be seen each day. Chances are you will discover that there are more kinds of birds than you ever knew about. Similar field guides are available for butterflies, amphibians and reptiles, mammals, wildflowers, and trees and shrubs.

Insects can be among the most beautiful backyard inhabitants, such as the monarch, shown as both caterpillar and butterfly.



T. C. Greiner



K. P. Hufey

Another piece of equipment that is useful but not essential for enjoying wildlife is binoculars. Sometimes seeing the distinguishing marks on a bird or mammal is very difficult without binoculars, even if the animal is close to you.

For birders there are other aids. Recordings of bird songs are available on tapes and records from groups like the Audubon Society and National Wildlife Federation. The Iowa Conservation Commission has developed a pamphlet entitled Iowa Bird Study that includes a list of birds likely to be found in Iowa, as well as a migration calendar showing when various species are likely to be seen. Information on feeders and nest houses is also included in the pamphlet. It is available from the Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319, or at field offices.

WHAT YOU CAN DO FOR WILDLIFE

If you don't see enough wildlife in your yard you can probably do something about it. By planting trees or

shrubs, putting up nest boxes, or maintaining a feeder, you can attract more wildlife to your own yard. Plantings of trees and shrubs can also cut your heating and cooling bills by slowing the wind around your house in winter and providing shade during summer. Many shrubs provide nest sites, food in the form of fruit, and protective cover from predators and rough weather. In short, they provide almost everything wild species need. Most nurseries carry a wide variety of trees and shrubs that will benefit wildlife.

Feeders allow you to observe wildlife species that find most of their requirements in other nearby areas. For example, with a suet feeder, you can attract woodpeckers to your yard even though they roost and nest in dead trees nearby.

Even the cardinals that come to your feeder might be visitors from a neighbor's shrub plantings. Still, you do much more for the birds if you provide both food and protective cover.

Nest boxes provide homes for many kinds of birds and mammals that normally nest in tree cavities. Dead trees are rarely left in residential neighbor-

hoods, so if you want to have wrens, swallows, martins, or other cavity-nesting birds, you will either have to leave dead trees in your yard or provide them with a box to nest in. Plans for building nest boxes are available from many sources. General size dimensions for houses are included in the Iowa Bird Study pamphlet that was described earlier. Plans for bluebird and barn owl nest boxes are also available from the Iowa Conservation Commission.

As you become more and more aware of the wildlife that lives around your home, you will be amazed at the amount of enjoyment wild animals can provide you with. If you're like me, your outlook on life will be a little brighter too.

Doug Reeves is urban wildlife biologist for the commission. He holds a B.S. degree from Lake Superior State College and an M.S. degree in wildlife from Michigan State University. He has been with the commission since January 1984.



DATE SET FOR STAMP DESIGN CONTESTS

Harrison said there are no prizes for the winners, but they are required to make a certain number of art prints of their winning design. He said they stand to profit substantially from sales of those prints, as well as the prestige that goes with winning. The commission receives 40 percent of the wholesale cost of the prints.

The designs are used for stamps which hunters and fishermen must purchase to pursue their sports. The date of the actual judging to pick

the winning design will be announced later, said Harrison.

Iowa wildlife artists must submit their designs for the state's 1985 trout, habitat and waterfowl stamps between June 11 and June 15.

Ross Harrison, superintendent of information and education for the State Conservation Commission, said any artist wanting to compete in the annual contest should request a set of rules from the commission. Rules can be obtained by writing the Iowa Conservation Commission,

Wallace State Office Building, Des Moines 50319.

"Although we restrict entrants to Iowa artists only," said Harrison, "our contests have a great national reputation because of the quality of the winners, and because the competition for the duck stamp is second only to California in the number of years it has been run."

The first duck stamp was commissioned to Maynard Reece in 1972. Actual competition began in 1973.

DONATIONS

The commission would like to recognize and thank the following people for their donations:

Robert Rogers	\$5 fish and game	Virgil Everett	\$10 non-game
Midland, Texas		Britt	
Harry Harrison	\$10 non-game	Fillmore Fairways	\$25 fish and game
Madrid		Cascade	
Keith Morrison	\$4 fish and game	Ralph Littrell	\$5 non-game
Salem		Iowa City	
Charles Ackles	\$10 fish and game	Epley Seed Corn	seed corn
Albia		Shell Rock	(200-500 bushels)
Ermon Menke	\$10 fish and game		
Elliott			
Hanson	\$2 fish and game		
Dows			
Collins	\$5 fish and game		
Davenport			
Carlsen	\$50 fish and game		
Elk Horn			
Howe	\$5 fish and game		
Iowa City			
John Walter	\$25 fish and game		
Shenandoah			
E. Fay	\$5 fish and game		
Cedar Rapids			
Ward Kepp	\$15 non-game		
Orange City			
Albert Wunder	\$2 non-game		
Harlan			
Agnes Harvey	\$5 non-game		
Adel			
William Steinbeck	\$10 non-game		
Keystone			
Robert Dau	\$3 non-game		
Bettendorf			
E. Rufer	\$5 non-game		
West Des Moines			
Eggy Liekweg	\$20 non-game		
Iowa Falls			



David Simmens (left) and Donnie Smith (right) members of the North Linn Fish and Game Club of Central City, put up wood duck nesting boxes. The boxes were donated and erected by the club in February.

KEG PARTY REGULATIONS IN STATE PARKS

State park visitors are reminded of the new regulations regarding keg beer parties that will be in effect this year.

Persons holding keg parties are required to notify the park ranger prior to the event. A responsibility agreement and a damage deposit are required. The deposit is \$100 per 100 persons or portion thereof attending the party. The deposit will be returned after the party if no damage is done to the area and the site is cleaned up before leaving.

Kegs are not permitted in beach areas, campgrounds or parking areas. Contact your local park ranger if you have any questions.

Firewood Sales Discontinued

An additional reminder to park visitors is that firewood sales have been discontinued. Due to increased use of charcoal briquettes, the park itself will not sell firewood. However, many park concessionaires will make wood available to campers.

FISHING REPORT OVER THE PHONE

Iowa anglers can get up-to-date information this season over the telephone.

Each Wednesday, until September 3, the Iowa Conservation Commission will record a fishing report highlighting the fishing hotspots across the state. The report will be compiled from day-to-day information gathered by fisheries biologists, conservation officers, park rangers and others.

Anglers can get the straight scoop 24 hours a day by dialing 515/281-3307.



IT'S SMOKEY BEAR'S 40TH BIRTHDAY

Smokey Bear, the familiar gentle giant who serves as symbolic guardian of the nation's forests, reaches a milestone this year when he observes his 40th birthday. Despite his advancing years, he has not slackened the crusade against forest fires through his message of prevention. There is still much to be done.

The origin of Smokey goes back to the early days of World War II when forestry officials, aware of a Japanese submarine's shelling of southern California, became concerned that future attacks could touch off forest fires. General agreement on the need to protect this valuable natural resource resulted in the Cooperative Forest Fire Prevention Campaign, organized by the USDA Forest Service to encourage the general public to participate in forest fire prevention.

The Wartime Advertising Council, a newly formed public service agency made up of business and advertising people, volunteered to help the Forest Service in a nationwide fire prevention campaign. The National Association of State Foresters added its support. The Forest Service and the Council decided to select an animal to represent forest fire prevention. Walt Disney's Bambi had been used early in 1944 for a poster on fire prevention.

Albert Staehle, an artist who painted for national magazine covers, was asked to paint the first bear. It was felt the bear should wear jeans and a campaign hat. The poster, which showed the bear pouring water on a campfire, was printed in 1944 and distributed early in 1945. The bear was named "Smokey" after "Smokey Joe" Martin, the assistant chief of the New York City

Fire Department from 1919 to 1930.

After the war, the word "Wartime" was dropped from the Council's name and this organization continued to sponsor public service campaigns, including Smokey Bear's program.

"Only YOU can prevent forest fires" was a message created in 1947 and still is in use today as a key part of the campaign. This message is widely recognized as one of the most memorable advertising slogans in history. A recent survey showed that 95 percent of the Americans questioned could finish the slogan when given the first words, "Remember, Only You _____." And it has been effective. In 1942, more than 10 million acres of wildlands were burned but only 3 million acres were burned in 1981. This represents a savings of \$10 billion to American taxpayers, not to mention the savings in natural beauty, unpolluted streams, wildlife, and recreation opportunities.

In observance of Smokey's 40th birthday, the U.S. Postal Service will issue a commemorative stamp on August 9, 1984. Across the country, there will be many regional and local activities honoring Smokey.

To protect the image of Smokey Bear and the work of the Cooperative Forest Fire Prevention Program, Congress passed the Smokey Bear Act in 1952. This law prohibited the use of Smokey Bear without the permission of the Forest Service; permitted the Forest Service to license the use of Smokey Bear and collect royalties; and it allowed the Forest Service to keep the royalties and put them into a fund to be used only for forest fire prevention. The Smokey Bear program has licenses with 50 businesses and organizations

that make or sell merchandise associated with Smokey.

A real live Smokey came on the scene in 1950 as the result of a devastating wildfire that swept through the Lincoln National Forest in New Mexico. A crew of firefighters battling the blaze almost lost their lives due to a wind shift. With wet handkerchiefs covering their faces, they lay face down on a rock slide while the fire raged around them.

As the fire passed and the smoke cleared, the firefighters looked about in the charred forest and saw a badly burned bear cub clinging to a blackened tree. They took the little bear to a ranger station where several people tended to the burns. He was named "Smokey" after the original poster Smokey Bear. When the burns had healed,

he was sent to live at the National Zoo in Washington, D.C., where he became the living symbol of Smokey and forest fire prevention.

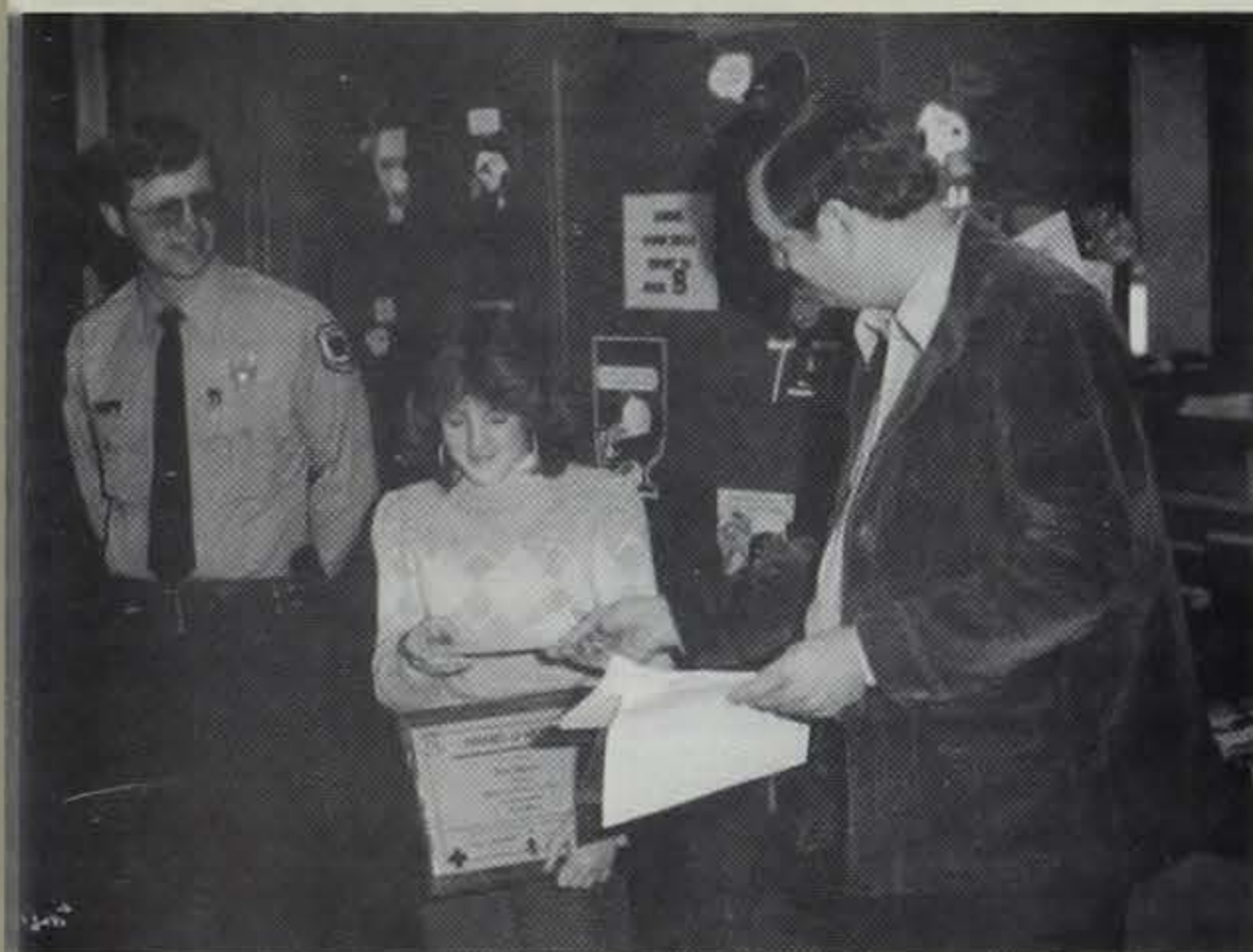
The job of preventing forest fires at the national, state and local levels continues and with it the task of educating people to practice fire prevention. It's crucial for our natural resources that Smokey and the supporting public not become complacent as a result of past successes.

The state foresters actively support the Smokey Bear campaign through a special committee. One of the most effective actions are the visits to schools during Fire Prevention Week. These foresters ask all Iowans to help make this a landmark year in forest fire prevention, "as a birthday present to Smokey."



Smokey in action with young and old.

WATER SAFETY POSTER CONTEST WINNERS



Toni Allison (center) receives her \$100 savings bond and plaque from the commission's recreational safety coordinator, Sonny Satre (right) and Lon Lindenberg (left), conservation officer for Polk County.

Winners of the Water and Boating Safety Committee of Iowa's fourth annual water safety poster contest were chosen in February.

Toni Allison, a sixth grade student from Johnston Middle School, won first place with her unique design of a profile of a person's head with visions of three water safety problems with a message, "Think Twice." Toni is the daughter of Anita J. Sciarrotta and Dennis Allison. In addition to winning a \$100 savings bond and a plaque, Toni has been invited to meet Governor Branstad and witness the signing of Iowa's safe boating proclamation in May.

Savings bond awards and plaques, provided by IMT Insurance, will also be given to the following second and third place winners: second place (\$75 savings bond) to Heidi Crone of Washington, a sixth-grader from Stewart School in Washington; third place (\$50 savings bond) to John Goodhue, a fourth-grader from Emerson School in Indianola. Honorable mention certificates will be mailed to 52 additional students whose drawings were

selected by the judging panel.

According to Sonny Satre, recreational safety coordinator for the commission, the poster contest was a big success. "Choosing the best designs from over 350 entries proved to be a difficult task for our judges," he said. "The committee was pleased with the interest shown by students across Iowa. Every poster carried an important safety message."

Satre said the objective of the project was to begin developing water safety awareness among young Iowans. "We are happy with the response. Participating school administrators and teachers as well as the students are making a real contribution toward water safety in Iowa." The theme for the 1984 poster contest was "Rivers Require Respect."

IMT Insurance will print a quantity of the winning poster for distribution throughout the state. Cosponsors of the annual program are the Iowa Conservation Commission, U.S. Coast Guard Auxiliary, Des Moines Power Squadron, and the Iowa Chapter of the American Red Cross.

ARBOR DAY AWARD FOR SIX IOWA COMMUNITIES

Iowa City, Fort Dodge, Cedar Rapids, Davenport, Cedar Falls and LaPorte City have been named "Tree City USA" communities by the National Arbor Day Foundation, according to state forester Gene Hertel.

The foundation honors communities with the Tree City USA designation upon recommendation by state foresters. Communities qualify by having a city tree ordinance, a legal tree governing body, a comprehensive urban forestry program and an observance of Arbor Day.

Tree City USA communities receive a flag with the program's logo and a walnut-mounted plaque. Winners also receive Tree City USA community entrance signs. Maple leaf stickers will indicate additional qualifying years on the signs.

Conservation commission foresters presented the Tree City USA flag and other recognition materials to community representatives during Arbor Week, April 23-29.

The National Arbor Day Foundation is a nonprofit corporation working toward improved tree planting and tree care programs throughout the country.



BIG MAC II

The second annual Burlington Invitational Great Mississippi Adventure by Canoe is scheduled to depart from Dubuque on the morning of June 12 at 8:00 am. The trip covers eight days on the Mississippi with overnight camping scheduled at Bellevue, Sabula, Clinton, LeClaire, Buffalo, and Muscatine, Iowa and Keithsburg, Illinois. The journey is scheduled to arrive in Burlington at the commencement of their Steamboat Days celebration.

Breakfast and dinner will be made available along the way at prices from \$3-4 per meal. Pre-registration for the trip is required, and the \$20 cost per canoe is used to defray the expense involved in providing transportation of camping equipment and clothing by van. Shower facilities are provided, along with shuttle service to and from the campground at the end of each day's paddling. Nighttime entertainment will again be provided this year.

The trip will be held rain or shine. Average distance per day will be about twenty-three miles with about three to seven hours of paddling time, depending on winds and currents.

For more information, contact Sue Smith, 922 N. 3rd, Burlington, 52601 or call Barb Morrison, phone 319/754 8853.

In the January issue of *The Conservationist*, Richard Bishop was listed as the sole author of *The Chickadee Checkoff, Results and Significance*. It should have said, "By David Newhouse and Richard Bishop." David is a nongame wildlife biologist for the commission.





Illustration by Rex Heer

Nature Tale for Kids

SCURIE — THE CAUTIOUS FOX SQUIRREL

By Dean Roosa

If Scurie wasn't the saddest fox squirrel that had ever lived, he was runner-up. Over half grown now and he'd just been driven from his home by his parents who were making arrangements for their second family. He didn't understand — two parents that had fed and protected him now chased him — chased him away from the hickory grove, away from that giant old elm he loved to climb in. Besides that he had just tried to jump from one tree to another, missed the branch and fell thirty feet to the ground. The fallen leaves, soft earth, and fluffy tail combined to soften his fall, but they didn't keep his pride from being hurt! He slowly climbed to a horizontal branch of a big basswood tree and lay there

looking across the valley toward the hickory grove and giant elm. He surely was the saddest squirrel in Iowa.

Scurie spent the night in a cavity in the basswood tree, and the next morning things looked a little brighter. He found a big hickory tree and ate his fill, then napped in an abandoned nest nearby. He awakened to raindrops, and because the nest was old, he was getting wet. He climbed down and found the basswood tree again, but when he tried to enter the cavity, he came face-to-face with the biggest squirrel he had ever seen. He jumped from the tree and ran down the hill, his heart beating wildly, for that big squirrel was right behind. He won the race and left the big basswood just as he had left the hickory grove and the giant elm.

Scurie soon learned that young squirrels have trouble finding a woods they can call their own. He wandered for most of two weeks before he found an abandoned corner of Pylar's Woods. It was really a large woodlot, and he claimed it as his own. The most attractive feature was the corncrib nearby, but he had to be careful because a big gray squirrel thought he owned the corncrib. Therefore, Scurie waited and watched until the big gray had eaten, then ran to grab an ear.

One day, an immense farm dog caught Scurie, but he only lost some fur, and sat on top of the crib and scolded the dog. After the dog left, the little terrified squirrel returned to his woodlot, mulled the matter over in his mind, and decided there were safer places than this — places where there were no bully gray squirrels or farm dogs. He left Pylar's Woodlot like he had left the hickory grove, the basswood and the giant elm.

Scurie was nearly full grown now and was no longer frightened by other squirrels. He headed toward the big river with its miles of trees, hundreds of hickory trees, and no farm dogs. It was early fall, and he was busy burying nuts, climbing a huge soft maple he now called home, loafing in the warm sun, and generally enjoying life.

One afternoon while lying in the sun with the wind blowing his bushy tail back and forth, a great noise and flying splinters made him jump straight up. It was a rifle shot, and the bullet had just missed him! He ran down the trunk, jumped to a walnut tree and then to a hackberry tree while bullets flew around him. He finally reached the big friendly hollow soft maple. He didn't even peek out until the following day. Then, because he saw other squirrels down the valley, he cautiously crawled out, but he didn't doze in the warm sunshine again. He was forever watchful of tall, upright animals that carried those funny-looking sticks.

Later that fall, while he was busy burying another nut, a huge hawk swooped down and grabbed Scurie. The hawk got a grasp on only Scurie's tail, however, and Scurie managed to escape. But he learned there was one more danger that a young squirrel needed to watch out for. The great-horned owl from the big hollow snag by the river made a pass at Scurie one evening when he stayed out too late; more lost fur and mangled pride. All these experiences made Scurie the most alert squirrel in the valley, and he

atched as some of his friends became meal for an owl or the young hunter and his family.

All in all, life was good for the alert Scurie. Late in the winter, Scurie saw a new squirrel scampering around the valley. Soon they were both living in the old soft maple, and five young fox squirrels were soon to be seen climbing the branches of the tree. They were a constant worry to Scurie because he knew what happened to careless squirrels. He tried to show the young ones how to be careful, but still one was carried to the old dead snag where the owl lived, one was caught by a marauding gray fox, and one wandered too far away and was not seen again. The two remaining grew to maturity in the old soft maple before they were driven away — exactly as Scurie had been driven away by his parents.

Scurie lived for four more years watching young squirrels come, grow, and leave. He was now the sage of the valley, the biggest squirrel around.

In his fifth year, there were almost no nuts on the trees in the valley. Many squirrels left for other valleys and other oak groves. Scurie stayed and ranged far and wide for food, but finally, he had to resort to a life-style he had learned so long ago — visiting corncribs. Because he was big and old and wise, no other squirrels argued when he went to the crib. One day, there was a terrible noise at the crib. Machines were all around as the owner unloaded and sold the corn. After a few days of cleaning up the shelled corn, all the squirrels were once again on their own. Some starved or were caught by dogs. Scurie was too smart for either, and found an abandoned house where a squirrel had laid up a store of nuts and had then left. Scurie lived here until spring. He was old now and couldn't run like before, but something told him to go back up the river. His joints hurt, and he traveled slowly. Finally, after a week of traveling, eating, and napping, he found a familiar valley, and, there it was! The giant old one he had never forgotten. He slowly climbed, explored, and relived his childhood. Then, tired, he went to the same place where he had snoozed as a baby. The sun was warm, and he slept. The next morning, a half-grown squirrel, Scurie's great-grandson, although (either knew) came out and barked at Scurie. Scurie, startled by the vaguely familiar voice, opened one eye and looked, then closed it forever. Scurie was finally at home and at peace.

CLASSROOM CORNER

Here at the Conservation Education Center, visitors are most attracted to the deer in the area. Deer are one of the wildlife forms that have been found in etches on ancient cave walls. Indian names came from them; they are found in art for their grace and beauty.

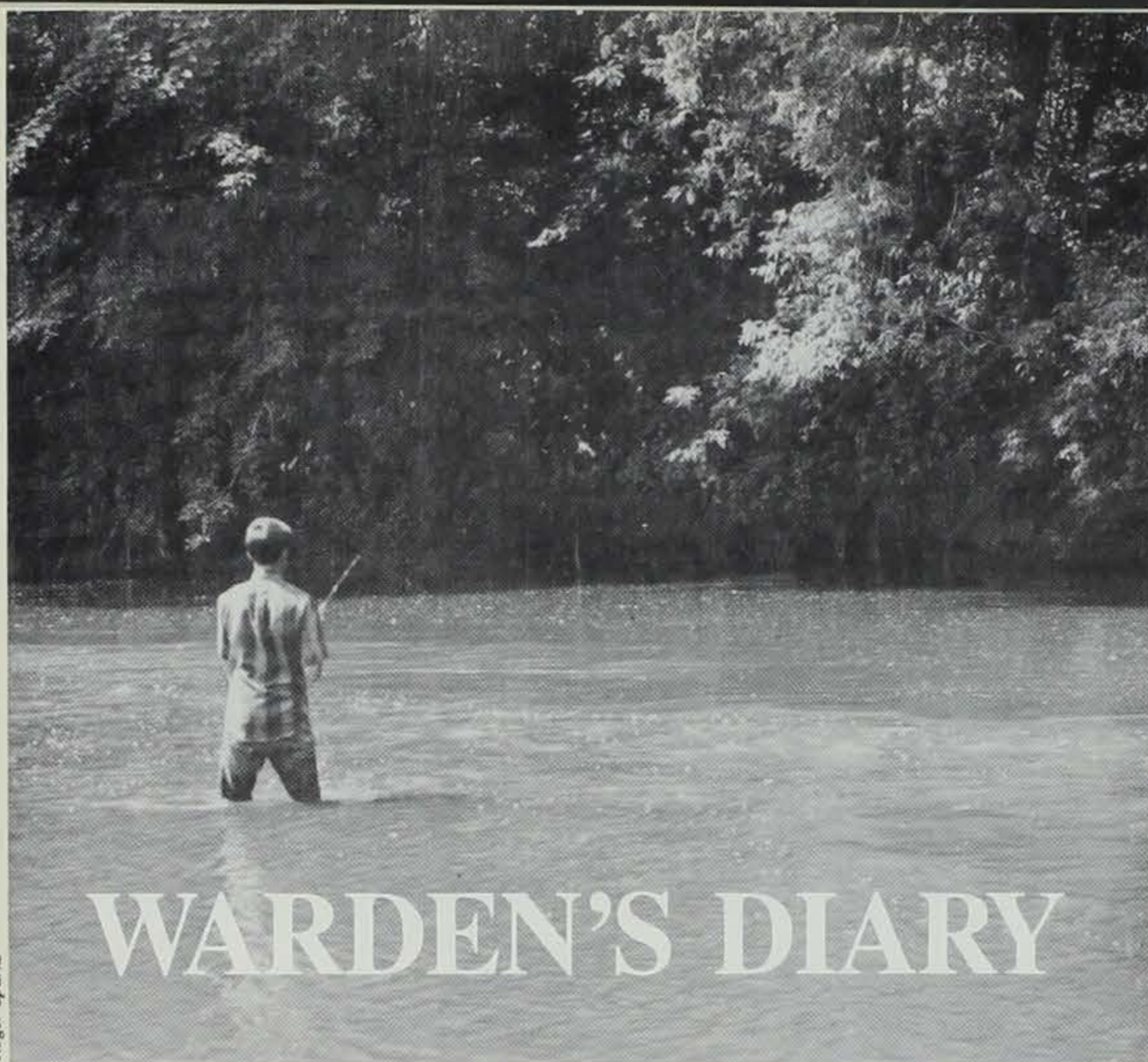
Lee Gladfelter, Iowa Conservation Commission's Research Biologist for deer provided the following questions to test your knowledge of deer and their characteristics.

Deer Quiz Questions

- What is the most accurate method of aging a buck deer?
 - Number of antler points
 - Diameter of main antler beam 1" above the burr.
 - Teeth
 - Body weight
- What is the average home range for adult deer in Iowa?
 - 50-100 acres
 - 150-500 acres
 - 1-2 square miles
 - 3-5 square miles
- In which year was the deer population greatest in Iowa?
 - 1856
 - 1910
 - 1953
 - 1983
- The average gestation period for does is about 6½ months. In what months are most fawns born?
 - late March and April
 - April and May
 - May and June
 - July and early August
- Hunters refer to some of the deer that they harvest in the fall as "button bucks." How old are "button bucks"?
 - fawns
 - yearlings
 - 2½ years
 - old bucks past their prime
- What is the average live weight of an adult doe?
 - 125 pounds
 - 150 pounds
 - 175 pounds
 - 195 pounds
- Timber habitat is critical for deer in Iowa. How many acres do we currently have?
 - 1-2 million acres
 - 3-4 million acres
 - 6-8 million acres
 - 10-12 million acres
- Deer fawns are spotted to provide them with a natural camouflage. When do they lose their spots?
 - 30 days old
 - 1-2 months old
 - 3-4 months old
 - 5-6 months old
- Deer hunting is a major recreational sport in Iowa. In 1983 approximately how many deer licenses were issued?
 - 60,000
 - 80,000
 - 100,000
 - 110,000
- In 1953, Iowa reopened the deer season to harvest surplus animals and reduce crop damage complaints. In what year was the deer hunting season closed to protect a vanishing population?
 - 1856
 - 1898
 - 1917
 - 1933
- Adult bucks may reach a weight of 300-350 pounds. How much do fawns weigh at birth?
 - 2-3 pounds
 - 4-6 pounds
 - 8-10 pounds
 - 12-15 pounds
- When hunters refer to "the rut," they are talking about:
 - The marks deer make on the ground to mark their territory
 - The breeding season
 - A well-used deer trail
 - The mark made by deer when rubbing their antlers against small trees and shrubs
- The mule deer is a common western deer species, but in Iowa they:
 - do not occur
 - rarely occur
 - are numerous in western Iowa
 - are numerous across the state.

ANSWERS:

1. (3) 2. (2) 3. (4) 4. (3) 5. (1) 6. (2) 7. (1) 8. (3) 9. (4) 10. (2) 11. (2) 12. (2) 13. (2)



Roger Sparks

WARDEN'S DIARY

By Jerry Hoilien

Fishing is for everyone. I've hardly met a soul who doesn't like that feeling of a tug on the line, whether it be a trot-line, a cane-pole, or an ultra-lite spinning rod with two-pound monofilament. There is something about that feeling, that bump, or tug, or sudden hit. Add to it things like the disappearing cork, the underwater flash, or the swirl of a surface strike. How about a warm, lazy afternoon on a stream bank? Think of the brisk spring air on a trout stream. Consider a summer evening with a full moon dancing across the water and campfire smoke drifting past your line. Bring back a few memories?

Then, there are the "fish stories!" Where in this world is it permissible and perfectly acceptable to stretch the truth further and further with each telling? In most sports, the score is the score, the limit is the maximum, etc. But with fish stories, the sky is the limit and it's all perfectly legal. I've heard those fish gain and grow at phenomenal rates. I wonder if the biologists are aware of this? Over a cup of coffee the growth of a fish is fast enough, but over a couple of beers, it will boggle your mind! The length of a fish is only limited by the teller's arm length.

I was listening to a fellow tell about his fish catching one day. Seems he caught so many that when he was halfway through cleaning them, he just plumb wore out. So, he put the uncleaned ones in the freezer and placed a layer of newspapers on top. He placed

another layer of uncleaned fish covered by another layer of newspapers and so on. "It worked *great!*" he said. Whenever he wanted some fish, he'd put a few in the sink and pretty soon they'd be kickin' and floppin', and then all he had to do was dress 'em and fry 'em up!

That's just a sample of the fish stories I've heard over the years. I've heard some real weird ones from a warden's standpoint too. Like the guy who didn't have a trout stamp but was putting trout on his stringer to keep them from stealing his sucker bait. It must have been true because he didn't have a sucker (and he wasn't about to find one).

We've all heard about the guy who was just "drowning worms," but the guy that told me he was just "checking the depth of the water" so he could go get a license and fish tomorrow really made me scratch my head.

And of course we can't talk about game wardens and fishermen without remembering the story of the two anglers on the bank. One of them took off running when he saw the warden coming. After a half-mile chase the warden caught him and he produced his license explaining that he wasn't sure if his buddy had one.

There are lots of stories, but that's life, and fishing is one of the best pastimes and memory makers I know of. If you don't have some good memories about fishing, take some time now and go make some. Don't forget to buy your license and lots of luck.

The C

By Roger Sparks

Most of my years have been blessed with country living. But no memories are fonder than those of my childhood, the farm and a wonderful, winding creek.

It was exactly like most streams in Iowa, with gravel riffles, mud banks and deep, green pools. It wasn't a large creek, just a little wider than a healthy broad jump could clear, but narrow enough to try. Between rains it ran clear, exposing minnows, green sunfish and bullheads. It was a rare summer day when the big pool under the road bridge didn't have a bike or two parked by it.

The world was much larger then and the little creek valley was so vast, its pioneers dared not venture forth without provisions. A couple of peanut butter and jelly sandwiches and a canteen of Koolaid, we would reason, could keep a man alive, if he got weathered in.

A bent pin, some string, and a worm found beneath a rock provided my early angling thrills. There were many landmarks from that point on. I recall my first round tin of assorted hooks, my first cord stringer and finally, after much coaxing, my first rod and reel. Saturday nights found me in town pouring over fishing tackle displays instead of toy counters. I saved what money I encountered to buy precious items I might routinely pick up by the dozen today. Before long, I was tying flies and constructing tiny spinners designed to humble a few of the larger green sunfish. To this day I pity those who have not had the thrill of fooling a fish with a hand-made gadget.

As I grew, the world of the creek slowly grew with me. At first, each bend seemed to require a small journey to reach; the distant woodlot on the neighbor's farm was a foreign place. But the older I became, the closer the horizon seemed, and I began to seek the untouched stretches. By the time I reached 10, I commonly ran off to the "crick," not so much to escape, but to return to something deep and real. There, in the shaded dampness of the stream bank, I was awed by the lonely beauty around me.

I began to understand the connection between the creek and the many wild things around it. The willows, cottonwoods and oaks provided a wonderful relief from the common vista of corn,

the Country Creek



alfalfa, and soybeans, to more than human eyes. It was there I first came anglued as a raucus old rooster erupted at my feet — an experience that startles me as much today as it did then.

I began to notice other things too, like certain plants that grew along the water's edge and others that found the sunny spots out near the cropfields to their liking. I came to know several kinds of sparrows, each different from the so-called house sparrows back at the barnyard. Great blue herons and wood ducks were unusual but notable visitors. Muskrats were often surprised even at midday, and raccoon and mink tracks added an exciting, wild character to the mud banks and tiny sandbars.

Creeks are for kids, however, and it wasn't too many years before thoughts of the old hideout waned. Facing the onslaught of homework and organized sports, the creek commanded little attention. Indeed, with cheerleaders to chase, nature study took on new mean-

ing. But the old creek never completely disappeared from my mind and years later I found myself thinking of it while considering a place to build my own house. I thought of my daughter and wondered what a rural stream much like the one on which I had prospered might mean to her. I reasoned that she had always been keenly interested in the outdoors and natural things; so, if given the opportunity, she might take to her own creek.

She did. I spent pleasant, summer hours watching her pick up frogs, scare muskrats and chase fish. I had given her as much basic knowledge as I could, but she craved more and trips to the creek were frequent. She had always been a good sight brighter than her father, and more industrious, so I had held she would retain her fair share of outdoor knowledge. That is until recently.

About a year ago, my daughter apparently contracted a mysterious dis-

ease. Now, upon her arrival home from school, it has become necessary for her to wear a life-giving electronic device on the side of her head. The telephone company strategically installed these units in several rooms, complete with long cords, so that she might move freely about the house. Despite the apparent symptoms of her affliction — the loss of hearing, the contorted body configurations, the strange, jumbled dialect — my wife assures me, rock-solid optimist that she is, my daughter is not at all unlike other 15-year-olds and that she will one day return to the interests she cultured as a child.

I really hope so. If she does, she will be happier for her outdoor experiences. She'll remember that there are special things in life to learn that schools, books, and even parents can't provide. And she'll understand that those things might well be discovered by a kid with muddy feet and frog-filled hands, sitting on a secret bend of a quiet country creek.



Illustrations by Scott Patton

Soft Plastic

Another long winter has ended and anglers anticipating the open-water fishing season are sorting over lures in tackle boxes. Right away shortages are discovered. Most trays needing refills are those containing soft-bodied plastic lures. Many of these lures fell victim to stumps, rocks and trees, while others were shredded by striking fish.

Interest in molded soft plastic lures began in the mid-1960's. Proven effectiveness has increased popularity until a large assortment is now considered a must in nearly everyone's tackle box. Plastics are available in a wide range of shapes, sizes and colors, including worms, grubs, fish, crayfish, frogs and forms imitating other natural foods of fish.

For most anglers, restocking of bodies is handled through a local tackle shop. Molding and constructing plastic lures, however, can provide a money savings, if a large number are used. More important, is the reward of catching fish on homemade lures. The total investment in material and supplies is fairly modest.

The two types of molds which can be purchased for casting plastics are open and injection molds. Open molds are

quickest and easiest to use, but will produce a lure with a flat bottom. They are one-part molds having either one or three body cavities. An open mold costs from \$3-10, depending on size of body to be cast and number of cavities. The injection type produces a fully rounded body but is much slower to use. These molds have just one body cavity. The injection molds are made in two parts, an injecting plunger and a two-piece mold that clamps together. Costs are from \$6-7 for an injector (only one is needed), and from \$3-7 for each mold.

Other materials required for making plastics and their approximate costs are: plastic casting liquids at \$4 a pint (larger quantities are available); plastic hardener/softener at \$4 a pint; liquid color, \$1.50 an ounce; and a small aluminum melting pan at \$2.25. Also needed is a source for heating liquids, such as a cooking stove, hot plate or camp stove.

Once the materials are purchased, the lure-making procedure is simple. First, the plastic liquids must be thoroughly shaken and stirred in their containers. Working in a well-ventilated area, the desired amounts of well mixed casting liquid and hardener/softener are poured into a pan. The pan is then heated on a

stove set at 325-350 degrees. The contents must be stirred as they warm to keep from burning. The liquid will change from a thin to thicker consistency, then gradually become thin again, like syrup. At this time it is ready to use, and color dye should be added.

Now the baits can be poured or injected, depending on what type molds are being used. Working fast is essential as the plastic cools very quickly. Open-mold pouring is simple. Mold cavities are filled level full in a single, steady flow. The plastic sets up almost at once. As soon as molds are full, the melting pan must be returned to the stove in order to keep the remaining plastic ready for the next pouring. After about a minute the plastic that was poured is ready to be removed from the mold, and the procedure can be repeated.

For injection-mold casting, the heating process is the same as for the open mold. But after heating, the liquid is poured into an injector reservoir which has a plunger. The plunger shoots liquid through a nozzle, into a two-piece mold which is clamped together. The reservoir is filled in a vertical position. The plunger is inserted into the reservoir, and the assembly is turned over and set upright on the base of the plunger. Next the mold with one end having a small opening and the other end a larger overflow vent opening, is set on top of the nozzle. The mold is then pushed down on the reservoir nozzle, forcing the heated liquid through the small opening to fill the body cavity. After filling, the procedure is the same as for the open mold.

Each cup of liquid will make about fifty or sixty plastic bodies, depending on the size to be cast. It is best to work

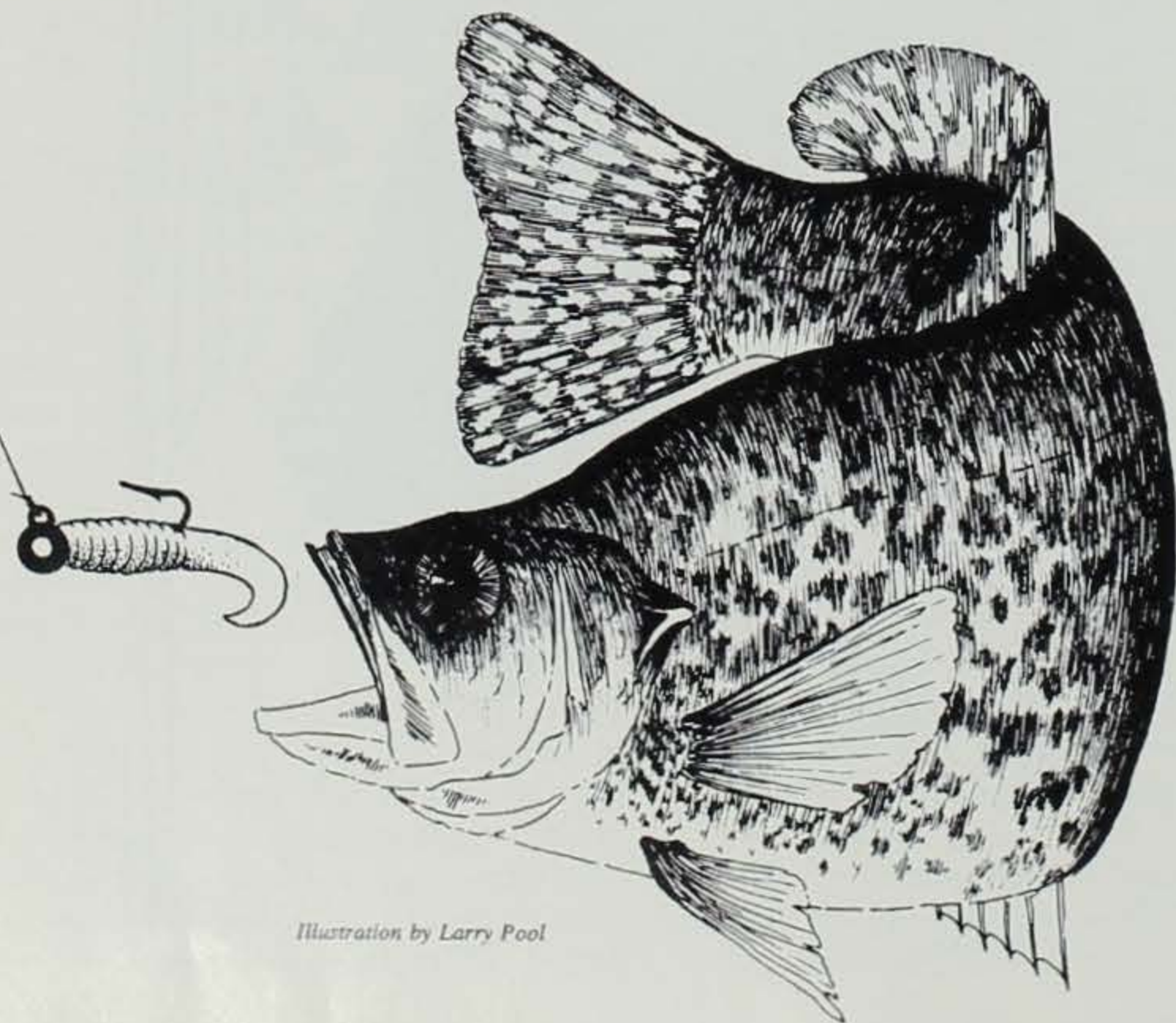
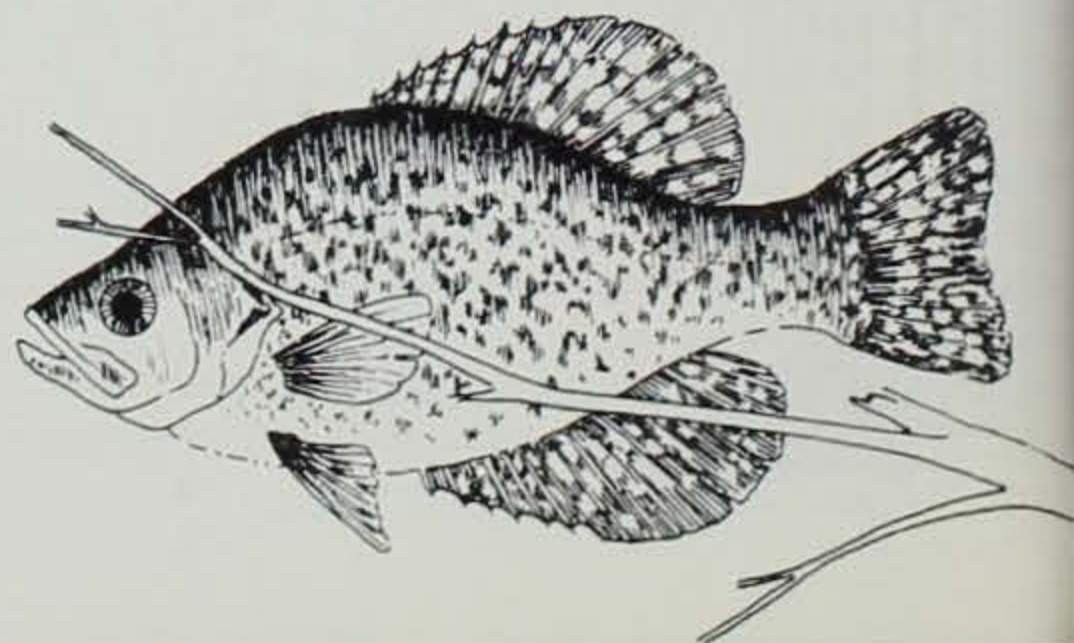


Illustration by Larry Pool



Lures

By Robert Middendorf

with a small quantity of plastic when first learning the process. If molds are overfilled, excess plastic can be removed with a knife or razor blade and the scrap placed back into the pan to be remelted. Also, if improper pourings are made, the mistakes can be remelted. There is no limit to the number of times the plastic can be remelted, provided it is not overheated.

Molds and materials for constructing soft-bodied, plastic lures can be purchased at larger fishing tackle stores. They are also available through advertisements in outdoor magazines and mail order catalogs.

Bob Middendorf is a fisheries management biologist at Solon. He is a native of Lansing, and has been with the commission since 1948.

Below left: A few of the many flat bottom openmolds available to the do-it-yourselfer.

Below right: Basic materials for home production are mold, casting liquid, softener, hardener, coloring dye and pan.

Right: Soft-bodied, plastic lures in many sizes, shapes and colors can be purchased, or you can make them yourself.

Photos by author



Morels and False Morels

A Need to Know the Difference

By Lois H. Tiffany and George Knaphus



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Morel hunting has been a popular outdoor spring activity in Iowa for years but has attracted an increased number of participants during the last fifteen years. These people were introduced to the hunt during the period when elm trees were declining from elm wilt disease and morels were found in large numbers. Now the enjoyment of finding and eating these delicious fungi remains a continuing challenge in spite of reduced numbers of morels available.

Mushroom hunters recognize two to four species of sponge mushrooms or morels. These all are members of the genus *Morchella* and have a hollow, simple stalk topped by a sponge-like upper portion with sharp-ridged pits. The upper portion may vary in color in different species, or in different-aged individuals of the same species. All develop in April and May, with the exact timing and length of season varying from year to year. All Iowa species of *Morchella* are marvelously edible.

Problems can arise, however, when people encounter the false morels during their hunts. These fungi look somewhat like the true morels, and occur in the same kinds of field situations in the spring. One type of false morel, that belonging to the genus *Verpa*, is easily recognized when the plant is slit

lengthwise. The stuffed stem of the *Verpa* species, filled with fuzzy white fungus tissue, and the free cap portion, attached only at the top of the stem, are distinctively different from the hollow stem and attached cap of the true morels.

The other, and perhaps more common, false morels are of the species *Gyromitra*. They are larger, heavier plants, with thick stems and a cap portion with rounded ridges. The cap portions are usually a rich reddish-brown, and sometimes are almost saddle-shaped.

Some, perhaps all, of the false morels contain gyromitrin, a compound which breaks down to form monomethyl hydrazine when the plants are boiled in water, or in the body if they are eaten without special treatment. This is an insidious poison because, typically, no noticeable symptoms develop until a certain level of material has accumulated in the body. At that time serious illness or even death may occur.

This spring a group of researchers (including Don Huffman of Central College at Pella, Lois Tiffany, Bob Nyvall and George Knaphus at Iowa State University at Ames, and Robert Embree at the University of Iowa at Iowa City), with the support and help of the Extension Service of Iowa State

University, will try to interpret the morels and false morels of Iowa and their distribution in the state.

This project depends on help from the people of Iowa who collect and eat morels or who enjoy knowing about the natural areas of Iowa. We are asking people who collect any of these mushrooms to share with us, and also to collect a specimen of the false morel for our observation. Please take one good specimen of each type, wrap it (preferably in wax paper or in paper toweling), and put it into a brown paper bag with an attached label including your name, when the collection was made, the kind of plants in the area, and any comments about the collection area. *Please don't* wrap or put it in a plastic bag. As soon as possible, take the specimen(s) to your county extension office, and they will send them to one of the identification offices at Ames, Pella, or Iowa City. The specimens will be studied in detail and a report made later.

In addition to this basic project, we hope that doctors will inform us of any cases where mushroom poisoning of any kind is suspected. If people eating any kind of mushrooms suspect that they have become ill or have had unusual symptoms within 4 to 48 hours after eating mushrooms, we would appreciate receiving this information.

All of this may seem to imply that mushrooms are very dangerous. This project will help clarify the situation and give us all more confidence in safely eating these delicacies.

Lois Tiffany is a professor of botany at Iowa State University. She earned a B.S., M.S. and Ph.D. from Iowa State. She was the first recipient of the governor's medal for science teaching.

George Knaphus is a professor of botany at Iowa State University. He earned a B.S. from the University of Northern Iowa, and M.S. and Ph.D. from Iowa State.



A morel mushroom (opposite page) in the field. Note hollow stem (inset).

Immediate left: Representative specimens of false morel (*Gyromitra*).

Above: Comparison of false morel, *Verpa bohemica* on left and morel, *Morchella semilibra*, on right. Note attachment of the cap along stock of morel and attachment at the end of stalk of false morel. Also, *Morchella* has hollow stock, *Verpa* has white, fuzzy tissue.



OLD FORT MADISON IOWA'S FIRST

By John Hansman

Fort Madison, the first U.S. military post established on the upper Mississippi, was built in 1808 and 1809 at the site of the present city of that name in southwestern Iowa. The fort was never popular with local Indians who forced the garrison, under siege, to evacuate and burn the post in 1813.

Excavations carried out at the fort site in 1965 and 1966 by Dr. Marshall McKusick (then Iowa State Archaeologist), and in 1981 by the writer with Paul and Joseph Bartholomew, have added to our knowledge of this early fortification. In 1988 the city of Fort Madison will

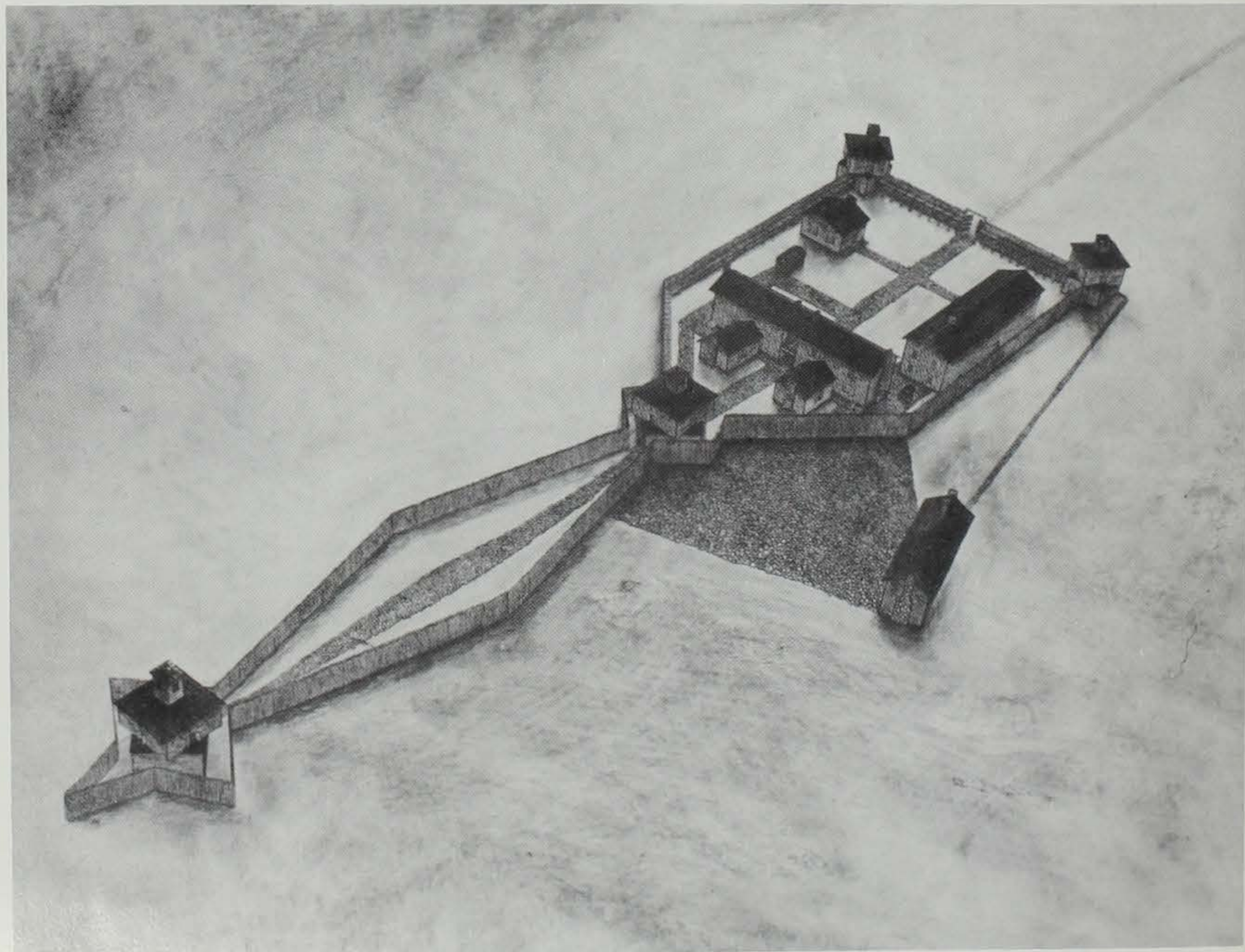
jointly celebrate the 150th anniversary of its incorporation and the 180th year of the founding of the fort. As part of these activities, the city, with the support of local groups, plans to build a partial reconstruction of the old fort near its original site.

The building of the fort

The Louisiana territories purchased by the United States from France in 1803 included all land drained by the Mississippi River. Much of this country, however, was also claimed by various Indian tribes. Under a treaty of 1804,

the Sauk and Fox Indians ceded to the United States parts of land they claimed along the Mississippi. The treaty provided for establishment of a factory, or trading house, where Indians could exchange goods. Partly by these means, the government hoped to secure the friendship of many Indians who tended to favor the British in Canada.

A "factory" set up at Fort Belle Fontaine on the Missouri River proved too remote to serve the northern tribes. In 1807 government officials decided to establish a second trading post near the mouth of the Des Moines River, below



T FORT

the Mississippi rapids. A fort would be erected to protect the factory.

In September, 1808, a convoy of keel boats from St. Louis arrived at the foot of the Des Moines. First Lieutenant Alpha Kingsley, who commanded the expedition, decided that land near the river's mouth was subject to flooding and, thus, was unsuitable for the buildings; therefore, he moved up the Mississippi, past the rapids, and chose a place on the west bank of the river.

This proved an inauspicious location, for from a hill close behind the fort, which was on the river flat, hostile forces could fire down upon the garrison. In addition, a ravine a hundred paces west of the fort, afforded protection to anyone who might attack the post from that direction. Nevertheless, construction began in the autumn of 1808 and was largely completed by the spring of 1809.

The fort was built on a modified-square plan, with the northern part of the stockade forming a two-sided extension meeting at a point centered on a blockhouse (Fig. 1.3). Logs for the fort



were cut by the garrison and some hired civilians. A double row of log pickets, called the "tail" in surviving military correspondence, extended north from this building (Fig. 1.11) to another blockhouse, located on the hill overlooking the fort (Fig. 1.4). The tail was a defense intended to deter Indians from harassing the fort from this higher ground and gave structural testimony to the fort's poorly chosen location; it may be a feature unique to Fort Madison among American frontier forts. Two other blockhouses were built at each corner of the stockade wall facing the river (Fig. 1.1 and 1.2).

Inside the fort were two officers' quarter buildings (Fig. 1.5) and an

enlisted men's barracks (Fig. 1.6), all two stories high and built of squared logs. A log guardhouse and a stone powder magazine stood in the eastern part of the compound (Fig. 1.7 and 1.8). Two small kitchen cabins were at the rear of the officers' quarters (Fig. 1.9). Walkways paved with cobblestone joined the various structures.

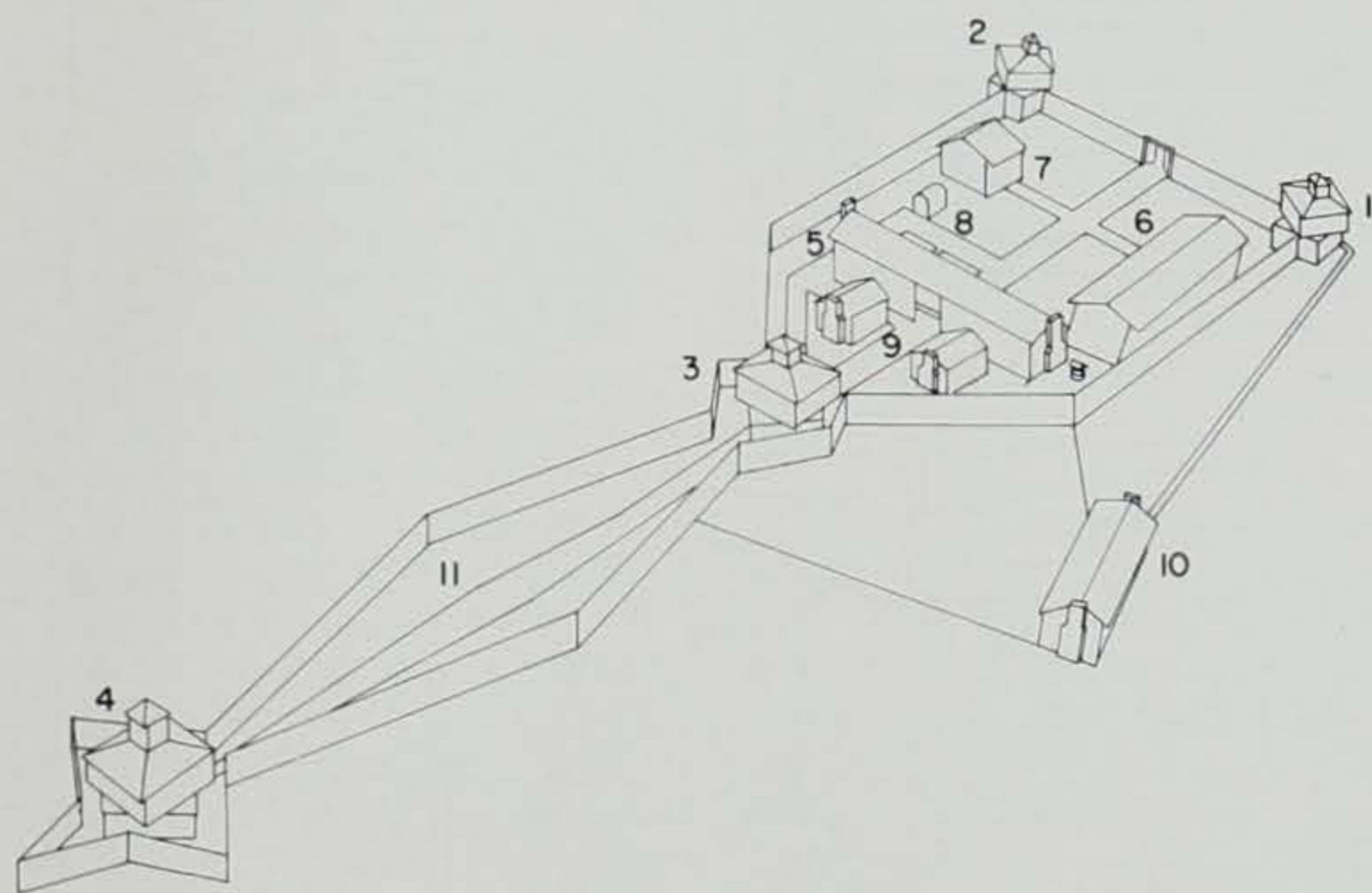
Limestone for foundation walls, fireplaces, and chimneys was quarried across the Mississippi in Illinois, from rock outcroppings near the river. Fig. 2 shows the stone cellar walls of the third blockhouse discovered during excavations for a water tank on property of the Shaeffer Pen Company in Fort Madison in 1965. This find brought about the State Archaeologist's dig of that year.

The "factory" and its wares

The trading factory building at Fort Madison was not completed until the autumn of 1810. As a prudent measure against possible Indian attack, Lieutenant Kingsley had sited that structure 90 feet west of the fort stockade structure.

Figure 1, left: 1 and 2—corner blockhouses. 3—central blockhouse. 4—blockhouse to guard "tail" of fort. 5—Officers' quarters. 6—enlisted men's barracks. 7—Guardhouse. 8—stone powder magazine. 9—kitchens. 10—"Factory" or trading post. 11—The fort's peculiar tail.

Figure 2, above: Stone cellar walls of central blockhouse excavated in 1965.





In this artist's impression John Johnson at the Fort Madison trading post barter with a group of Sauk Indians.

He probably reasoned that this would provide greater security for the garrison than if the factory, as first intended, had been built inside the fort.

The factory, measuring 52 by 20 feet, consisted of two stories of hewn logs with a stone-floored cellar. On the ground floor was a large room for trading, a counting room, a fur storage room and a kitchen. Living quarters were above. As noted earlier, frontier stores of this kind were intended to secure the friendship of Indians by providing a variety of useful goods.

The trading agent at Fort Madison was John Johnson, who arrived with Lieutenant Kingsley in 1808. He calculated his sale prices at 120 percent of cost. Among items carried at the factory for this purpose were flintlock muskets, animal traps, fishhooks, knives, brass tomahawks, hoes, and strings of wampum.

By the early 19th century, glass wampum beads, such as those found at Fort Madison, had substantially replaced shell beads, and were often used by Indians for decorating belts. A predominance of purple wampum in these conveyed ideas of hostility, sadness, and death; white as a major background color signified peace and good will. During this later period Indians also wore necklaces of strung wampum beads; others were sewn in patterns on buckskin clothes and moccasins. These were probably the more common uses

made of beads supplied at the Fort Madison trading factory.

For Indian women, Johnson carried in addition to beads, calico, flannel, twill, coating, assorted ribbons, buttons, cooking pots, scissors and rings. Vermillion and Prussian blue were available for cosmetic use.

The Indians traded animal skins, tallow, beeswax, lead, and other items. Johnson sent most of what he obtained from the tribes to St. Louis. On an accounting sheet of 1809 he lists 38,000 pounds of deer skins, together with packs of beaver, muskrat, and otter fur. In 1810 he collected 80,000 pounds of lead brought down river from Sauk and Fox mines in upper Iowa and Illinois.

Soldiers and Indians

Although most of the northern Indian tribes did not object to the establishment of a trading house on the upper Mississippi, some Indians showed concern over construction of the adjoining military post called Fort Madison. As early as the spring of 1809 a party of seemingly friendly but suspected ill-intended Sauk and Foxes attempted to enter the fort under pretext of dancing for the garrison. The post commander, Lieutenant Alpha Kingsley, however, successfully discouraged the advancing Indians by aiming a six-pounder bronze cannon at them through the partly open stockade gates.

In August, 1809, Captain Horatio Stark arrived with his family at Fort Madison to take command. On September 28, 1810, Stark's wife Hannah gave birth to a daughter, Rozanna. Although specific information is wanting, it is probable that Hannah bore her daughter at the fort and that Rozanna was the first white child born in what is now Iowa.

The first Indian siege

While the trading house at Fort Madison prospered, some Indians continued to resent the fort. The Sauk warrior Black Hawk remained particularly hostile. During the War of 1812 he supported the British in North America, and in late summer of that year, he and a band of followers attacked Fort Madison. On September 5 they killed Private John Cox, who was caught outside the stockade. They also slaughtered the garrison cows, burned some boats at the landing, set fire to two nearby cabins, and menaced the fort with burning arrows. On the following day, during a period of little wind, Lieutenant Thomas Hamilton, the last post commander, ordered the factory building burned, thus preventing Indians from setting fire to the factory on a day when west winds might carry burning debris to the fort.

The Indians withdrew their siege on September 19, 1813. Shortly thereafter, with the factory burnt and with little prospect of rebuilding, John Johnson, the trading factor, departed for St. Louis. Later in September, a relief party of 19 soldiers arrived to increase garrison strength to about 60 men.

The second Indian attack

The respite from Indian attack, gained by the garrison at Fort Madison after the skirmishes of 1812, lasted several months. In the summer of 1813, Lieutenant Hamilton ordered his men to construct a small blockhouse beside the ravine about 100 paces west of the fort. During previous troubles, this ravine had provided convenient cover for Indians harassing the stockade. On July 8, 1813, a party of Winnebagoes and Sauks fired on a detail of soldiers cutting timber for the new structure. Two men were killed and one was wounded.

On July 15 four soldiers guarding the blockhouse near the ravine were attacked by Indians. All four were killed by either musket fire or by spears thrust through chinks in the unfinished log walls.

The fort is abandoned

Two days after the blockhouse killings, Lieutenant Hamilton wrote his commanding officer at Fort Belle Fontaine, in southern Missouri, stating excellent reasons why the difficult positions at Fort Madison might oblige him to abandon the post. Supplies were depleted, and as trading with the Indians had ceased, no real reason remained to stay. Faced with continuous harassment, Hamilton abandoned the fort on September 3. The garrison slipped away at night, through a trench they had dug earlier, to some boats moored and presumably hidden at the riverside. Before

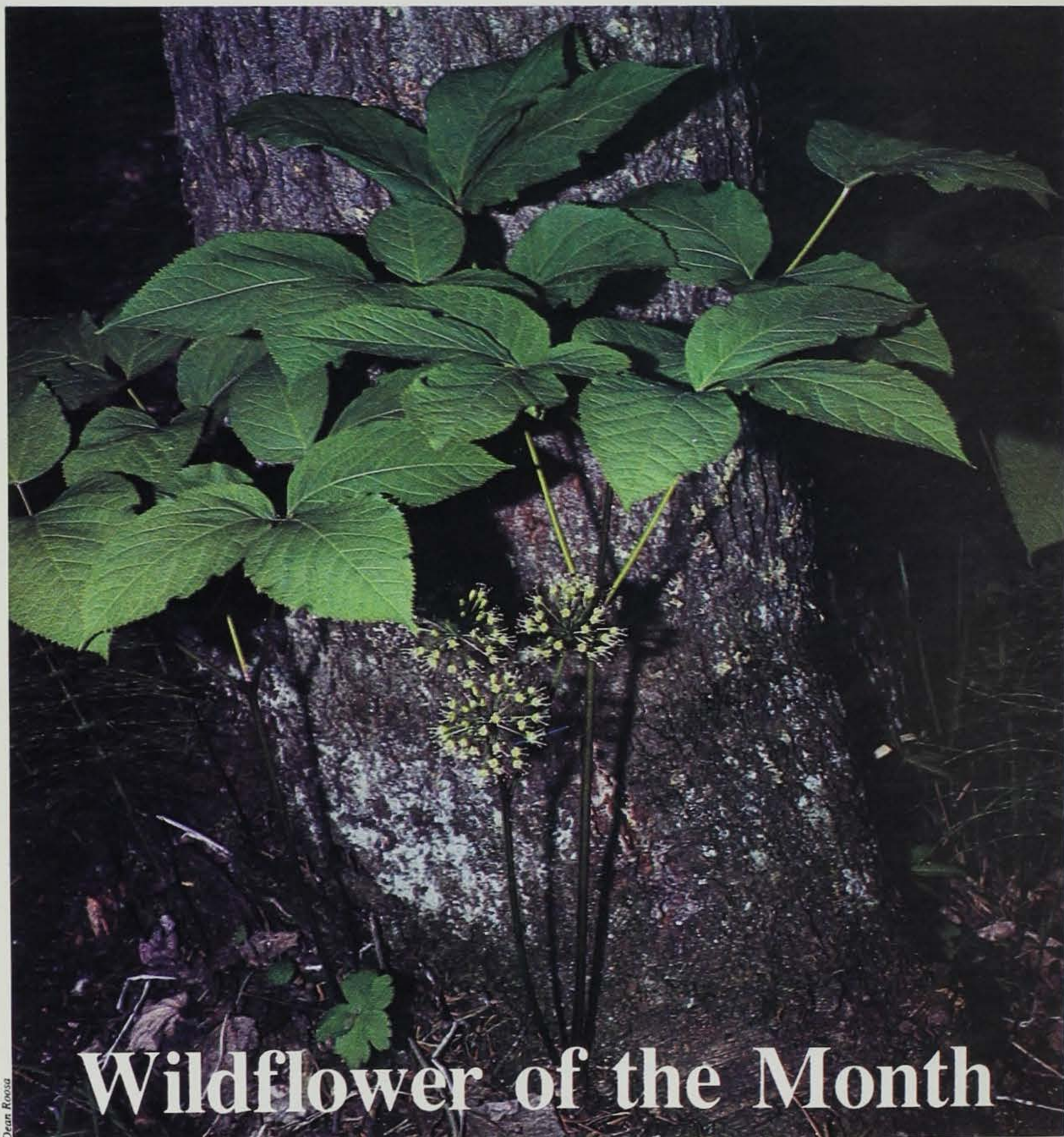
leaving they set fire to the stockade and all the fort buildings.

An impression of the burning of old Fort Madison is reproduced below. The original of this picture was painted about 1900 by Alexander Windmayer of Fort Madison. Although boats and uniforms are somewhat incorrectly represented, the painting is the best known attempt to illustrate the event.

John F. Hansman is an archaeologist who participated in the State Archaeologists' excavations at Fort Madison. A resident of Fort Madison at that time, he now lives in London, England.

An impression of the burning of old Fort Madison, painted around the turn of the century by Alexander Windmayer of Fort Madison. Faced with constant harassment, Lieutenant Hamilton and the garrison set fire to the stockade and abandoned the fort at night, September 3, 1813.





Dean Roosa

Wildflower of the Month

Wild Sarsaparilla (*Aralia nudicaulis*)

By Dean M. Roosa

An interesting and important member of the woodland flora is wild sarsaparilla (*Aralia nudicaulis*) found in much of Iowa, but most common in the northeast quarter. It grows to a height of nearly 18 inches, with the long leaf petiole dividing near the top into three leaves, each with usually five leaflets, arranged in a pinnately compound fashion. The flower stalk, which arises from near the base, is topped by tiny greenish-white flowers arranged in loose, ball-shaped clusters. The normal number of clus-

ters is three, but may range from two to seven. The fruit is a cluster of dark purple berries.

Wild sarsaparilla is in the plant family Araliaceae, and it somewhat resembles ginseng, a much less common member of the same family. Because the plant is widespread in the wooded portions of America, it has been extensively used as a medicine. Native Americans powdered the root and used it as a poultice for sores. Other tribes used it as a diuretic and stimulant and for respiratory problems. The aromatic roots have been used as an ingredient in root beer, but it was not used as a basis of the sarsaparilla drink, despite its common name.