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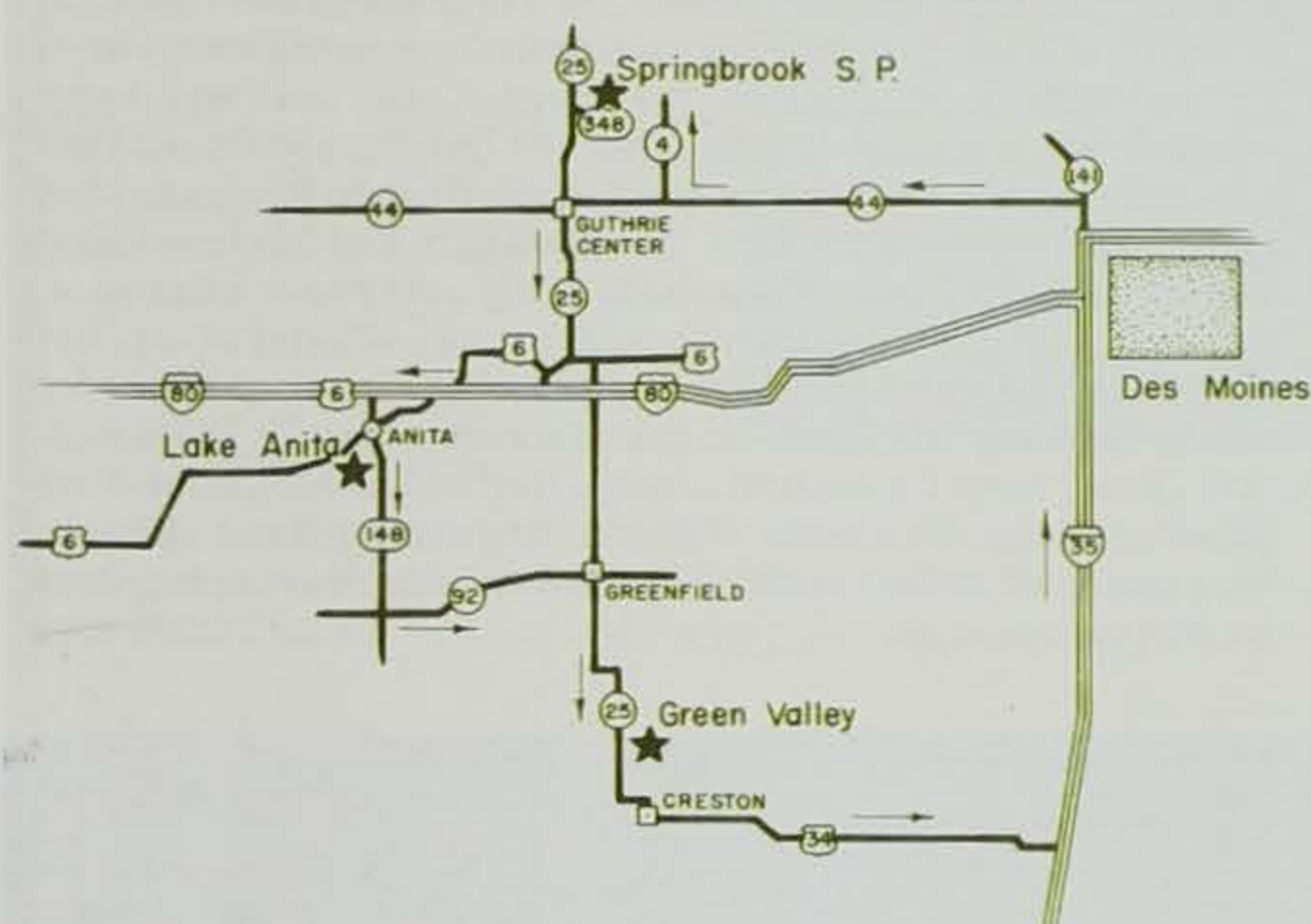
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Try A Mini-Camping Vacation in Iowa's State Parks

Lake Anita.





By Sonny Satre

Photos by the Author

IOWA'S 64 state parks offer a variety of outdoor recreational activities and opportunities. For the camper with vacationing in mind, whether you choose to visit one or a number of them, state parks can provide a very pleasant experience. If you want to avoid crowded conditions, the best time for one of these trips is during the week instead of weekends or holidays.

Some of the activities most parks offer include swimming (many with modern beach facilities), boating, camping, fishing, hiking, picnicking, nature study and just plain relaxing. Another important factor to consider during these inflationary times is that this type of vacation can be less expensive for the old pocketbook and at the same time a lot of fun.

For example, my wife (age unknown), our ten year old daughter, eight year old son and myself experienced one of these mini-camping vacations recently and the final consensus was that everybody had a great time! I have listed all the costs (see accompanying table) from gasoline for a standard-sized American car pulling a fold-down camper, to food for the expected hungry appetites. We visited three state parks—Springbrook, Lake Anita and Green Valley—with one night spent at each. From a practical stand-point, you may desire to stay at a park for more than one day because of the hassle of moving and setting up. That's up to the individuals involved.

Our first destination was Springbrook State Park, located about 50 miles northwest of Des Moines in Guthrie County. It was about noon when we registered at the camping check-in station and then selected a shady site to set up. All sites are on a first come, first served basis. Registration fee for an electrical hook-up site in a modern area (including shower facilities) is \$3.50 per night. If you prefer camping areas with electrical outlets as we do, Springbrook is a good place to go as there are 72 of these sites. Water and sanitary facilities are conveniently located near all camping spots.

A good recommendation on your first visit to a particular park is to pick up a park brochure at the check-in station and see what the park has to offer. The booklet describes the various features and facilities in the park and includes a map of the area. These handy individual park brochures are available from the park ranger at all state parks.

After putting the finishing touches on setting up, we decided to have a light lunch, consisting of ham and cheese sandwiches and lemonade before exploring the park. We found that Springbrook has much to offer. This is a 740 acre woodland park with a predominate canopy of hickory and white, bur and red oak. The camping area, however, is shaded mostly by hackberry, cottonwood, ash, silver maple and box elder. The southwest corner of the park is bordered by the Middle Raccoon River where a boat ramp is located for canoeists and fishermen. Springbrook also has a 27 acre spring-fed lake for which the park is named. Its clear water contains some good fishing opportunities for bluegill, crappie and largemouth bass. Rowboats and canoes are permitted on the lake. Only electric trolling motors are allowed on this rather long, narrow body of water. Boats can be rented from the concessionaire and bait can also be purchased there. We rented two pontoon paddle boats and toured the lake in about 30 minutes.

The lake has an excellent supervised sand beach. Swimming rates are 60¢ for adults and 25¢ for children under age 12 at all state park supervised beaches. Included in this rate is use of the bathhouse and shower facilities. A food and drink concession is also located by the beach. My wife and I spent a couple of hours relaxing on the sandy beach while the kids went swimming and had some treats at the food concession.

There are several hiking trails at Springbrook. Some of the trails lead into remote wilderness type areas where it's common to see white-tailed deer and other forms of bird and animal life. We took the loop trail around the lake where we were startled by the fleeting glimpse of two does. The scurrying of chipmunks, squirrels and rabbits along the trail was common. Many types of wildflowers show their colors from spring to fall throughout the park. We identified several, including our state flower, the wild rose, black-eyed susans and buttercups.

After a very busy day, it was time to barbecue some hamburgers and relax around the campfire before calling it a day.

We spent about 24 fun-filled and interesting hours at Springbrook and we plan to return some day for another camp outing.

After a breakfast of blueberry pancakes, bacon, orange juice and coffee, it was time to break camp. Our next stop was Lake Anita State Park, located about 40 miles southwest of Springbrook and three miles south of the town of Anita in northeast Cass County. Lake Anita is one of our newer state parks, being officially dedicated in 1967. The park totals 942 acres and includes a 171 acre man-made lake. Lake Anita offers modern camping facilities which include showers and electrical hook-ups. The camping area can comfortably hold about 250 camping units.

A modern beach house facility together with an inviting sandy beach is one of the most popular attractions at Lake Anita, especially during the warmer summer days. Lifeguards are always on duty during open hours. Another popular pastime is fishing. Lake Anita is one of the top lakes in the state for jumbo bluegill, nice-sized crappies and largemouth bass. Anglers also take some bonus catches of yellow perch, channel catfish and bullheads. Boat motors up to six h.p. are permitted.

For the picnicking enthusiast there are eight picnic shelters, and picnic tables are handily placed throughout the park. A golf course is nearby to test the golfer in the family. A state operated concession rents boats and motors and sells food, bait and other items.

We selected a terraced camp site overlooking the lake with an electrical hook-up. Showers, water and sanitary facilities were within easy walking distance. After a quick lunch of hot dogs and chips, we decided to go fishing. We tried our luck from one of the several fishing jetties found around the lake. Within a couple of hours, Lake Anita lived up to its reputation. We had several jumbo bluegill, some perch and one very large bullhead. For supper that night, you guessed it—fresh Lake Anita fillets and all the trimmings. That evening we enjoyed a campfire along with some hot buttered popcorn.

For campers who like fishing among other activities, put Lake Anita on your list.

Continued on Page 14

'Locking Through' on the Mississippi

By James E. Horan
BOATING SAFETY COORDINATOR

TO A MISSISSIPPI RIVER BOATER, entering and leaving a lock chamber is a common occurrence and probably no more than a minor delay as he travels from one pool elevation to another. But to the rest of Iowa's boaters "locking through" is an unknown experience and one to be considered with some care.

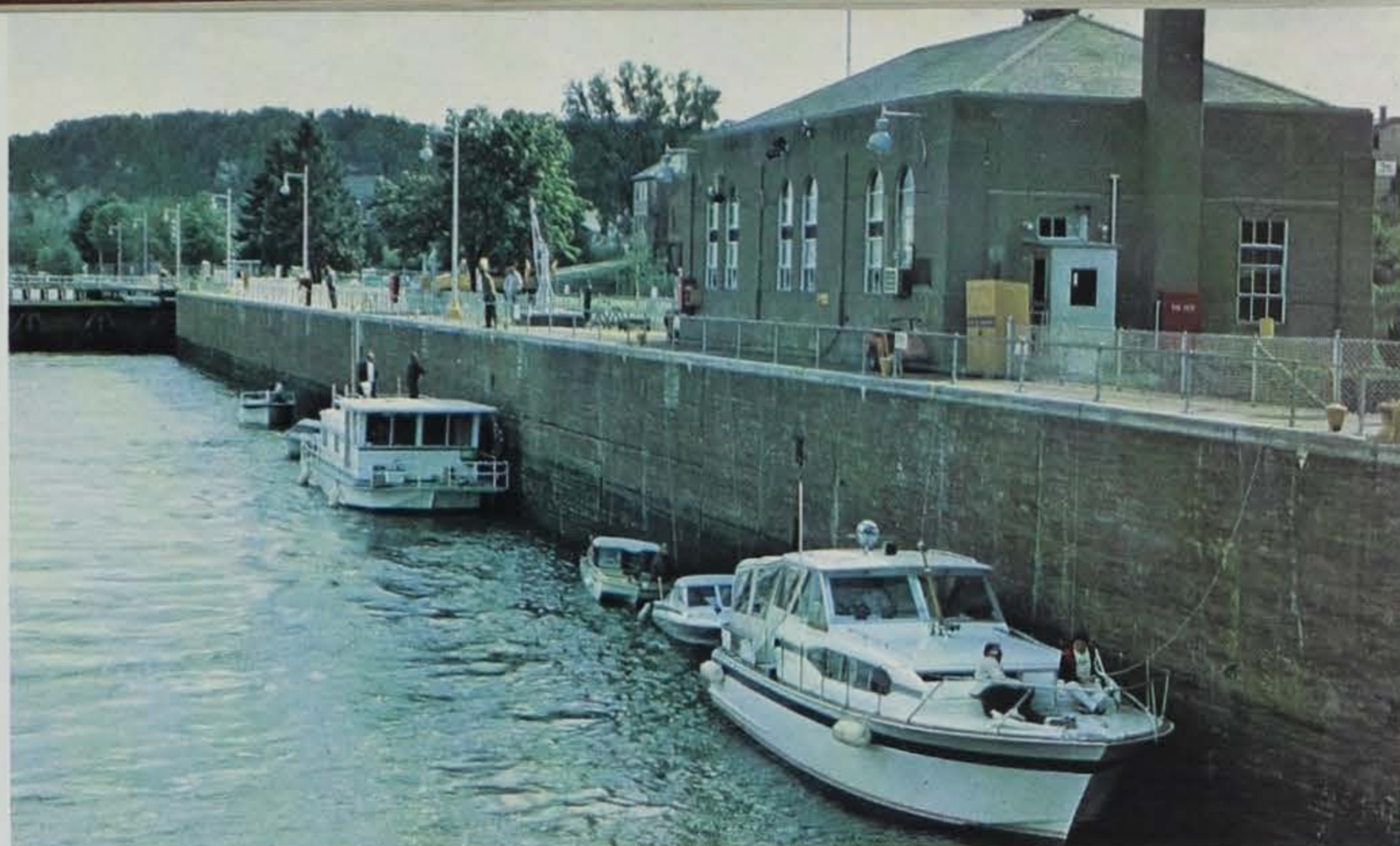
To be sure most people know the "World's Greatest River" is our eastern boundary and that is made up of a series of impoundments or pools which are separated by dams. Also, we know that to travel from one pool to the next, commercial and recreational boat traffic must pass through a lock chamber changing their elevation as they do so. In this day of trailer boating and more leisure time, you may find yourself contemplating an excursion on the Mississippi which will include a trip through a lock chamber.

Locks, of course, are known to other parts of the country. When western New York was the frontier, the Barge Canal and its system of locks and dams provided the commercial means to literally open up the west. Even prior to the Barge Canal coal was being transported from Pennsylvania across the Delaware River and then across southern New York by canal to the Hudson River and then down river to New York City. The Delaware and Hudson Canal was very small by today's standards being only about 8 feet wide. The canal was the lock chamber with a series of gates to regulate water level. Mountain streams provided the source of water for raising the water level and one has to presume that dry years must have caused some fluctuation in barge traffic. The McClellan-Kerr Canal connects Oklahoma with the Mississippi River. Illinois, Ohio and other states have lock and dams similar to those found on the Mississippi, also.



Mississippi River

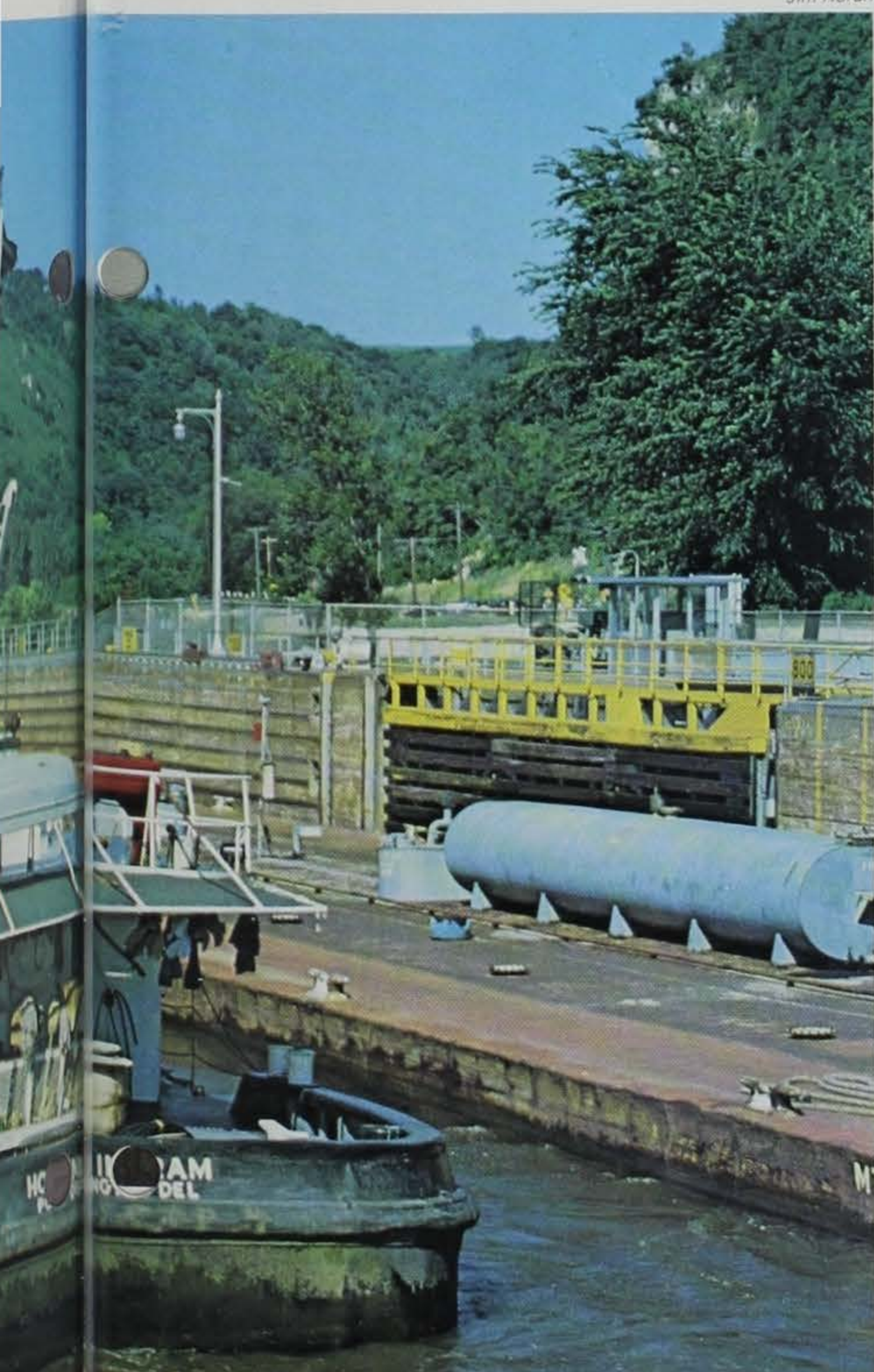
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Ken Formanek

A well known locking system is located at Sault Ste. Marie, Michigan. These lock chambers, four abreast, allow vessels to pass from Lake Ontario to Lake Huron on their westward journey to

Jim Horan



Lake Michigan or Superior. Since the construction of the St. Lawrence Seaway the Soo Locks open up the three western Great Lakes to ocean going traffic.

With respect to the Mississippi River, Iowa has a unique place in history. The first lock and dam on the river is located at Keokuk, Iowa. The lock chamber owned and maintained by the Corps of Engineers and the dam owned and maintained by Union Electric Company, will be the subject of a later article. Let's see how a pleasure boater would go through a lock for the first time.

When approaching a dam either from upstream or downstream, locate the lock. It will protrude from the dam along one shoreline or the other. Motor to a point near the gates yet far enough away to allow other craft to depart from the lock. (From upstream stay on the land side of the lock to avoid drifting into the dam.) Watch the signal lights. The red light means stay clear; the amber light means caution; and the green means all clear to enter. If yours is the only boat present, you may wish to pull alongside the lock and pull the horn rope to announce your presence to the lockmaster. It's located in the recess of the middle ladder on the land wall. At this point be prepared for some delay - in some cases up to one hour. The lockmaster may sound one long blast of the horn when it's time to enter. When the gate begins to open, stay well clear of outgoing traffic.

Enter the lock slowly. Waves caused by boats in the restricted space of the lock chamber can cause problems. The lockmaster will direct you to a place alongside the chamber wall. A rope will be tossed to you but do not tie the line to your boat. Hold on to it to keep your boat from drifting away from the lock wall. Protect the hull of your boat with bumpers. Once moored, stay seated and shut off the motor. Fires of any kind are not allowed during the locking process.

Wait for the lockmaster's signal before untying, then proceed at a slow speed until well clear of the lock and all craft on the other side. The locking process takes about 10-15 minutes.

In the locking process, a few other things should be considered. First, barges and emergency craft have priority over recreation boats. Pleasure craft are never allowed to lock through with a barge. Space is limited and the massive barges could crush small boats and the great turbulence created by their wakes could capsize pleasure craft.

When traveling on the upper Mississippi, it's a good idea to refer to navigation charts which can be obtained for a fee from the District Engineer's offices: Rock Island District, Clock Tower Building, Rock Island, Illinois 61201 (309) 788-6391. St. Paul District, U.S. Post Office and Custom House, St. Paul, Minnesota 55101 (612) 725-7501.

The U.S. Coast Guard Auxillary and Power Squadron offer courses on seamanship and boating skills that can come in handy on the Mississippi. Look for more articles on recreation on the Mississippi River in future issues of the Conservationist. □

TREE SQUIRRELS

By Jim Zohrer
WILDLIFE MANAGEMENT BIOLOGIST

Flying squirrel.

Jerry Leonard

ASK ANY SQUIRREL HUNTER in the state and he will tell you that squirrel hunting can be a truly rewarding experience. While sitting in the woods waiting for your quarry to make the first move, you have time to view Nature at her finest.

In Iowa, squirrels are one of our most important wildlife resources. Squirrels rank third in number harvested behind pheasants and rabbits. Each year over one million squirrels are bagged in this state.

Red (Pine) squirrel.

Photo by the Author



We have four species of tree squirrels in Iowa. They include the gray squirrel, fox squirrel, red squirrel and flying squirrel; although only the gray and fox squirrels are hunted.

The gray squirrel (*Sciurus carolinensis*) is an inhabitant of dense hardwood forests. It is most common in eastern Iowa where populations may run as high as one squirrel per acre. Gray squirrels eat a variety of nuts and oak acorns with hickory nuts being the most favored food. During periods of high population densities, both eggs and baby birds may be included in their diet. The gray squirrel does not set aside a large cache of food for the winter. He buries each piece of food individually, and so he is responsible for planting many of the trees that now grow in Iowa.

The gray squirrel's favorite den site is in a hollow, high in a tree. Leaf nests are also constructed in the summer, and in the winter if tree hollows are scarce. Gray squirrels may have two litters a year with the first litter being born in March and the second in July or August. The average litter contains three young.

The fox squirrel (*Sciurus niger*) is our largest tree squirrel. A full grown adult may weigh up to three pounds, with the females often weighing a little more than the males. The fox squirrel prefers open woodlands and is found throughout the state, especially in Northeast and Southeast Iowa.

The fox squirrel spends more of its time on the ground than the gray squirrel and is not as good a climber. Acorns are the most important food item followed by hickory nuts, walnuts and butternuts. Field corn is also a favorite, and fox squirrels can do considerable damage to a crop.

A hollow in a large white oak is the fox squirrel's favorite den site, although leaf nests are also built. A summer leaf nest is loosely constructed of branches and leaves. Leaf nests are often used in the summer because they are cooler and because the winter den tree may be infested with lice or mites. Fox squirrels normally have two litters of young per year, with the average litter containing three young. The first litter is born in March and the second in July. A female born in March may have a litter of her own by the end of the year.

The red squirrel (*Tamiasciurus hudsonicus*) is much smaller than the gray or fox squirrels. It weighs only .4 pounds. It occurs in scattered populations, primarily in Eastern Iowa. The red squirrel also eats acorns and various nuts. It stores most of its winter food in a single location and may have as much as two bushels of food put away in a single hole. Like the gray and fox squirrels, the red squirrel often causes damage to maple trees. Bark is stripped off upper branches so that the squirrel may eat the underlying layers and lick the sweet sap as it rises in the spring.

The red squirrel nests in tree cavities or leaf nests. It normally has one or two litters per year with two to five young being born.

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IOWA'S PRAIRIE PRESERVES

By Dean Roosa
STATE PRESERVES BOARD ECOLOGIST

Photos by Ken Formanek and Randall and Tomma Lou Maas

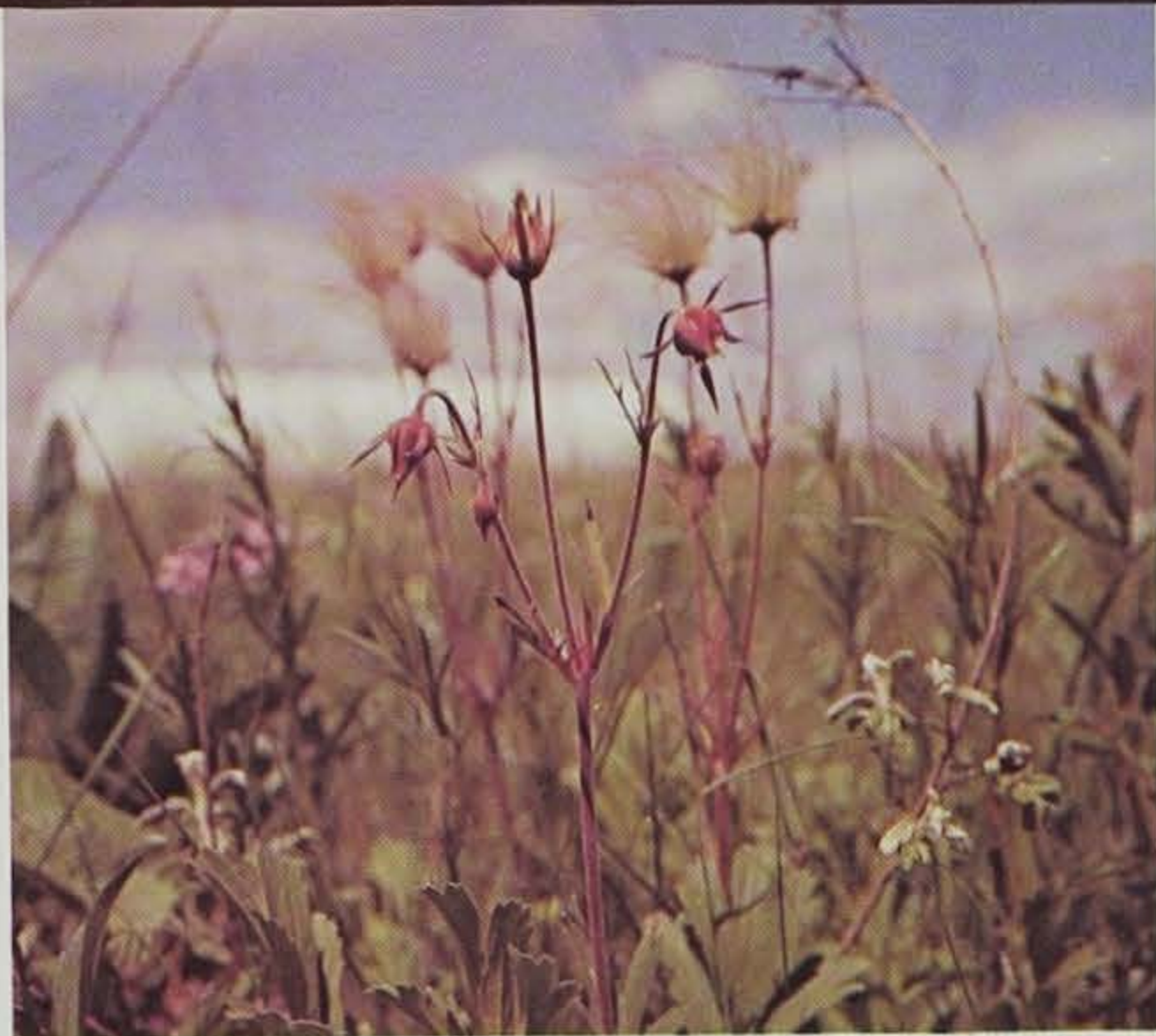
A sea of grass... an incredible lonely land of sky, wind and impenetrable sod faced the pioneers; hot in summer, cold and desolate in winter, without equal in beauty in July. For lack of a better term, early explorers called this land "prairie", French for "meadow". Stretching from the woodlands of Indiana on the east to the Rocky Mountains on the west, this unique ecosystem lay for millenia, slowly transforming the sun's rays into a mantle of vegetation which in turn was slowly transformed into the finest black topsoil the world has known.

This vast land was nearly treeless. The most important reasons for this were climate and fire. Fire, set by lightning or deliberately by natives, raced across the land, killing trees, removing litter to let the soil warm faster, recycling nutrients faster, proving to be the great rejuvenator. Prairie plants, having evolved with fire, have their growing buds and much of their biomass below ground and are not harmed by the early spring fires.

The native prairie is diverse. About 15 new species of plants bloom each week, giving a never-ending charm, a constant food source for pollinators and an opportunity for these plants to grow without excessive competition.

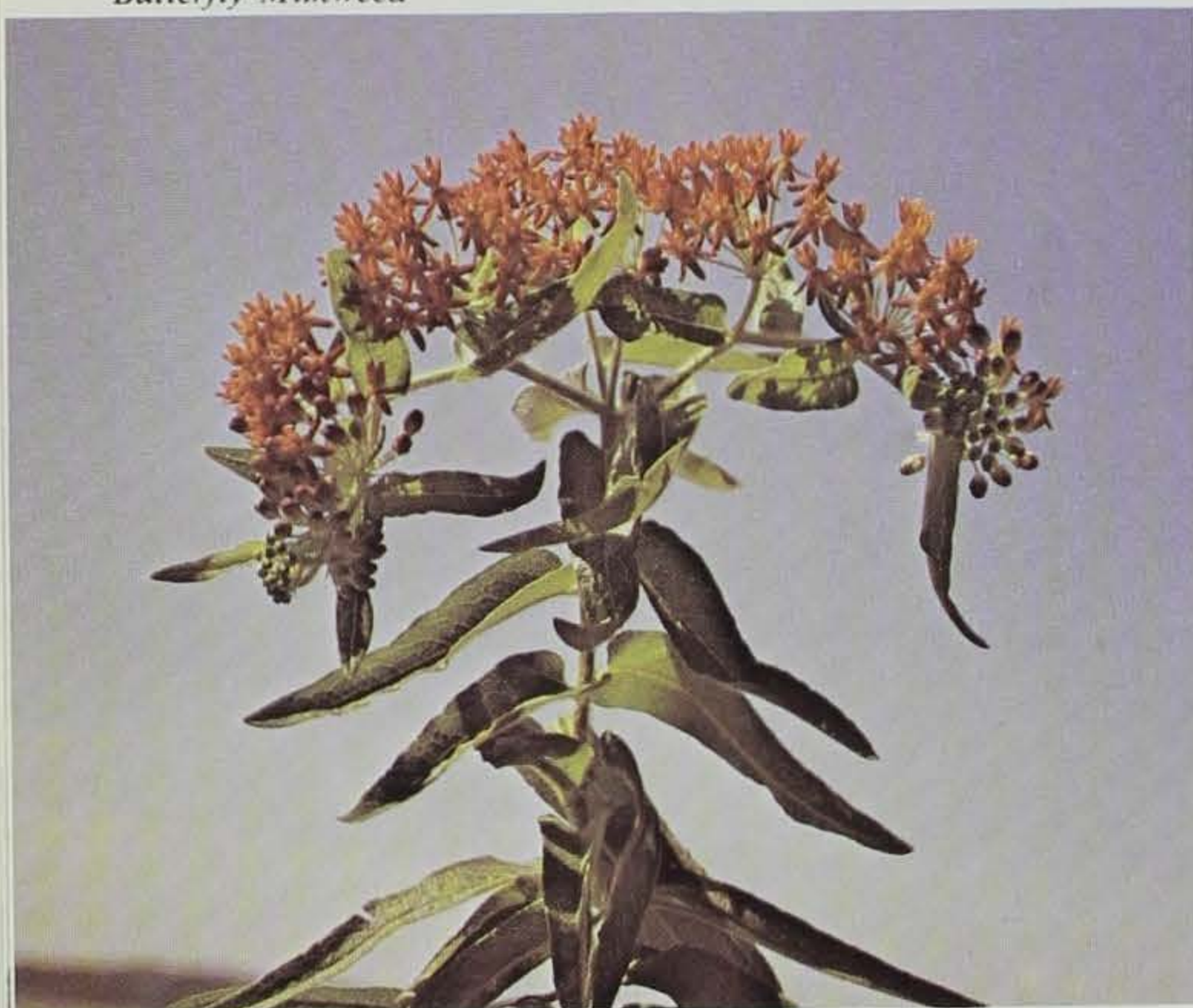
In the midst of this hot and cold, charming and desolate, inviting and intimidating land was a place that would be called Iowa. It was unique because it was a transition zone between the tall and mid-grass prairie. Unique also, because it contained examples of the ecotone between oak woods and prairie - the oak savannah, still visible in northern Iowa.

Today the prairie is almost gone. Once 38% of the coterminous United States and 85% of Iowa was prairie. So tough yet so fragile,

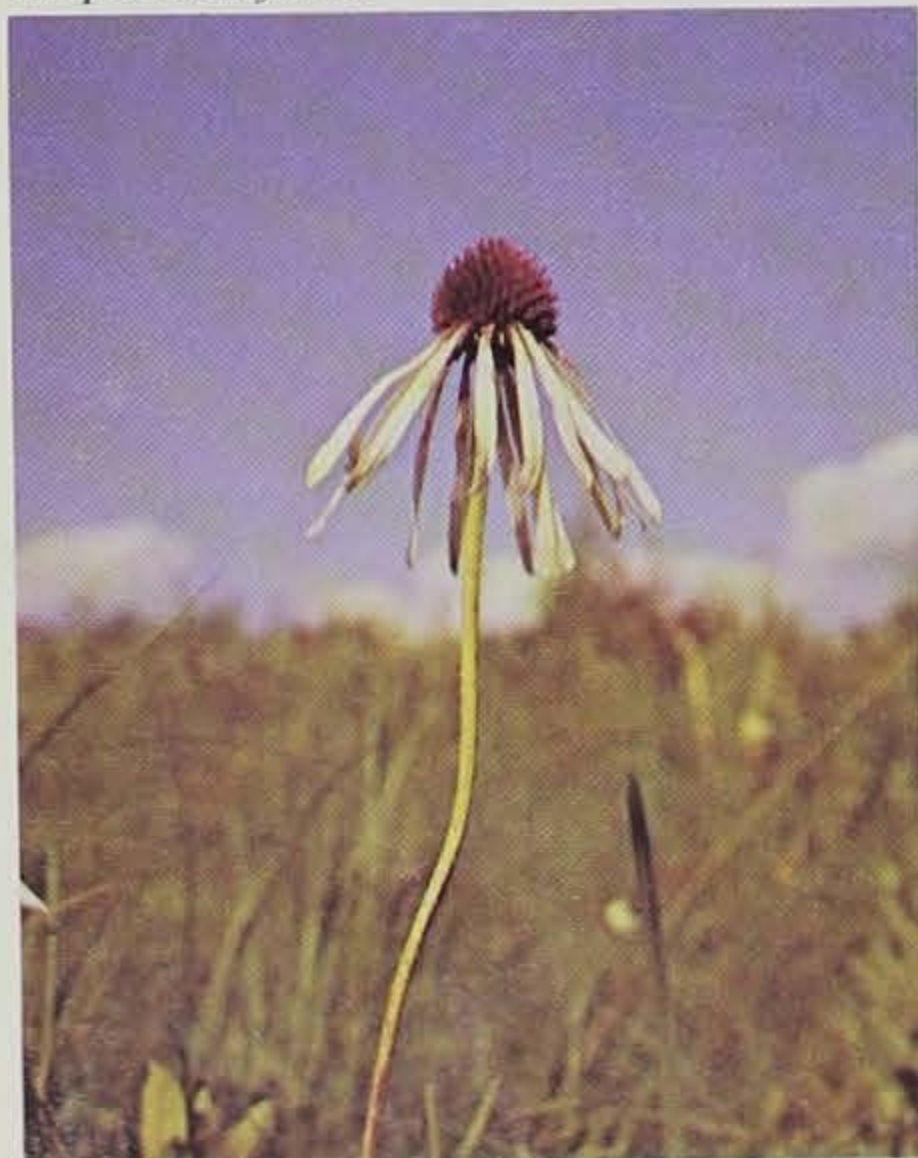


Butterfly Milkweed

Purple Avens



Purple Coneflower



Shooting Star



Larkspur



Yellow Coneflower

it left its mark on generations of early Americans. They, in turn, left a scar on it. The rich topsoil and scattered remnant prairies are what remain to remind us of this great legacy. We've traded one great herbivore for another; many species of grass for a few, all the time reaping the benefits of several thousand years of a slowly-evolving and complex ecosystem.

There has recently been a resurgence of interest in prairies and prairie restoration. In Iowa, the movement started in 1933 with the report, "The Iowa Twenty-five Year Conservation Plan", prepared for the conservation commission and which proposed the concept of preserves, pointing out seventy areas in need of preservation. The Iowa Academy of Science was instrumental in this movement. Dr. Ada Hayden, on the Academy's committee on conservation, wrote "The Selection of Prairie Areas in Iowa Which Should be Preserved". An outgrowth of this was the purchase of four tracts of native prairie ranging from 25 to 240 acres and located in widely separated parts of Iowa. These are now state preserves. Additionally, the nature conservancy has recently dedicated two of its tracts as state preserves. Kossuth and Webster County conservation boards have each designated a native prairie as a state preserve. The University of Northern Iowa has also dedicated as a state preserve a prairie in Butler County. These prairies serve as laboratories for ecological studies and studies of soil, animals and vegetation. Prescribed burns, where a portion of each prairie is burned each spring, is now used in management practices. Additionally, some of the prairies harbour rare or unusual species of plants or animals. Descriptions and locations of these prairie preserves follow.



Pasque Flower

Hayden Prairie

Named for Dr. Ada Hayden, professor of botany at Iowa State University and who had a life-long interest in prairies, this 240 acre prairie was purchased in 1945. It was the first prairie preserve purchased by the state. About 140 acres are upland prairie, the remainder is mesic or wet prairie. It is located four miles west and five miles north of the junction of highways 63 and 9 near Cresco, or five miles west of Lime Springs.

This prairie was in the ownership of one family for 78 years and was cut for hay and occasionally pastured. It is the largest unbroken native prairie remaining in Iowa.

From a distance, the blue-gray Pasque flower, earliest of the prairie flowers, was mistaken by pioneers for prairie smoke. Other flowers visitors may encounter are Shooting-Star, White and Purple Prairie Clover, Meadow Rue, Lead Plant, Wild Strawberry, Ox-Eye, Loose Strife, Wild Indigo and Prairie Rose. About 150 species of plants have been found on this prairie.

Designated as a registered national natural landmark in 1966, it was dedicated as a state preserve by the Preserves Advisory Board and the Conservation Commission in 1968.

Cayler Prairie

Cayler Prairie was purchased in 1960. This 160 acre tract is located in Dickinson county, three miles east, three miles south of Lake Park, or three miles west, 1 mile north of Lakeside Laboratories on Lake West Okoboji. About 75 acres are upland prairie and the remainder mesic to lowland prairie. It is located at

Cayler Prairie



the edge of a moraine, which accounts for its gently rolling topography and diverse plant life of which 265 species of 53 plant families have been recorded. Some of the more abundant plants from this prairie are Lead Plant, Blazing Star, Prairie Rose, Goldenrod, Prairie Clover, Scouring Rush, Pasque Flower, Wild Pea, Yellow Cone Flower, Ground Cherry and Prairie Violet as well as some very rare species.

This is a favorite place for field trips for classes from Lakeside Laboratories and a large number of research projects have been completed here.

Cayler prairie was designated as a national natural landmark in 1966 and dedicated as a state preserve in 1971.

Kalsow Prairie

This 160 acre tract, located in Pocahontas county, one mile west, five miles north of Manson, was purchased in 1949. Since then it has been the subject of studies on its soil, vegetation, fungi, vertebrates and management. A complex of 14 shallow potholes and their drainageways are spread across the prairie.

The diverse tract, with over 240 species of plants, begins the flowering season with Prairie Violets, Shooting Stars, Prairie Phlox and Hoary Puccoon; next come Anemone, Black-eyed Susan, Butterfly Weed, Compass Plant, Purple Coneflower, Blue Flag, Wood Lily; later in the year, Ox-Eye, Purple Prairie Clover, Rattlesnake Master appear; the final color is added by Closed and Downy Gentian, Silky Aster and the tall grasses. Some of the vertebrates which may be found are Masked Shrew, Harvest Mouse, Deer Mouse, Upland Sandpiper, Killdeer, Bobolinks, Pheasants, Northern Prairie Skink and Smooth Green Snake. This tract was dedicated into the state preserves system in 1968.

Prairie Phlox



Sheeder Prairie

Sheeder Prairie, purchased in 1961 from Oscar Sheeder, son of the original homesteader, is located four miles west and one mile north of Guthrie Center. It is of rolling topography, reflecting the rolling, loess-mantled Kansan glacial surface upon which it is located. Although of only 25 acres, 54 plant families of over 180 species contribute to its flora. This diversity is due to its varied topography of dry prairie, mesic prairie and drainage ways.

This prairie was mowed annually from about 1865 to 1965. Fire was used as a management tool since early times, the first intentional fire being set in 1890.

Some of the commonly-encountered early flowering plants are Star Grass, Hoary Puccoon, Prairie False Dandelion, Prairie Phlox, Prairie Violet and Common Lousewort. Later one may find Purple Coneflower White Snakeroot, Compass-Plant, Cup-Plant, Goatsbeard, Ground Plum and Prairie Turnip. The flowering year closes out with Prairie Sunflower, Gentian, Big and Little Bluestem, Rigid Goldenrods and Silky Aster.

This prairie was dedicated into the state's preserve system in 1968.

Williams Prairie

The Williams Prairie is located in Johnson County, two and one-half miles northwest of Oxford. It is a shallow bowl-shaped prairie with only a small portion of dry upland. This 30 acre tract was purchased by the Iowa Chapter of the Nature Conservancy and dedicated as a state preserve in 1976. It is located 16 miles from the University of Iowa; this makes it easily available for use by classes as an outdoor laboratory.

Some of the more unusual vegetation include Bunchflower, Turk's Cap Lily, Blazing Star and Bottle Gentian. The Short-billed Marsh Wren, Grasshopper Sparrow, Song Sparrow and Meadowlark are known to nest here.

Freda Haffner Preserve

In 1972, a gift from Freda Haffner allowed the Iowa Chapter of the Nature Conservancy to purchase this 110 acre tract. The outstanding feature is the largest kettlehole in the state and one of the largest known. The tract is located approximately four and one-half miles northwest of Milford.

The area around the kettlehole, though formerly pastured, supports a prairie flora of over 250 species of plants. Approximately 40 acres of prairie remain; 60 acres of ground formerly farmed will eventually be planted to prairie species and restored to prairie. This is a favorite study area for classes from Iowa Lakeside Laboratories, located about three miles northeast.

Stinson Prairie

Stinson Prairie, owned and managed by the Kossuth County Conservation Board, was purchased in 1969 and designated as a state preserve in 1971. This 32 acre prairie is perched on the edge of the Algona moraine and is located four miles west and one mile south of Algona. There are four basic vegetation types: dry, mesic, swales and potholes. For its size, it is very rich, with at least 175 species of plants known to occur. Some of the more common species are Leadplant, Pasque Flower, Purple Cone-Flower, Many-Flower Aster, Blazing Star, Toothed Sunflower, Mountain Mint, Butterfly Weed and an array of tall grasses.

Liska-Stanek Prairie

This 20 acre native prairie is owned and managed by the Webster County Conservation Board. It is located five miles southwest of the junction of highways 169 and 20 at Fort Dodge, or three miles southeast of Moorland. It was purchased in 1972 and designated as a state preserve in 1976. It is mainly a mesic prairie with two shallow potholes. Some of the characteristic vegetation one may find is Compass Plant, Blazing Star, Needle Grass, Purple Coneflower and Prairie Sunflower. Birds which may be seen include the Bobolink, Meadowlark, Swamp Sparrow, Blue-winged Teal, Dickcissel and Red-winged Blackbird.



Clay Prairie

The Clay prairie is a 2.64 acre tract in Butler county, three miles south and one mile east of the junction of highways 3 and 14 at Allison. It was purchased in 1961 by the University of Northern Iowa and named for John B. Clay who was instrumental in preserving the prairie. Although small, the prairie is known to support at least 98 species of plants. In May, hundreds of Shooting Stars can be seen; this is followed by Purple Avenas, Indian Paintbrush, Downy Gentian and Rattlesnake Master. The prairie was dedicated as a state preserve in 1976. □

Turks Cap Lily



Nature's Wonders

By Karen Keninger

Illustration by Newton Burch



THE AIR was pregnant with the summer thunderstorm as we lay down on our sleeping bags. The seven of us lined up dorm-style in the big tent. At first, the heat made sleeping impossible, but gradually the air was cooled by a light breeze and I drifted into childhood dreams as the music of the first drops of rain began on the canvas above me. Sometime later I woke with a start. Thunder was pounding the heavens and what was that? Mingled with the whistling wind and the driving rain, I heard my father's incoherent shouting. One of the tent stakes had come loose, and he and my mother were getting soaked trying to drive it back into the ground.

The next morning was beautiful. The grass was wet beneath our bare feet, and the trees dripped left-over rain as we raced back from our morning walk. The air was fresh and tingling after the thunderstorm, and we were urged on by the smell of bacon frying over a wood fire. That day we planned to hike the trails of Backbone State Park near Strawberry Point. "Be careful," my father warned. "There is a dropoff beside you, and it's a long way down." I threw a rock over the edge and listened for it to land. He was right. It was a long way down.

As a child, I hiked many miles hand in hand with my father. I was fascinated by the things he showed me—the wind-ravaged trunk and twisted branches of a stunted pine; wild flowers and plants, each with its own peculiar scent and shape; curious rocks; a squirrel hole in a fallen log; a small waterfall; a bird's nest; a cave in a rock wall.

Caves have always meant mystery to me. Their musty unused air reeks of ancient secrets, and the weird shapes created by centuries-long processes encourage my imagination. Stooping, sometimes almost crawling, I explored the depths of Maquoketa Cave one Sunday afternoon. Through passages of rough damp stone echoed the soft gurgling of running water.

Another weekend might find me swimming with a friend in a lake or small river. The water is cold and bracing on a hot afternoon. Diving, racing, playing ball or just floating, we wile away the hours. Perhaps we rent a small boat and drift leisurely for a while, soaking up the sun and peace of later afternoon. When evening sets in we sit around a blazing campfire relaxed and tired and plan for tomorrow's horseback ride.

With picnic lunches strapped across our saddles, we set out in the early morning to wander the trails and back country roads. Our horses are spirited and eager to race. Intoxicated by the power of the animal beneath me, by the wind in my face and the sun on my back, I am wild and free. We charge full gallop down the deserted road. "Slow down," my companion shouts, and I manage to rein in just in time to turn a corner. The horses are becoming winded so we turn off into a wooded area to find a good spot for our picnic. "Duck," my companion warns and I obey instantly as we pass beneath a low branch. "Right," or "Left," and I guide my horse around a hole or tree. I need these simple instructions because although my mount can see where he is going, I cannot.

I know the sound, the smell, the touch, the taste of outdoors. The optic nerve does not have a monopoly on nature's beauty and I have learned to know her many wonders. □





A few birds at a time have meant so much.

Photos by Jack Coffey

Restoration of the Wild Turkey to Iowa

By Terry W. Little
FOREST WILDLIFE BIOLOGIST

Part II: The Iowa Story

IN AN ARTICLE LAST MONTH I described the near extermination of wild turkeys in this country following European colonization. Turkey populations numbered in the millions nationwide when the first white settlers crossed the Appalachian Mountains, but were reduced to only a few hundred thousand by the early 20th century, less than 100 years after the first largescale western migration. A combination of uncontrolled hunting and extensive clearing and grazing of our native forests nearly doomed this magnificent gamebird, and only a reversal in these trends kept them from total extinction. Recent developments in trapping techniques have made it possible for wildlife managers to restore wild turkeys to much of their former habitats, but I stressed that only a few specific and fairly exceptional reasons allowed these re-stocking efforts to succeed. Turkey populations are now on the increase in many states, and their restoration marks a great achievement in the field of wildlife management.

The story of the wild turkey in Iowa closely parallels what happened on a much larger scale across the nation. Turkeys were very common in Iowa when the first white settlers came to this state in the 1830's. Lewis and Clark had recorded them as plentiful along the Missouri River in 1804 and Audobon collected turkeys near Dubuque in 1843. Because Iowa originally marked the prairie-forest border and most of the state consisted of interspersed timber and

grassland vegetation, turkeys were probably not as numerous here as in their primary range farther east. Our turkey densities may have averaged only five birds per square mile over the entire state, compared to ten per square mile or more in the mature hardwood forests of the Ohio River valley and southward, yet few Iowa settlers had difficulty locating a turkey when it came time to put meat on the table. They were especially numerous in the large timber tracts in northeast and southeast Iowa, but were common throughout most of the state's forested river bottoms. Flocks of several hundred birds were reported in some areas, and turkeys sold for 50 cents apiece in the market at Muscatine in the 1860's at a time when domestic chickens were selling for \$1.50 each.

As in other states, however, hunting and land clearing took their toll. The last turkeys were shot in Clayton County in 1853, only 20 years after the first settlers arrived. They were able to survive much longer in southern Iowa, but continued to decrease gradually over the next four decades. Turkey hunting in Iowa was essentially over by 1900; single birds were reported in Appanoose County in 1902 and Davis County in 1905; the last turkey was shot in 1907 in Lucas County and the last verified sighting of a wild turkey in Iowa was made there in 1910. During this same period, Iowa's forests decreased from 7 million acres recorded on the original land survey in 1859 to just 2.6 million acres by 1956. Thus the wild turkey in Iowa went the

way of the prairie chicken, the passenger pigeon, the buffalo, and other native game animals. The pioneers' search for land to cultivate altered our native wildlife habitats to such an extent that much of our once-common wildlife completely disappeared.

The Iowa Conservation Commission began experimenting with a turkey restocking program in the early 1900's, and, like other states, the first attempts were made with gamefarm birds. Iowa obtained brood stock from Pennsylvania in 1920 and began raising turkeys at the State Refuge near Lansing, and later at the State Game Farm at Ledges State Park. From 1927 to 1938 releases were made in Yellow River State Forest, (Allamakee County), the Loess Hills (Monona County), the Des Moines River Valley and Ledges State Park (Boone County), and in the Amana Colonies (Iowa County). In addition, sportsman's clubs made releases of gamefarm birds over many years in a vain attempt to re-establish wild turkeys. Our results with gamefarm turkeys were no better than anyone else's. Birds at many of the release sites immediately moved to the nearest farmyard, took up residence and perished there without producing enough poults to establish a population. By 1950 there were still no known truly wild flocks of turkeys anywhere in the state, and it appeared that the wild gobbler would never be heard in Iowa's remaining forested lands again.

The development of new trapping techniques in Missouri in the 1950's entirely changed the outlook for wild turkeys all across the country as many states began successfully re-establishing wild populations using wild-trapped and transplanted birds. Encouraged by successful restorations in some 42 states the Conservation Commission decided to try introducing wild turkeys to Iowa's forests once more. Because no wild birds remained in Iowa, trades were made with several other states between 1960 and 1969 to obtain release stock. Texas exchanged turkeys for walleye pike fingerlings in 1960, Missouri traded for ruffed grouse in 1965 and pheasants in 1968, Nebraska shipped us turkeys in 1966 and North Dakota traded for pheasants in 1969. Results from these various releases were mixed, and for several years the future of turkeys in Iowa was still in doubt.

In 1960, 29 turkeys of the Rio Grande strain from Texas were released in Iowa's largest remaining continuous timber block in the Yellow River State Forest. Initial results were encouraging, broods were produced each year for several years and turkeys dispersed throughout much of the timbered areas in northeast Iowa. Survival of poults was low, however, and turkey numbers probably never exceeded 100 birds in any year. For some unexplained reason, these turkeys were unable to populate the most promising-looking timber in the state. Unfortunately, the turkeys from Nebraska and North Dakota did no better. The Nebraska birds (Merriam's strain) were released in Stephens State Forest (Monroe County) and in the Loess Hills in 1966. Brood production and survival were low,

wintering populations did not exceed 15 to 20 birds and no turkey sightings were reported after two to three years at either site. The North Dakota turkeys, also released in Yellow River Forest, did slightly better, increasing to a few birds in several scattered locations in Allamakee and Clayton Counties after their release in 1969, but only a small remnant population remained by 1974.

There was no obvious explanation for the failure of these turkey releases, but there was some evidence that these strains of wild turkey were unable to adapt to Iowa's forest conditions. The Rio Grande strain developed in the arid, brushy river bottoms in Texas and Oklahoma; the Merriam's turkey originated in the relatively dry mountain forests of Colorado, Arizona and New Mexico; and the North Dakota birds came from an environment entirely different from Iowa's oak-hickory forests. Some factor of climate, food habits or behavior apparently prevented all three types from successfully establishing viable populations in Iowa.

This speculation was supported by the tremendous success realized by the Missouri transplants. In 1966, 11 turkeys of the Eastern strain native to Iowa were obtained from Missouri and released in Shimek State Forest, Lee County. Brood production and survival must have been tremendous, for winter population estimates increased from 40 birds in 1967 to at least 400-500 birds by 1973. The birds dispersed over several square miles and turkey sightings became so common in Lee County that it soon became impossible to continue estimating turkey numbers. Encouraged by these results, the Conservation Commission released 20 more Missouri turkeys in Stephens State Forest in 1968, and similar results were obtained.



Flocks of 25-30 turkeys were sighted commonly by 1970 and a population of 400-500 birds developed by 1974. Results of these releases added credence to the idea that the turkeys used at previous release sites were not adapted to Iowa forest conditions. The Missouri turkeys came from forests in the Ozark Mountains quite similar to forests in southern Iowa, and they certainly had no trouble adapting and increasing in numbers.

Convinced that the right turkey had at last been found for Iowa, Commission biologists instigated a trapping program in the two southern Iowa state forests in 1972 to speed up dispersal into other suitable habitats. In the past four years, turkeys have been released at 19 sites in the southeastern

quarter of the state, at a rate of three adult gobblers and ten hens per site. Four of the earliest releases, Lake Wapello State Park (Davis County), Lacey-Keosauqua State Park (Van Buren County), the Amana Colonies (Iowa County), and the Burlington Ordinance Plant (Des Moines County), seem to be doing quite well. The wary nature of wild turkeys and the difficulties involved in seeing them in their forested habitats makes it extremely difficult to estimate turkey numbers, but the frequency of turkey sightings at these sites suggests that sustainable populations may soon be established there. Evaluating the success of the more recent releases would be premature at this time, but none have failed completely as yet and several appear promising. There now appears to be a good possibility of establishing wild turkeys throughout the timbered areas south of U.S. highway 34 and east of Interstate 35, and there is some potential for turkeys in several areas adjacent to this core region.

While southeast Iowa appears to be well along in restoring wild turkeys, the northeast corner still did not have appreciable numbers of turkeys by 1974. Results of Iowa's first modern turkey hunting season were discouraging in the northeast zone. Only 11 turkeys were shot by 150 hunters in 1974, and it appeared that neither the Rio Grande nor North Dakota transplants were going to succeed. Because of the success of the Missouri birds in southern Iowa, another pheasants-for-turkeys trade was made in 1975. Iowa began supplying Missouri with 5000 pheasants in trade for 250 turkeys, and the first releases were made in Allamakee, Clayton and Fayette Counties in 1975. To date, turkeys have been stocked at 14 sites scattered from the Upper Iowa River in Allamakee County south to the Wapsipinicon and Maquoketa Rivers in Linn and Jones Counties, thus completing our most ambitious stocking effort in this area. The northeastern turkey hunting zone was severely reduced in size in 1975 and eliminated altogether in 1976 to protect turkeys at these new sites. Only time will tell if the right turkey has been found for northern Iowa, but reproduction occurred at several sites last year and the outlook is more

favorable now than at any time in the past.

In addition to the 33 releases in northeast and southeast Iowa, Missouri turkeys were stocked at three sites in the Loess Hills along Iowa's western border in 1976, and three more releases are scheduled for this area in 1977. Five additional releases will be made next winter along the Racoon, Boone and Cedar Rivers with birds from southern Iowa, which should nearly complete plans for restoring the wild turkey to Iowa. When these release sites are stocked, about 625 birds will have been released at 48 sites scattered across most of the remaining timbered areas in the state. Release sites were chosen to allow birds at successful sites to spread through surrounding timber, thus stocking as much habitat as possible from the fewest possible sites. The only timber areas not being considered for stocking at this time are the extremely narrow river drainages extending into the north-central and northwest portions of the state, and some isolated small blocks of timber where the birds would have little chance for dispersal. Should evidence from the current series of releases prove that turkeys can survive in these areas, however, they may also be considered in the future.

The restoration of the wild turkey to Iowa is truly an amazing story, and one whose final chapters still remain to be written. The success or failure of the many new releases will determine just how much of the state can support wild turkey populations once again, but it is already apparent that several areas are capable of maintaining good numbers of these large and beautiful birds. The objective of the Conservation Commission's turkey restoration program is to put turkeys back into all suitable habitat so that as many Iowans as possible can hear a wild gobbler in the spring and see an old male strut his ritual dance in front of a harem of hens. Wholesale timber clearing and turkey poaching are two of the problems this program must overcome, and only time will tell how successful it will be. Nevertheless, Iowans interested in restoring wildlife to a landscape which has seen nothing but losses in the past few years have something positive and encouraging to look forward to with this program. □

Wild turkeys trapped in net get examined by future biologist.



Warden's diary

By Rex Emerson
LAW ENFORCEMENT SUPERVISOR

IT WAS HOT ENOUGH TO FRY fish eggs on the bottom of our aluminum boat today, so we waited until late afternoon to go out on the Mississippi River. That's what most of the fishermen were doing too. Fishing is a relaxing sport, so no use being out there if you can't be comfortable.

It was still hot, but boating up the river did have a cooling effect. We pulled in to shore to check a fisherman who was sitting on the bank. He had five rods and reels with a line from each in the water. We explained to him that he was only permitted to have two.

"Why are you fishing with five lines?", I knew I shouldn't have asked. We were ready for the old wheeze about "just drowning some worms", or "teaching the worms to swim".

But he came up with a new one. He said, "I haven't had a chance to go fishing yet this year and I am just trying to catch up."

As we headed on up the river toward the dam we wondered if the judge would get a chuckle out of that excuse.

When we got to the dam, we pulled in closer than the three hundred yard marker. Commercial fishermen are not supposed to put any of their gear within this area. We threw out our thirteen pound drag hook. In a place such as this, with the swift current, it is really necessary to have two officers in the boat. I was holding the rope and letting the hook drag on the bottom while the other officer backed the boat across the river. Even though the weather is hot, it's a comforting feeling to have a life jacket on in water like this. Twice we dragged across the river and had nothing. The third time, and even closer to the white water coming through the dam, we were about in the middle of the river when I felt a flexible pull on the rope. When I raised my left hand the officer running the motor knew I had found something. He turned the bow of the boat upstream and gave the motor just enough gas to hold us in one place as I pulled on the rope. I had caught the tail rope of a hoop net.

After getting unhooked from it and sighting some landmarks to mark the spot, I let it go back into the water. We buzzed over to shore and under a fallen tree to wait for someone to come and run it.

While we were waiting, the other officer told me that he heard about a fellow who fell out of his boat. A second boater when over, pulled him out of the water and asked, "How did you come to fall out of the boat?"

The first man said, "I didn't come to fall out of the boat. I came to fish."

About that time the commercial fisherman we were waiting for came to run his net. I was glad he came when he did so I wouldn't have to listen to any more stories like that one. We waited until he got the net in his boat and while he was taking the fish out, we pulled up from the down river side. The anchor on the net was holding his boat. He had his back to us when we came alongside and he looked like he had just been caught with his hand in the cookie jar when he saw who we were. Commercial fishermen are a hardy type of people, out in all kinds of weather. They work extremely hard trying to make a living off the river. They know when they are wrong, as do the sport fishermen. But, they differ from the sport fishermen in one way. The commercial fisherman will take his ticket in to the judge, pay his fine and be on his way without whining or making excuses.

By the time we left the commercial fisherman it was dark. We had taken his net and fish for evidence, so all that was bouncing around in the boat. We worked till midnight checking fishing licenses and boats running without lights. When we got in we went to get something to eat. People in the cafe could tell we were river officers from the fish slime on our uniforms and our bug stained teeth. They could probably tell by the smell too.

MINI-CAMPING VACATION

(Continued from Page 3)

Our trip to Green Valley State Park covered about 55 miles. Green Valley is located approximately 2½ miles northwest of Creston in Union County. The 1000 acre park has a non-model camping area (no shower facilities) with about 60 electrical hook-ups. Flush toilets, water and a trailer dump station are all available in the camping area. According to the park ranger the area can accommodate about 150 units without being overcrowded. The campground offers a picturesque setting overlooking the lake.

Green Valley Lake, a 390 acre impoundment, meanders through the middle of the park. Water skiing and recreational boating are popular activities in a specially zoned area on the lake. Panfish such as bluegills and bullheads provide the bulk of the angling action. There is also a good population of channel catfish in the lake. The lake was renovated two years ago because of an over population of stunted crappie, bluegill and rough fish. Although the lake will really be at its best in a year or two, fishing success is beginning to improve considerably already.

Swimming and sun bathing are other favorite forms of water recreation at Green Valley. As in the other two parks we visited, Green Valley has a very nice modern beach facility with life guards present. Picnicking facilities include many tables conveniently placed around the area and two shelters. The shelters are available on a first come, first served basis. The state-operated concession offers food services, bait and rental of boats and motors.

After setting up under a green ash tree, we had a quick snack before getting ready for an afternoon in the park. As the weather was quite warm, my wife and daughter went to the beach while my son and I went fishing. They had a good time and we managed to catch a nice string of bluegills and bullheads.

Later, while driving through the park, we observed a number of pheasants including a hen with a brood of chicks. Rabbits were common scampering through the brush. The kids had fun feeding bread crumbs to several thirteen-striped ground squirrels near our camper. We ended our day visiting with other campers around campfire while the kids roasted marshmallows.

All in all, it was a vacation we will remember as a great outdoor experience. In fact, we are planning similar mini-camping vacations to other Iowa parks. Whether you camp in a modern unit or in a tent, consider Iowa's state parks on your next outing. It's good family fun!

For complete information on the state's camping areas, write to the Iowa Conservation Commission, Information and Education Section, 300 Fourth Street, Des Moines, Iowa 50319 for a free copy of Iowa STATE PARKS & RECREATIONAL AREAS brochure.

ITEM	AMOUNT SPENT
Gasoline	\$18.96
Food	25.59
Miscellaneous	16.90
(includes camping, swimming fees & boat rental)	
Total	\$61.45

Look for mini-trips to other regions of Iowa in future issues of the CONSERVATIONIST.



CLASSROOM CORNER

by Robert Rye

Administrator, Conservation Education Center

Where do you study nature? Areas such as schoolyards, back yards, rivers and prairies are all good. Have you tried a state park? Any size or type of group can use them.

I will discuss some activities that we at the Conservation Education Center have done at Springbrook State Park. A family or class trip can include one or more of these activities in their own outing.

The best part of using and enjoying a park is that it is, for the most part, free. Many of the "studiables" are waiting for you — you don't have to chase them — like trees, flowers, hiking and solitude.

We at the Center usually start by stressing the proper use of an area. There are rules which need to be followed. No group will be the first or last one. We always try to leave the area so it can be used by others. Besides not littering, this involves watching where we put our feet; what we pick; or how we use something.

Campfires can be one of many areas of study. What to burn, where and how to start a fire, control it and especially how to put one out can all be considered. This activity makes a great starting place to talk about shelter and the necessity of it in times when one is lost. Have you ever tried to make a fire in the rain or possibly without matches?

Living things like insects, birds and flowers are found in a state park. Insects can be studied and grouped. Their names seem to be very secondary. Group them by where they are found — lawn, long grass, woods, streams, lakes or in buildings. Are there similar ones in all places? Where are the larger ones found? Do they differ by color or shape from place to place? A small amount of time can provide a lot of information.

Birds also vary in many of the same ways. They show varying examples of camouflage and attractive colors. Their songs provide identification and enjoyment. Birds can be called by whistling or by mechanical means. Because they are territorial animals, an intruder will stimulate many birds to investigate and to call. Tapes can easily be made and played back to see if the birds will respond.

Flowers and the plants themselves will differ on each hike. The woods have the first plants to appear in the spring, as well as numerous seasonal varieties. Those plants which arrive later are adapted to the prairie areas. Both can be found in the state parks. Did you ever consider why some flowers are found early and some later on in the season? By taking a survey of the amount of light, you will find it to be one of the major limiting factors. Smell and feel the plants and flowers for another interesting study.

Photography is a challenging hobby. Stalking a deer or a squirrel may seem impossible, but it is only a start when you consider lighting, background and centering your subject. State parks abound in nature trails which can be walked to find your perfect setting. It all pays off when you get your developed photographs of your state park visit.

Every park has its own history. When and how it first became a park, the origin of its name and who built it are all part of the history of a park. How many of these questions can you answer about the state park nearest you?

Boating, fishing, swimming, picnicking and hiking through Springbrook State Park and many of the others, are available to visitors. Each person has his own way of finding enjoyment and using his recreational time.

Plan and make your own group-trip to a state park.

Let us know what phase your group or family would be interested in pursuing. We could possibly give you guidance if you have certain topics/subjects you would like to study further. If you want to use the Conservation Education Center whether school or other (Sr. citizens, garden clubs, 4-H clubs, etc.) call 515-747-8383 and make your fall or winter reservation now.

SQUIRRELS (Continued from Page 6)

Red squirrels can often be seen chasing gray and fox squirrels. Where you find high populations of red squirrels you will normally find few of the larger gray or fox squirrels.

The flying squirrel (*Glaucomys volans*) is probably the least known of Iowa's tree squirrels. Although found throughout the state, it is only active at night and so is seldom seen. This squirrel has perfected the art of gliding. Using the large folds of skin extending from the wrist to the ankle the squirrel can glide for 30 yards or more.

Photos by Jerry Leonard



Fox squirrel.

The flying squirrel is found in heavily wooded areas and prefers to live and nest in tree cavities. These squirrels are highly social animals and several individuals may be found in a single cavity. By rapping on a hollow tree you may cause a sleepy flying squirrel to poke his head out of his hole to find out about the disturbance.

Females will have two litters a year of two to six young each. The first litter is born in March and the second in August. Flying squirrels feed on nuts, tree buds, insects and birds eggs.

Several timber management practices can be carried out which will greatly benefit local squirrel populations. Maintaining a balanced white oak and black oak stand of timber is important, along with the control of wildfire and the reduction of woodlot grazing. A selective cutting program that will leave one or two good den trees per acre will also provide needed nest cavities.

Squirrels were an important resource in Iowa at the time the settlers arrived and they are still important today. Through proper management we can maintain this resource for our generations to come. □

Gray squirrel.





Attention Ruffed Grouse Hunters!

We need your help. Each year the Iowa Conservation Commission conducts a survey of ruffed grouse hunters. The information hunters supply is used to help determine proper management practices for Iowa grouse populations.

To this date we have been able to find some grouse hunters in those hills but we are trying to expand the survey in order to obtain a broader base of information.

If you are a ruffed grouse hunter who usually hunts each season we would like to enter your name on a list of grouse hunters we can contact each year for information.

Should you wish to take part in this program fill out the information below and send it to:

The Iowa Conservation Commission
Wildlife Section RG
300 - 4th Street
Des Moines, Iowa 50319

Name: _____

Address: _____

City: _____

Telephone No.: _____