

Iowa CONSERVATIONIST

MAY 1981

STATE LIBRARY OF IOWA
Historical Building
DES MOINES, IOWA 50319



Iowa CONSERVATIONIST

MAGAZINE

Volume 40, No. 5 • May 1981

STAFF

Roger Sparks, *Editor*
Robert Runge, *Managing Editor*
Kenneth Formanek, *A-V Coordinator*
Ron Johnson, *Photographer*
Julius Satre, *Contributing Editor*
Junie Gookin, *Circulation Manager*
Newton Burch, *Art Director*

CONTENTS

- 2 BELLEVUE
STATE PARK
- 4 PRAIRIE ROSE
STATE PARK
- 5 RICHARDSON'S
GROUND
SQUIRREL
- 6 A LITTLE BIRD
TOLD YOU?
- 8 THE CCC IN IOWA
- 10 GIZZARD SHAD —
FRIEND OR FOE?
- 11 CLASSROOM
CORNER
- 12 SHOWY
LADYSLIPPER
- 13 FORT DEFIANCE
STATE PARK
- 14 WARDEN'S DIARY

COVER

1981 Iowa Trout Stamp — Brook Trout — by
Nick Klepinger, Klepinger Wildlife Art, 420
West 2nd Street South, Newton, IA 50208.

THE IOWA CONSERVATION COMMISSION

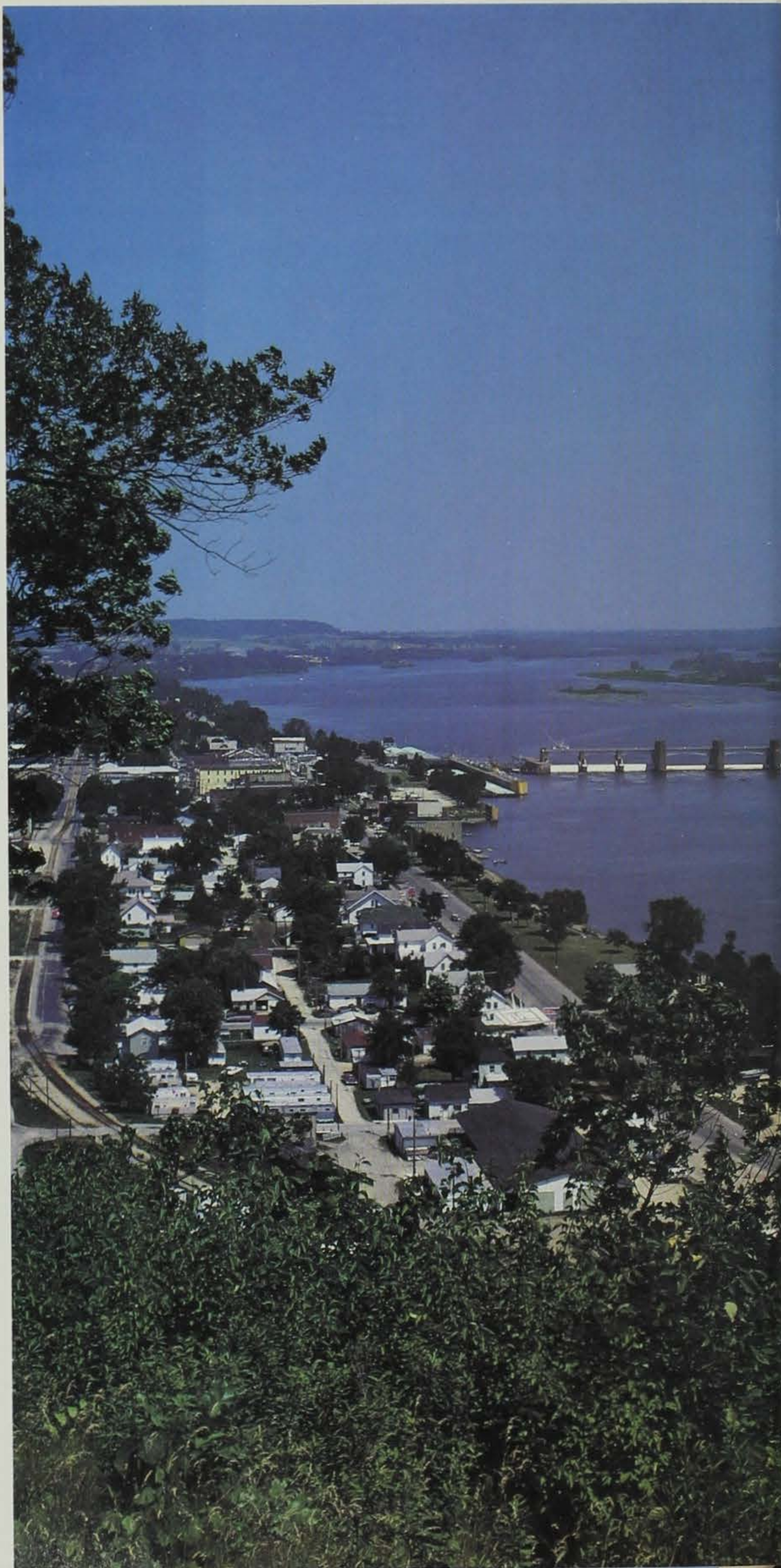
Marian Pike, *Whiting, Chairman*; Tom Bates,
Bellevue; John Brophy, *Lansing*; John D. Field,
Hamburg; Richard W. Kemler, *Marshalltown*;
Donald K. Knudsen, *Eagle Grove*; Carolyn T. Wolter,
Des Moines.

ADMINISTRATIVE STAFF

Larry J. Wilson, *Director*
Bob Fagerland, *Deputy Director*
DIVISION CHIEFS Allen Farris, *Fish and Game*;
Stanley C. Kuhn, *Division of Administration*; John
M. Stokes, *Lands and Waters*.

SECTION SUPERINTENDENTS Tom Albright,
Engineering; Joe W. Brill, *Parks*; Robert Barratt,
Wildlife; James Mayhew, *Fisheries*; Roy Downing,
Waters; Lester Fleming, *Grants-in-Aid*; Gene
Hertel, *State Forester*; Rick McGeough, *Law
Enforcement*; Larry Davis, *Information &
Education*; Gene Geissinger, *Accounting*; Doyle
Adams, *County Conservation Boards*; Arnie Sohn,
Planning; John Beamer, *Land Acquisition*.

IOWA CONSERVATIONIST (USPS268-780), is
published monthly by the Iowa Conservation Com-
mission, Wallace State Office Building, Des Moines,
Iowa, 50319. Address all mail (subscriptions, change
of address, Form 3579, manuscripts, mail items) to
the above address. Subscription price: one year \$2.00;
two years \$3.00; four years \$5.00. Second class post-
age paid at Des Moines, Iowa and other points.



BELLEVUE STATE PARK

by Don Carrier, Park Ranger and Mike Abel, Assistant Park Ranger

PHOTOS BY KEN FORMANEK

"Conservation of timber and natural resources is the modern cry."

This statement would seem to typify the feelings of many people today. However these words were part of an impassioned plea in 1924 for public support for what was being called the South Bluff Park Project. Fortunately, the plea to the citizens of Bellevue to preserve this land did not go unheeded. On Friday August 24, 1928, with about 4500 people present, Governor John Hammill formally dedicated Bellevue State Park.

Early work done on the area was partly a result of time and materials volunteered by Jackson county residents. A lodge constructed of oak logs and stone was completed in 1929 by a group of inmates from Anamosa. The stone was quarried nearby and the logs were from an area west of Bellevue known as Paradise Valley.

The lodge served as a meeting place for local citizens and was a favorite for family reunions and dances for many years. In 1973 vandalism brought an untimely death to a beautiful and valuable asset when the lodge burned to the ground in the late-night hours of Memorial Day weekend. It has since been replaced by a fully equipped, modern cedar-log lodge. *(Continued on Page 15)*



Opposite page: View from the lodge. Below: Bellevue Lodge.





Prairie Rose State Park

by DEB COATES

ASSISTANT TO THE PARK RANGER, PRAIRIE ROSE STATE PARK

PHOTOS BY RON JOHNSON

Prairie Rose State Park is located in Shelby County, 6 miles east of Harlan on Highway 44 and 3 miles south on a blacktop road.

The park received its name from a small town called Village of Prairie Rose which once stood near the present location of the park. The small prairie town is now a part of history.

Prairie Rose is a 422 acre park, 218 of which is an artificial lake. The lake is the center of the park and is used for many seasonal sports.

Fishing is a popular activity. Fishermen have a choice of bass, bullhead, bluegill, catfish, crappie and carp. No matter what they choose to fish for it is always exciting when they are successful at catching their prize. Ice fishing is also very productive at Prairie Rose.

Winter activities here at the park, along with ice fishing, are cross country skiing, ice skating, sledding, constructing snowmen, and snowball throwing. Snowmobiling and ice boating are allowed on the lake only.

There are even more activities to choose from during the summer. Swimming is allowed only at the beach on the north side of the lake. Boats can be rented at the beach but some people prefer to bring their own boats (provided they have no larger than a 6 horsepower motor) and use the ramp provided on the south side of the lake. Swimmers and boaters enjoy the concession stand located at the beach.

There are two camping areas. If you like roughing it, the west camping area is non-electric. There are 51 units and an area set aside for group camping. Several of these units have a beautiful view of the spillway, the dam, and the lake. The east camping area is electric, has 61 units, and a showerhouse which can be used by campers in the non-electric area as well. The electrical camping area has a scenic view of the lake. Water is accessible in both camping areas and a dumping station is provided. Many campers like to bring their canoe or sailboat along and enjoy the challenge of the wind and water.

Two large areas and two smaller shelterhouses are set aside for our picnickers. There are plenty of tables and grills available for everyone who loves to eat and enjoy the out-of-doors.

Something new starting this summer at Prairie Rose will be a series of programs and presentations on Saturday nights for campers and/or anyone who would like to attend. Each program will have a

different subject matter to present and discuss. These weekly programs will last approximately 12 weeks.

This past summer Prairie Rose had the honor of welcoming the Secretary of Agriculture, Bob Bergland, and then Senator John Culver. There was a ceremony to sign a Soil Conservation bill which allowed farmers owning land surrounding the lake to build terraces with the aid of federal funds. This will help alleviate soil erosion which is causing the lake to fill in. The aid had been very long in coming and was enthusiastically welcomed. It is important to preserve nature's beauty now for our future generations to enjoy.

Prairie Rose, like all other state parks, has rules and regulations which must be obeyed in order for everyone, including campers or just daily visitors, to have a pleasant stay and to keep the park natural and accommodating.

It has been said that nature is a thing of beauty along with all of its creatures. People have a large responsibility to keep nature beautiful. This responsibility can be accomplished by respecting and admiring Mother Nature's work. Prairie Rose has been set aside and developed by the state of Iowa for the public and for the protection and preservation of wildlife. In today's hustle and bustle world where there seems to be no time to stop and enjoy life, it is nice to come out to Prairie Rose, if just for an afternoon. Young and old alike can watch the squirrels play, maybe see a deer bound across a field, feel that little tug on the end of a fishing line, hear the sound of a pheasant, feel the warmth of the sun streaming down, or just sit and daydream while listening to the rustle of leaves in the wind. These things are taken too much for granted in today's society. They are so small yet so significant. We should enjoy and cherish what nature provides for us. Prairie Rose State Park allows us to accomplish this pleasure we all should have in our lifetime.

EDITOR'S NOTE: Prairie Rose Lake is scheduled to be drained for renovation after Labor Day weekend.



RICHARDSON'S GROUND SQUIRREL

Iowa's Newest Mammal



BY RON SPENGLER

EXECUTIVE DIRECTOR, OSCEOLA COUNTY CONSERVATION BOARD

Richardson's ground squirrel (*Spermophilus richardsonii*) has been documented for the first time in Iowa by the Osceola County Conservation Board.

The Osceola County Conservation Board, while doing baseline studies of the mammalian fauna of Osceola County, learned from personal communication with State Ecologist Dean Roosa, that based on range expansion observations in Minnesota, Richardson's ground squirrel was expected to turn up soon in N.W. Iowa. Soon after, a local hunter reported the presence of "grey gophers" to the Conservation Board. Not ruling out that these sightings could be Richardson's ground squirrels rather than Franklin ground squirrels which are commonly called grey gophers, the site was visited and several specimens were collected and verified as Richardson's ground squirrels.

What are Richardson's ground squirrels?

LIFE HISTORY: The Richardson's ground squirrel is one of the most unique and interesting of the 28 species of ground squirrels found in North America. It is colonial in habit, with many families living adjacent to one another. The proximity of neighbors in the colony creates a setting which allows for a very effective communications system. Nearby neighbors are warned of approaching predators by sentries which emit high pitched squeaks incorporated with simultaneous flicks of the tail. Because of this behavior, the animals have become known over much of their range as "flickertails".

HABITAT AND FOOD HABITS: Because they are intolerant of tall vegetation, their preferred habitat is commonly overgrazed pasture. They are seldom found on flat ground and seem to prefer well drained hill tops and slopes.

The food habits of these ground squirrels are mainly herbivorous, with the diet consisting chiefly of grasses, forbs, roots and seeds. They also demonstrate some carnivorous habits in that they consume small quantities of insects and will eat carrion.

SOCIAL STRUCTURE: The social structure of these squirrel colonies consists of centrally located, elaborate burrows occupied by adult females. Adult males occupy simpler burrows around the periphery. Adults are extremely territorial and vigorously defend their burrows and adjacent area.

Although larger and more aggressive, males are subordinate to females and hastily retreat from them. Females tolerate males only for a short period following hibernation when they are receptive and allow males to approach for mating.

Little is known about the uneven sex ratio found in Richardson's ground squirrel populations. Commonly, there are 3 or 4 adult females for every adult male. This may be attributed to juvenal dispersal because young males may move several miles before settling and have more exposure to predation. Young females usually settle near the burrow where they were raised and may take over the maternal den site.

AESTIVATION AND HIBERNATION: Even more interesting than the uneven sex ratio, is the relatively short period of summer activity. Adults are active for only about a 3 month period and by late June and July nearly all are underground. Presumably they sleep during this period. Sleep occurring during warm weather is called aestivation. The squirrels remaining active above ground in the fall are nearly all juvenal males. The ground squirrels survive winter by entering into deep hibernation. During this period breathing and heart rate are greatly slowed, body temperature drops to slightly above freezing and energy requirements are maintained by stored body fat.

HOW DID THEY GET TO IOWA? Now that we know a little bit about the animals, the next question might be how did they get here? With the help of Carol Henderson, nongame supervisor for Minnesota's Dept. of Natural Resources, we have been able to retrace the movements of the squirrels beginning in West Central Minnesota, through the counties of Southwestern Minnesota and into Osceola County, Iowa. Unconfirmed sightings in Lyon County, Iowa suggest their presence there as well, however none have been documented.

WHAT GOOD ARE THEY? Now that we have Richardson's ground squirrels in Iowa one may ask what good are they? Are they a serious agricultural pest and what will be the effect of their presence in Iowa? These questions remain largely unanswered. While they are usually regarded as pests throughout their range, because they can damage grain and hay crops, they are an interesting species of wildlife that will be enjoyed by most. They will probably be most significant as prey species included in the diets of predators.

REFERENCES

- Burt, W.H., and R.P. Grossenheider. *A field Guide to the Mammals*. Canadian Wildlife Service, Minnesota DNR
Walker, E.P. *Mammals of the World*, Osceola County Conservation Board files.

A Little Bird Told You?

BY DAVE NEWHOUSE

PHOTOS BY THE AUTHOR

SOMETHING ABOUT THE DAYLIGHT urged her to be active, insisted she continue searching. The vague awareness of something to be done had taken form much farther south, and she had sought out other restless migrants. Together they had fed by day and traveled by night, burning all the energy they could find by foraging. Finally a sense of familiarity, a feeling of rightness foretold the journey's end. Her birthplace must be near here; but every weedy clump of grass and brush looked so alike. The wind was rising, and it might rain. A few seeds were left from last year and a few insects were hatching early; a brief rest might be in order, right here . . .

Of all the males singing throughout the field, he looked the best. His colors were brightest, his songs most brilliant, his repulsion of other males most dashing. The area he patrolled was lush (what a nest that grass will make; and the insects it will harbor!), and as she flitted near him, searching, he joined her. What ardent attentions, displays and invitations! Surely this must be the place where those urges had led her.

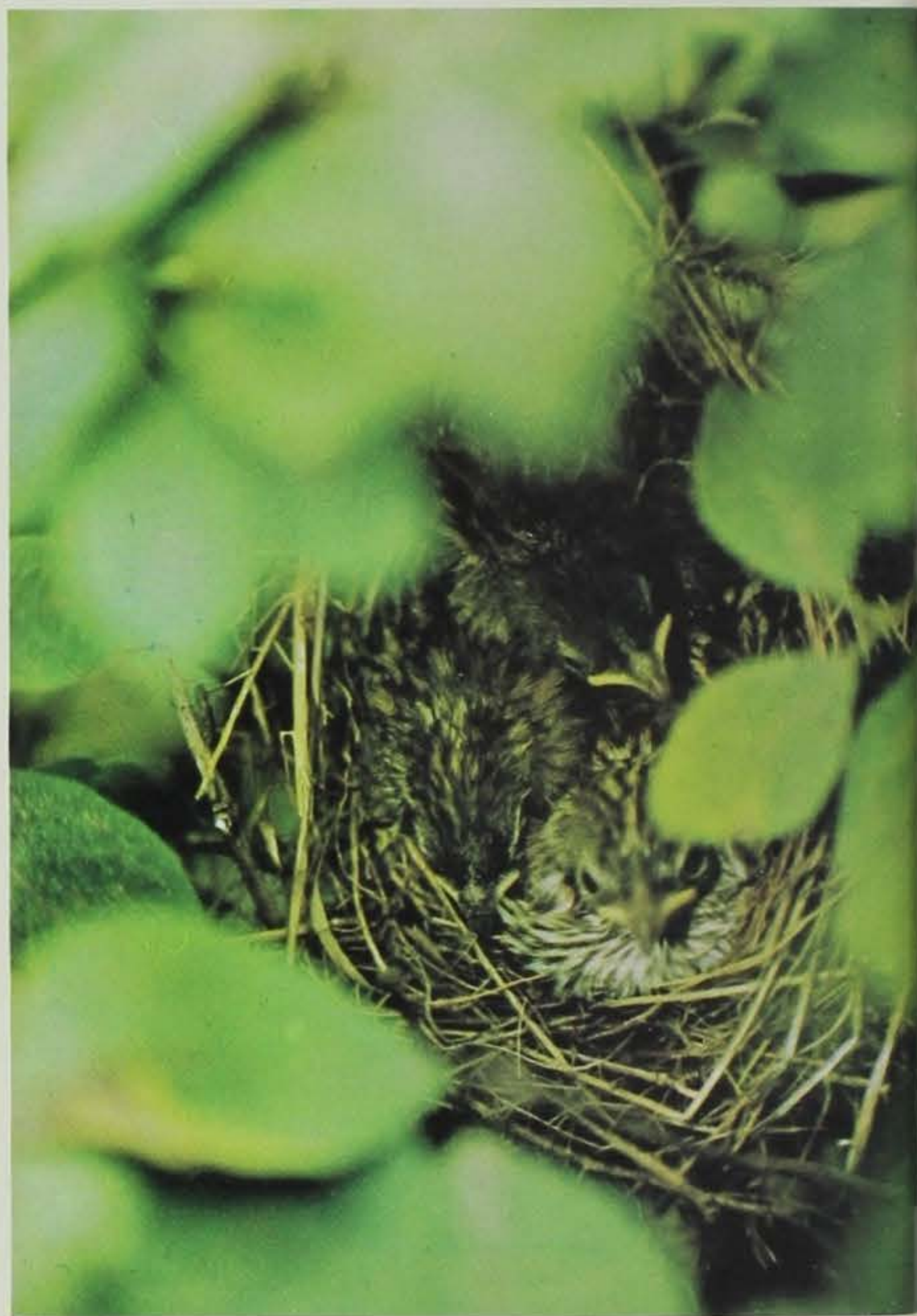
Day by day they carried grass, rabbit fur and spider webs to the fork of a shrub near his singing perch. She had never woven a nest like this before. Nest building was not one of the skills taught her during her first brief summer, yet the necessary actions arose from the genetic stock of knowledge accumulated by her species. She was fortunate, too, to have an experienced mate. Their nest site would not only have adequate provisions and be well defended; their eggs would be sheltered from the sun's rays and intruders' eyes after leaf-out. Other young females had mated with males younger and less resourceful than hers. Those nests in poorer territories would be more likely attacked by predators, and less likely to have food or cover to support the chicks reared there. All seemed well, the nest was finished, and the inner voice said "Stay."

She first heard the noise of grass swishing above the morning breeze. From behind her a tall beakless creature thrashed its way out of the morning sun. One long appendage shot out her way, then retracted to support the creature's awesome eyes. She huddled closer to the eggs sheltered against the bare brood patch below her breast, trying to remain unseen. Another creature joined the first, and lunged forward. Strange unmelodic sounds came from its beakless face. Just before it reached her, she flew. The eggs were hers, a part of her, and so precious; but LIFE . . .

"You're right, Cameron, it is a field sparrow. I saw the pink bill when she flew. And look, she has four pretty, speckled eggs. Let's leave so she can come back."

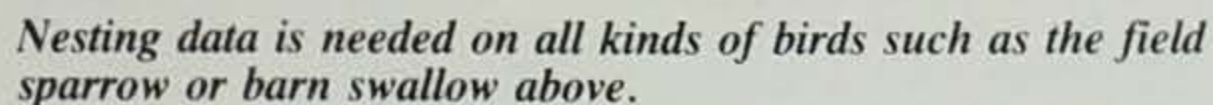
Cameron and Jody have just passed the entrance exam for participating in the North American Nest Record Card Program (NANRCP). Sounds impressive, doesn't it? Really, it's the heart of simplicity itself. All they do now is take a moment to jot down their observation of an active bird nest on a convenient card. (Photo, sides 1 and 2) If you can generally keep track of what county you're in, can tell a sparrow from a swallow, and know the difference between rose bushes and a farm pond, you too can cooperate.

The NANRCP is a system of collecting, processing and storing information on the nesting biology of birds. Although professional ornithologists like Dr. Jim Dinsmore (who coordinates this program for the Iowa Ornithologists' Union) are active observers, the bulk of



reports come from enthusiastic amateur birders. Your talents can be utilized, too, if you will simply record information on species, location, habitat and reproductive history when you find a bird's nest. Nest record cards describing nest contents during two to six visits within the breeding season are of the greatest use in analyzing reproductive biology. Careful observation of habitat and nests sites will also help tremendously in establishing management methods to enhance our living resources.

Data on species, habitats and locations are extracted by the Conservation Commission's Nongame Biologist (the author) and/or Dr. Dinsmore, and the cards are sent on to Cornell University. Information in the NANRCP files is available to any qualified researcher who

[illegible]

reliable report of herons, hawks or warblers nesting. Precisely because these species' survival is so critical, observers must make every effort not to disturb nesting birds. Even leaving a trail or scent or obvious tracks to the nest could encourage predation. For these same reasons, the locations of nests of birds of prey will be held confidential, and not reported with other nest record data.

For those of you interested enough to record and report your observations of bird nesting, we can report back the distribution of species observed nesting in Iowa. A set of maps, with nest locations marked, will show not only where you have seen each species, but also where we haven't looked carefully enough. If your reports indicate that autumn olive is heavily used by nesting songbirds, for instance, we'll tell you. I would like to acknowledge cooperators who submit cards, whether few or many. Last year Iowa Conservation Commission personnel shared their knowledge of 365 bird nests. They reported 272 in 1979 and 217 in 1978, largely as a byproduct of upland game research funded by hunting license fees. Join us and the I.O.U. in expanding our information on the feathered fellows who share our land. It's remarkable what a little bird can tell you!

[For nest record cards and instructions, contact Dave Newhouse, Wildlife Research Station, Boone, IA 50036 or Dr. Jim Dinsmore, 109 Sciences II, Iowa State University, Ames, IA 50011. If you know of a heronry, we would like to supply Colonial Bird Registry forms, as well. Enjoy looking wildly about you!]

THE CCC IN IOWA

by MARTIN KONRAD
FISHERIES TECHNICIAN

THE DEPRESSION YEARS of the 1930's left many people with scars from harsh economic hardships. However, under President Franklin D. Roosevelt's "New Deal" the Civilian Conservation Corps agency (CCC) was created. The CCC was conceived to generate jobs and at the same time to preserve and improve our nation's lands and waters. Instead of leaving scars of a difficult time the CCC left unique and impressive outdoor recreational areas to be used and admired for generations to come.

The Civilian Conservation Corps consisted of young men between 17 - 30 years of age or World War I veterans. Commonly known as the CCC boys, these young men lived in camps at the job site, sometimes in tents until wooden barracks were built. In Iowa, camp size ranged anywhere from 100 men at Lake MacBride State Park to a 210 man force developing Pilot Knob State Park. The camps were commanded usually by a lieutenant in the U.S. Army, in military fashion, but without strict military rule.

In Iowa, the CCC made many significant contributions in the form of park development, lake construction, soil erosion control, fish hatchery construction and reforestation.

Of the many contributions the CCC boys made, the most long lasting were probably in park development. Known as the "rustic" style, park structures were designed with low profiles and low pitched roofs to emit an aesthetically pleasing setting of a pioneering era. The uniqueness of these park structures is vividly expressed in their being constructed of massive and durable materials which generally consisted of limestone or sandstone and native wood. Wood and/or stone park structures such as lodges, bathhouses, concessions, cabins, shelters and entrance portals were architecturally designed to blend into the natural environment instead of intruding on or competing with it.

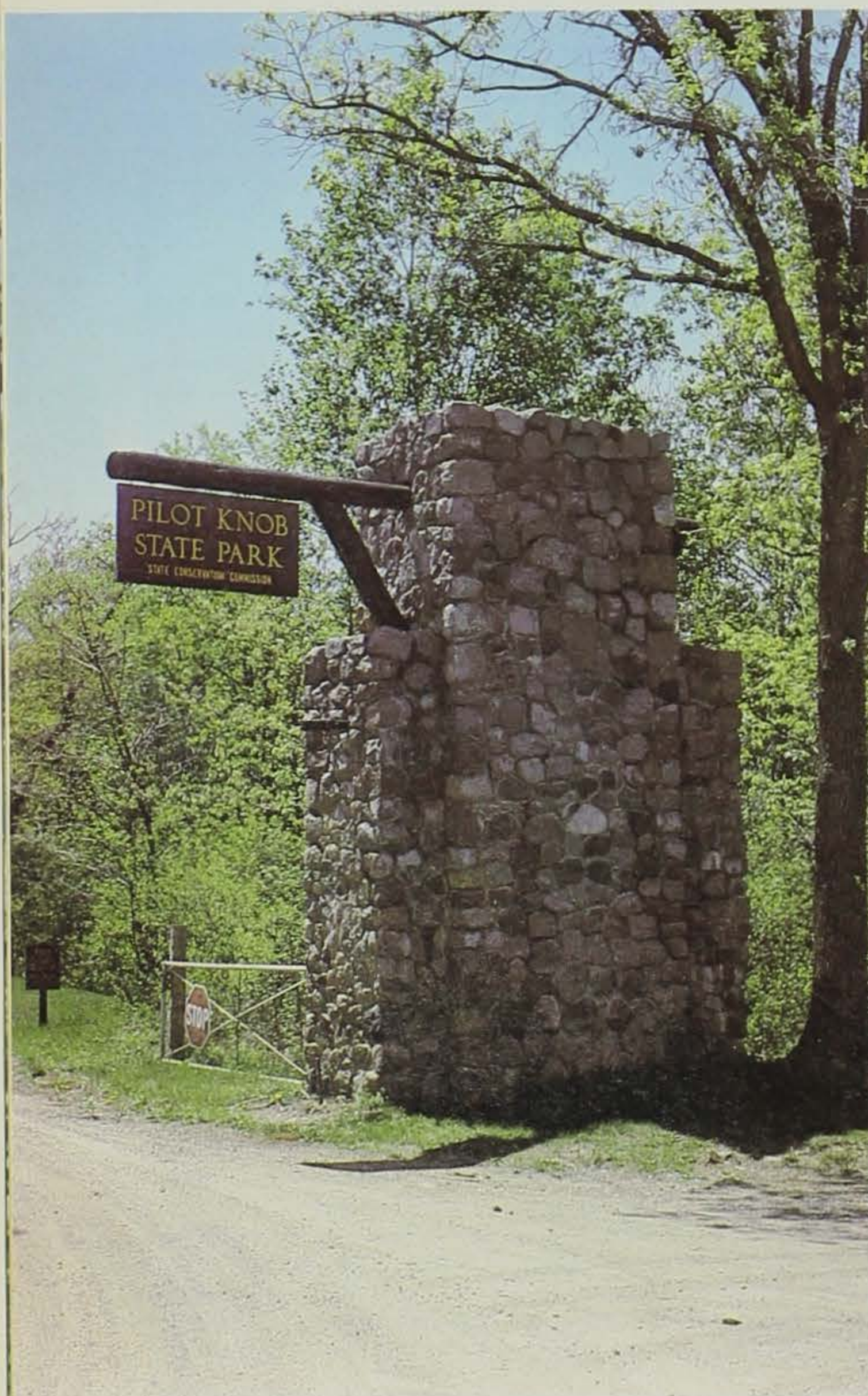
CCC labor was involved in almost every facet of park development. Limestone or sandstone, depending on what was available, was quarried at or in the vicinity of the job site by the CCC boys. Each stone block was hand shaped with hammer and chisel. When cutting stone blocks size uniformity was avoided. Block size variety helped blend in with the natural surroundings. Stone masons laid blocks on their horizontal plane to transmit a more pleasing pattern.

Park structures were built of native logs often salvaged during park development. Used either in log form or rough cut lumber, the native wood expressed the primitive pioneer character, as did the wooden shingles or shakes.

Other park structures built by the CCC boys were ranger residences, shops, incinerators and privies. All were built with the same concern as the other structures but were located in a less conspicuous manner, to prevent clashing with the natural surroundings.

In park development, great care was taken not to gut the park with unnecessary roads. This was to retain the beauty of the park and permit the same sense of seclusion as a broad wilderness expanse. To provide public access and at the same time retain as much beauty and seclusion as possible in the park, miles of foot trails were built. Four miles of trails were built at Pilot Knob State Park whereas twelve miles laced Backbone State Park. Some foot trails were complete with lookout towers, shelter houses, privies, footbridges and picnic facilities. Stone steps were laid by hand by the CCC boys on steep gradients. Along trails lookout towers or points were located on prominent scenic overlooks. Footbridges were constructed of native logs as were the picnic tables and seats.

Less obvious work done by the CCC boys, yet necessary in park development, was construction of the water and sewage systems. Other less notable work was laying sod and landscaping, cutting weeds, filling ditches, sloping banks, building roads, painting signs, and fencing.



The CCC is also made significant contributions in lake construction. Of all the recreational areas in Iowa which the CCC boys helped develop, more than 25% involved lake construction. CCC workers cleared the lake bed of debris, and constructed the dam and spillway. Often stone was hand laid on the dam to prevent bank sloughing and erosion.

To provide and maintain good water quality soil erosion control structures were built on the lake's watershed. Many gullies were plugged with debris to stop silt deposition into the lake. Silt dams were built on Lake Wapello's three major arms. At Maquoketa Caves State Park, as with Lake Wapello, CCC workers aided area farmers in soil erosion control by plugging gullies, terracing and tree plantings.

The CCC contributed five warm water hatcheries and one cold water hatchery to the Iowa Conservation Commission. They served an important function in fish production for many years. Small and now obsolete they have been phased out and replaced with modern hatcheries using more advanced fish culturing techniques.

Fisheries experts at the time recognized the value of providing artificial fish structures in man-made lakes. Each fish structure was designed and placed for a specific purpose. The fish structures were to provide shelter, act as spawning beds and increase lake productivity. Materials used in making fish shelters were brush, scrap lumber and rocks. Three hundred sixty fish structures were built in Lake Wapello and sixty fish structures in Lake MacBride.

Some of these state areas the CCC boys developed had at one time been privately owned and cleared of trees for agricultural purposes. With the aid of the CCC boys, reforestation became an integral part of restoring a bit of Iowa back to its wilderness state. The CCC camp at Lake Wapello established a forest nursery. A group detail was formed to spot good seed producing trees and to collect those seeds at maturity. Seeds collected were black locust, American elm, black oak, white oak, hickory, hazel brush, sumac, and dogwood. For

forest fire prevention, fire lanes were established around forested areas. Removal of diseased trees was a common practice to the CCC forest program.

The CCC program was terminated in 1942, but in its nine years of existence (1933-1942) the CCC made many contributions not only in Iowa but nationwide.

Though some of these contributions have since deteriorated and have been demolished, all hope isn't lost. At the present time the Conservation Commission is developing a master plan for Maquoketa Caves State Park, which includes restoration of the stone shelter house built by the CCC boys. Foot trails at Ledges State Park have partially been restored by the Young Adult Conservation Corps (YACC), a federally funded program similar to the CCC but of lesser magnitude. The amphitheater at Pilot Knob State Park is also in the process of being restored. The CCC truly has left many contributions of historical significance. Those contributions are an art form to be acknowledged and appreciated.

The CCC is gone, yes. Forgotten, no.

Anyone for the old CCC?

More than 500 farmer members of the Civilian Conservation Corps met in California last year to organize the National Association of Civilian Conservation Corps Alumni. Anyone who served in the CCC, in any capacity, is eligible to join. For details, write to Jack Vincent, 1709 Michigan, West Sacramento, California 95691.

Jack says he is 80 years old and the project "keeps me going."

Entrance portal (opposite) and shelter house (below) Pilot Knob State Park.



PHOTO BY THE AUTHOR



Abundant gizzard shad can provide a needed link in a lake's food chain or severely compete with desirable sport fishes.

GIZZARD SHAD — FRIEND OR FOE?

by Don Kline
FISHERIES BIOLOGIST

How can a fish which weighs less than an ounce and eats algae create such a controversy among Iowa's sport anglers? The answer, of course, is not a simple one. The use of gizzard shad in fisheries management must be balanced against its good and bad qualities. The gizzard shad can be utilized to benefit sport fishing, or on the other hand its abundance can result in problems for the angler. The pros and cons of this fish species will be argued for many more years, but because this is a current issue, let's examine this species from the standpoint of its role in the fish community and its usefulness in fisheries management.

A fish community is the sum total of fish species found in a body of water. Its composition can be relatively simple (as in our small man-made lakes) or quite diverse (as in our rivers). Each fish species has a role to play in the development of the community and its role can affect the dynamics of the entire fish community.

Gizzard shad by nature assume two roles — primary consumers and prey. The term "primary consumer" refers to the food habits of the fish. The principal diet of gizzard shad is microscopic algae and animals. Shad have a filtering system in their mouths which strain

food from the water. Shad travel in large schools and feed near the surface. As the school feeds, several fish will jump above the surface of the water. This trait has led many people to refer to them as "skip jack."

Hatching in June, shad grow rapidly to a length of three inches by September. Adults may reach 20 inches, but in Iowa most adults are between 10 and 14 inches in length. Their life span has reached 12 years, but the most common ages are three and four year old fish. The adults are common in shallow water during their spawning run in the spring. An average female produces over 300,000 eggs.

Gizzard shad have a high reproductive potential which make them ideal prey. The term "prey" means that larger fish such as largemouth bass, crappie, white bass and channel catfish will eat them. Because they can be available in large numbers, shad can provide a food supply for several other species of fish. This ability has led to the stocking of gizzard shad in several fisheries management areas.

The most well publicized shad introductions were to infertile reservoirs in the southern part of the United States during the 1970's where gizzard shad were being used to bolster the food supply for largemouth and white bass. Several populations of bass made a positive response after the shad stocking, but several others changed very little, or showed a negative response. Gizzard shad have also been recognized as an excellent prey species for crappie. The favorable publicity from the successful shad stockings led to wholesale introductions. Introductions where shad were not necessary or needed have resulted in many instances of harm to existing fisheries.

Therefore, during the 1980's we will have to ask the question, "Will the gizzard shad be friend or foe in our fisheries management effort?" Each stocking will have to be based on an understanding of the role shad can play in the fish community and on the objective of fisheries management for the area.

A few examples from Iowa's recent experiences will help emphasize the complexity of gizzard shad management. Lake Rathbun has had gizzard shad since its beginning, from a resident population in the Chariton River. Studies have shown that all predator species of the lake are dependent upon them for a food source. The shad numbers have fluctuated over the years and the crappie harvest has varied as a result. Surely, if all fish were removed from the lake today, gizzard shad would be one of the desirable species to restock. The largemouth bass population has not responded to the available forage because of other limiting factors. White bass have been stocked to take advantage of the abundant shad, and the fishery is now showing a positive response, although it has been slow developing.

PHOTO BY KAY HILL



Gizzard shad can be identified by their silver color shading to dark on top, keeled ventral midline and large dark spot on the neck behind the gill cover.

Lake Geode received a spurious stocking of shad in the mid-70's, and they blossomed until they are the most numerous species in the lake. Bluegill numbers declined during this same time and the bluegill fishery went from outstanding to mediocre by the late 70's. A loss of angling recreation was resulted and the fishing potential of the lake has been greatly reduced. The quality of largemouth bass fishing has improved, more as a result of an increased minimum size limit than the benefit of increased forage. Bass growth has not increased since the introduction of shad. Crappie fishing became excellent as the shad bloomed, but has fallen off and will probably cycle as the shad numbers rise and fall.

Lake Darling had suffered from heavy turbidity during the early 1970's, but the water quality has greatly improved. The most numerous sport fish in the lake was crappie, but because of their large numbers and marginal habitat they developed into a stunted population. In an effort to increase the forage base for the crappie, gizzard shad were introduced in the spring of 1980. The introduction has been successful and the crappie harvest should increase as they utilize the shad for food.

The major disadvantage of stocking gizzard shad in a lake is their ability to compete with other species of fish. The bluegill is their primary competitor because the young of both species eat the same food when they are newly hatched.

If gizzard shad do become a problem in a lake the only practical way to control them is complete population renovation. All fish in the lake must be eliminated and then restored with new stockings of desirable fish species. Reducing the number of shad with chemicals or drawdown would only stimulate them to produce abundant young at the next spawning.

Many questions remain unanswered in the gizzard shad controversy, but each experience with the fish adds to our understanding. The answer to our major question — *Friend or Foe* — will have to be answered for each lake, based on our knowledge of gizzard shad and our specific knowledge of the lake's potential. □

CLASSROOM CORNER

by Robert Rye



PHOTO BY SONNY SATRE

THE SHELVES, BRACKETS, or polypores are among the most numerous of all fungi. Fungi hunts in parks, towns, or at the Conservation Education Center *always* produce bracket fungi which are not only many, but also obvious.

There are some 600 species, mostly living on dead and decaying wood. They can be found all year round, season after season.

They are the most perfect recycling factory of the world, for they change dead wood into a fine sawdust. This sawdust makes humus, or top soil, in which young trees and other plants can grow.

The fruiting bodies — the part easily seen and which produces spores — can cover entire stumps, old logs, or snags. Polypores can be divided into two groups by the type of fruiting body they possess. One group has a soft, fleshy fruiting body that comes out every year. They grow in the summer months and reach maturity in the fall. The other group has woody or leathery brackets that persist for years. This type can produce very large shelves because they add a ring of growth each year just like a tree.

They are called polypores because of their structure. "Poly" means many and "pores" are openings. All polypores have minute to large tubes. If

you turn the shelf over or bend your neck to look under, you can see the many openings. These are the ends of the tubes. Each kind of polypore has a specific size and shape of tube.

Some of these polypores may be used in art projects. The woody types are more functional. They have been used as painting surfaces and as objects to be carved or used in some other creative manner.

Mycologists are scientists who know about fungi — the nongreen plants. They know that fungi are made of more than just fruiting bodies. Fungi have mycelium which are thread-like hairs. These form an extensive system throughout their woody hosts. The mycelium breaks down the cellulose in wood and frees the nutrients for use by other plants and animals. In fact, without these plants (the polypores) the forests would become completely clogged with dead wood.

Take part of one day — look around your property, on your way to work or to the store, and observe examples of fungi as you make your way. Count the polypores you see. Then go to a State Park or wildlife area and search there for polypores. They are quietly doing their jobs, sharing their dead tree with the local wildlife and not looking for credit for all they are doing for other organisms.

PROFILE OF AN ENDANGERED SPECIES

Showy Ladyslipper

(*Cypripedium reginae*)

by Dean M. Roosa, State Ecologist

PHOTO BY THE AUTHOR



ONCE this lovely orchid was found in 19 counties in Iowa. Its beauty led people to want to possess it — to dig it up and transplant it near their homes. These attempts almost always failed because of a peculiarity of the ecology of orchids: they need a woodland fungus to associate with their roots to obtain nutrients, and the proper fungus is not present in soils near most residences. The plant is now found in Iowa in possibly only two or three locations, which must be kept fairly secret. Another characteristic of orchids has destined many to death. When someone attempts to pick some species of orchids, the roots often are dislodged from the soil. This is because the plants have lost the ability to manufacture root hairs, so the roots are only slightly anchored. The best policy when an orchid is seen is to enjoy its beauty where it occurs naturally and refrain from handling it. The scientific name of this plant is *Cypripedium reginae*, and it is one of three members of the genus in Iowa.

This lovely plant is widespread, growing from Newfoundland to Minnesota, and south to Georgia. It is still quite abundant in certain parts of its range. Minnesota selected it for its state flower.

The Showy Ladyslipper is a robust plant, reaching heights of two feet, and is thus taller than other members of the genus in Iowa. Occasionally all three members of the genus are found growing in the same habitat type within a few feet of each other.

It is a rewarding and exciting experience to search and find this or an equally rare plant in the remaining natural areas in Iowa. Imagine my delight when, trodding through a woodland in eastern Iowa, I came upon a patch of 42 blossoms of this species. No, I won't say where. Fearing my footsteps would disturb the fragile soil, I didn't go close, but with a fond wave wished them an undisturbed summer and went happily on my way.

We must work hard together to protect our remaining natural areas — reminders of native Iowa. If we quietly sit back and let the remaining habitats for species such as this ladyslipper disappear to the bulldozer, we are just as guilty as the person who digs such a plant, thus depriving others of the chance to be reminded of Iowa when it was a truly beautiful land.

IOWA CONSERVATIONIST/MAY 1981

Fort Defiance State Park

By Donald S. DeLong
STATE PARK OFFICER

Scenic Fort Defiance is located in Emmet county in northern Iowa. It is 12 short miles east of the Iowa great lakes region, making it a nice place to camp during the busy summer months.

Fort Defiance got its name and start from the fort that stood in the Estherville community. In March of 1857, 40 men, women and children were massacred near Spirit Lake and Okoboji. This brought terror to the Estherville community and in 1862 a wounded 15 year old boy stumbled into town with the story of an Indian massacre in Jackson, Minnesota. Shortly thereafter Captain W. H. Ingham and Company A of the Northern Border Brigade were dispatched to Estherville and the construction of Fort Defiance began. The townspeople moved into the enclosure, but the feared Indian attack never came. Eventually the fort's timbers were used in the construction of new cabins.

Through the efforts of Mrs. Frank H. Rhodes, the Okamanpado Daughters of the American Revolution chapter, and the Estherville community, Fort Defiance State Park was started. The State Park Association wrote to Mrs. Rhodes informing her that for every acre they bought, the state would buy an additional acre. It wasn't long until they had 50 acres of land bought. The state of Iowa built an

enclosed shelter and a fireplace large enough to heat it. The State also built the roads into the park and provided drinking water, picnic tables and fireplaces. The Emmet county community bought a total of 80 acres of land and the state of Iowa secured the rest.

On October 15th, 1931 the state dedicated Fort Defiance as a State Park. Today Fort Defiance State Park is a 181 acre state preserve. The park's 181 acres are blanketed with a lush cover of vegetation including many species of the state tree, the oak. In the spring, the slopes are speckled with trilliums, bloodroot, hepatica, violets, pastel petaled hawthorn, plum, and the locust trees which dot the landscape. There are also many prairie flowers and grasses, including the endangered prairie bush clover, which thrives in the preserved prairie on a secluded knoll in the park.

The inviting shade of the many foot trails and bridle trails in the park offers a cool respite from the summer heat.

An enclosed shelter built from large cedar logs, constructed in a style suggestive of any old army out-post, is available for rental. The camp ground is non-modern and non-modern with electric hookups.

In the winter months many visitors come out to cross-country ski, sled down the hills, or snowmobile along its roadways. Fort Defiance is truly a year-around park. □

Log shelter house.



FROM THE WARDEN'S DIARY

By Rex Emerson

THE WOODLANDS HAVE awakened from their long winter's nap. The fresh young leaves are on the trees, and the forest floor is covered with wild flowers. The birds are nesting and the animals are busy bringing in food for their young offspring. And, those dumb martins still avoid my beautiful birdhouse.

It's the fishing time of year also. Today I assisted another officer on fishing patrol by boat. We searched an area for two hours trying to find a fish trap. The other officer had found a wooden fish trap stashed last winter under some brush along the river in that area. It was no longer on the bank, but we couldn't find it in the water. We tried using a drag hook on the end of a rope, also a long handled pike pole. A lot of roots were hooked, but no trap. Some day we will find it. We could certainly use a tip from some honest fisherman who might see it being used.

On down the river we pulled in to the bank and tied up the boat so we could check out some bank fishermen. One senior citizen that I checked had an annual fishing license for a resident over 65 years of age.

I told him, "This annual license cost you \$1.25. Why don't you get a lifetime license for only \$6.00, and it would be good for the rest of your life?"

His answer was, "I might not live long enough to make it pay."

He was fishing for carp. We both agreed that smoked carp

just can't be beat. The old fellow had thrown a sack over his bait can just before I got to him and was very evasive when I asked about his dough ball mixture.

When I told him I could smell anise oil in his bait he said, "That's the reason I covered it up. I suppose I'm in trouble for using anise oil. I knew it was illegal. I don't have any excuse, but I just figured it must be real good if it was illegal to use."

Just as soon as he let me get a word in I assured him that it was legal to use, and he could use all of it he wanted to. I have observed enough people trying to hide bait that contained anise oil that I knew why he was hiding his. It smells just like licorice, and so far as I know it has always been legal to use it.

When we were ready to get back into the boat I put my hand on the old man's shoulder and told him I hoped he would have to buy at least twenty of those annual fishing licenses before he was through.

As we went down the river we cut enough illegal bank lines to fill a large grocery bag. They didn't have the required name and address on them, and hadn't been checked every twenty-four hours as required. Some were tied to snags out in the river, and not attached to the bank as required. If any of them had been freshly baited we would have left them and come back later to catch someone running them.

While we slowly worked the river looking for illegal lines or fish traps the young officer I was with asked me what changes in the conservation field I had seen during my years with the Department. As I picked up the long handled pike pole to try to locate a fish trap, I thought back over the years and related a few things to him.

When I went to work for the Conservation Commission as a Conservation Officer in 1955 we had our second Iowa deer season. Only a few places had deer at that time, and look at the fabulous deer hunting we have now! During the years of the government set-aside acres, Iowa had the best pheasant population in the entire United States. Since that time, with land abuse causing wind and water erosion and loss of habitat, the pheasant population had to go down. It had nothing to do with the length of the seasons. We always had more rooster pheasants left at the end of the season than were needed.

The gray partridge has been introduced now, as it can survive with much less cover. The ruffed grouse hunting in northeast Iowa is better than ever. The sportsmen who buy hunting licenses and pay taxes on arms and ammunition have paid for wildlife areas so some cover and marshes can be preserved. This helps insure the possibility for future generations to have some wildlife to enjoy, not only game birds and animals, but also the nongame species. A lot of work has been done in recent years for nongame species.

There are days when it would be difficult to convince a fisherman that fishing is better than ever, but it actually is. Take a look at the trout program in northeast Iowa, or our modern fish hatcheries and their stocking programs all over the state. You could ask the hoggish individuals who illegally speared numerous big flathead catfish last winter in the Iowa River, if fishing wasn't better. (But they might not admit it.) Years ago

the farm ponds and small lakes would get so choked with vegetation they couldn't be fished. Now we have the white amur fish that eats that vegetation, thus clearing the waters for the angler. Thanks to the fishermen and boaters who purchase licenses, pay federal tax on fishing tackle, and pay tax on boat gas, we have been able to do some stream improvement and lake shore work. Areas have been purchased for access and boat launching, and in some cases land has been purchased to save rivers and streams from destruction.

The state parks and their camping areas continue to be well managed and kept clean, even with their very limited budget which often is not as large as some county park budgets.

The law enforcement officer is better trained and equipped than when I first went to work. Back in those days, when you went to work they gave the officer a summons book and a car, and told him to go "stomp out crime". Now officers are given eight weeks of field training, and ten weeks at the Law Enforcement Academy.

There were sixty-four officers when I went to work and now there are only sixty — a step in the wrong direction. The officer today has shorter work weeks, better equipment, and better pay than in years past. The officer today is just as dedicated to his job, but he insists on being treated like a human being. Law enforcement is like milking a cow. She doesn't stay milked. So we need more officers to keep ahead of the violators.

Fish and wildlife conservation has improved over the years and I am glad to have been a part of it. It all costs more money than it did a few years ago, but what doesn't cost more? Licenses will have to go up in price if you want us to continue doing a good job. Our gas and groceries have gone up the same as for other people.

Now and then some self-appointed crusader takes after our department and makes

Lookin' Back

Ten Years Ago



the Iowa Conservationist featured a story on the development of the Rathbun Game Management Area near Rathbun Reservoir. The total area exceeds 14,000 acres and is managed primarily for upland game.

Fishermen were doing quite well at Red Rock Reservoir as that body of water was undergoing the "new lake phenomenon" which makes fishing so good in a new area.

Twenty Years Ago



the fisheries managers were experimenting with a program of posting signs at Red Haw Lake informing anglers that the lake stratifies at 12

feet. This was done in an effort to help fishermen avoid fishing in depths where there are no fish due to lack of oxygen.

There was a story about a Chariton-man whose boat was pulled around the old city reservoir for 23½ hours by a huge fish which finally broke free. He said the fish may have been eight feet long. Some 800 to 1000 persons had gathered to watch by the time the battle ended.

Thirty Years Ago



the magazine ran an article on the fresh water eel. For many years scientists were puzzled about the reproductive cycle and other facts concerning the eel. It is now known that

adult eels travel down rivers into the ocean, and then to the Sargasso Sea in the middle Atlantic to breed and spawn.

Record numbers of whistling swans were sighted in Iowa as they stopped during their spring migration.

If you really want to know what I am going to do, I think might go join my old friend down by the river.

BELLEVUE STATE PARK (continued from Page 3)

Bellevue State Park could be called the "Gateway to Beautiful Northeast Iowa" because of its location on the southern-most edge of some of the most scenic areas along the Mississippi River. From the top of 300-foot vertical limestone bluffs one has a spectacular panoramic view of the "Father of Rivers". Atop these bluffs are Indian burial mounds associated with the Woodland Culture that were built at various times from 1,000 BC to about 1,300 AD. The mounds are said to include the burial spot of Ma-ko-kee-ta, an Indian girl whose name was given to the pretty river (Maquoketa) which transverses Jackson county. Here, also is where the first Indian converts were made from the tribe of the Winnebagoes.

The present park consists of two units totaling about 550 acres and offers a modern campground, picnicking, and hiking over seven miles of trails. Visitors, whether walking the trails in summer or snowmobiling in winter, will enjoy breath-taking views of the surrounding countryside. Although there is no access to the river from the park, the angler and boater will find several ramps nearby.

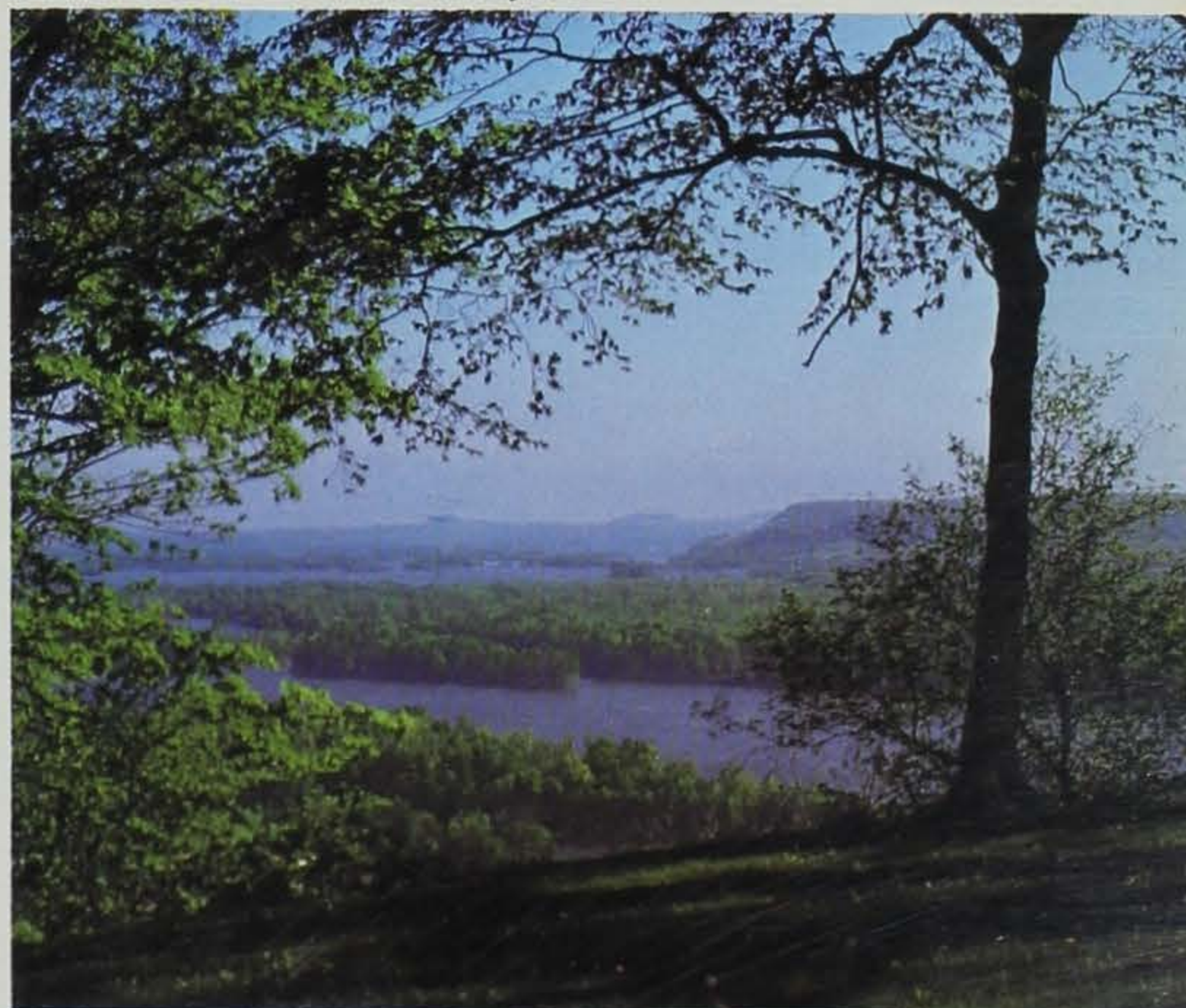
The quiet and cautious observer can see deer almost any day of the year. Red and gray fox offer fleeting glances as do coyote. Squirrels and rabbits are plentiful and can be seen year round.

Many species of birds can also be observed in the woodlands of this area. One of the rarest birds to be seen is the crow-sized pileated woodpecker. In the winter, large numbers of bald eagles concentrate near open water on the river below the lock and dam to feed on fish. It is a magnificent sight to watch these great birds descend from the sky, thrust legs forward to grasp fish in needle-sharp talons, rise from the water and fly to a nearby tree to devour their prey. It is not uncommon to view 20 or 30 eagles at one time.

The park also contains a generous assortment of wild-flowers and ferns. One of the most abundant is the hepatica, which appears in the early spring before the tree leaves shade the woodland floor. Soon to follow is Jacob's ladder with its bell-shaped flowers. Of the fern family, the one that seems to belong to the limestone ledges is the purple cliffbrade.

Thanks to the foresight of earlier residents we can see things much the way they were when Father Marquette and his associates stopped at this point on their historic river trip long ago. Today, Bellevue State Park is an uncrowded area that offers a unique renewal of man's inner-most resources. It is a beautiful place to visit and enjoy for a day or a week. □

Dyas Unit





LARGE FLOWERED BEARDSTONGUE

BY DALE BRUMM

Large Flowered Beardstongue or *Penstemon grandiflorus* is one of the approximately eight species of beardstongues in the Midwest which belong in the Snap Dragon family. Their name is derived from the tuft of hairs on one of the stamens. The large flowered variety is found in two narrow bands in Iowa along the Big Sioux and Mississippi rivers.

In May the plants grow to a height of about two feet, start to bloom about the first week in June, and continue to bloom for a period of more than a month. The flowers are very large (nearly two inches) and are a pale violet or lavender blue. The leaves are roundish, toothless, and clasping. The Beardstongues are found in open prairies and grow best in the hot, unshaded areas.

This Beardstongue can be found in Stone State Park, but a person has to walk to remote areas to locate them since most of the flowers are illegally picked and thus destroyed. (The park staff can give directions to where they can be found.) A good rule to follow so everyone can enjoy the natural attractions is "Take nothing but pictures and memories and leave nothing but footprints."

A special thanks goes to Jim Leachman of Sioux City who took this picture in a protected area in Stone Park.