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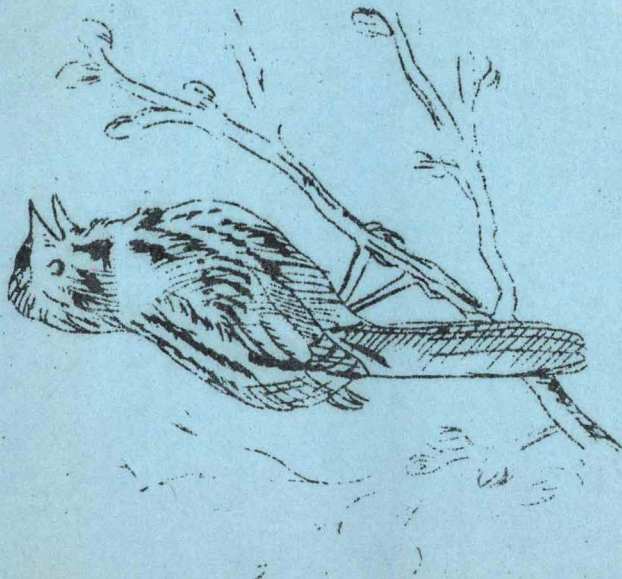
Ledges Nature Notes

Iowa
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NATURE NOTES

Vol. III May 12, 1940 No. I

This bulletin is prepared by the Park Naturalist for the information of the guests of the Lodges State Park in order that the recreational and educational opportunities of an unspoiled primitive area may be more fully appreciated, utilized and protected. It is issued by the State Conservation Commission with the cooperation of the Recreational Department of the Works Projects Administration and the Iowa State College Extension Service.

M. L. Jones State Naturalist

"You may drive a dozen times through any one of our State Parks and you will not know the parkland as a walker who has been there but once."

-- Carl Fritz Henning.

WHAT YOU CAN DO IN THE PARK
but can't do at home

Hike several miles through the woods without having to climb those pesky fences.

See a wild deer (not dear)

Find wood ready cut for your campfire without "borrowing" it

Park your car without having to steer clear of fire hydrants

Enjoy a permanent flower garden without weeding and watering it

Shake the crumbs from your red tablecloth without danger from Ferdinand

Hike with the Naturalist. He will answer your questions and show you many interesting things and places.

SUNDAY HIKES --- 10 a.m. 1 p.m. 3 p.m.
(Meet at Greeting Lodge)

PARK NATURALIST PROGRAM IN IOWA

As judged by most standards of comparison, the Park Leadership Program in Iowa during 1939 appears to have been highly successful. A report of last year's activities reveals that about 65,000 persons benefitted directly from the Iowa Park Naturalist Program during the past year.

Naturalists stationed in nine of the Iowa parks conducted 580 nature tours during the course of the summer season. More than 11,000 park visitors participated in the 580 tours. Nature exhibits in park areas attracted the attention of more than 18,000 visitors. Selfguiding nature trails proved to be one of the most popular of the features offered. An estimated 30,000 visitors took advantage of these trails.

More than 11,000 Nature Note Bulletins were distributed to visitors.

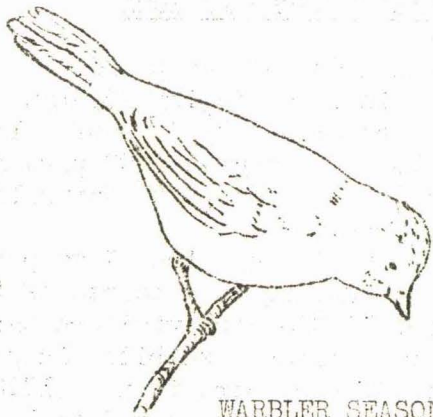
HIKE SCHEDULE

SUNDAY HIKES --- start at 10. a.m., 1 p.m., 3 p.m.,
from Greeting Lodge.

SPECIAL HIKES --- as arranged. Ask the Custodian or
the Naturalist.

Written requests may be sent to the State Naturalist at 1623 Woodland Avenue, Des Moines, Iowa

Bird migration is on! Now is the time for bird hikes, if it's variety you want. The Park Naturalist will be glad to conduct early morning bird hikes for any who are interested.



WARBLER SEASON

When the apple, plum and peach are in bloom, you may look for great numbers and varieties of warblers working tirelessly to rid man's crops of insect pests.

Do you question their ability to maintain a balance between the plant and insect world? If you do, you might consider that for untold millions of years the natural balance was well established, yet white man was not present to "control" with his poison sprays and his poison bran. On the contrary, civilization has so upset this balance that control measures are necessary.

People who come to our parks, however, are not so mercenary that they must measure everything in dollars and cents. Surely those who enjoy natural beauty will find much to enjoy in the beautiful plumage of the warblers. Most of them are not brilliantly colored like the cardinal or the scarlet tanager, yet the tasteful arrangement of colors in such great variety demands our admiration.

The Wilson's warbler sketched above will be one of the first which you may expect to find peering down at you from some leafy cover.

DON'T LOVE THEM TO DEATH

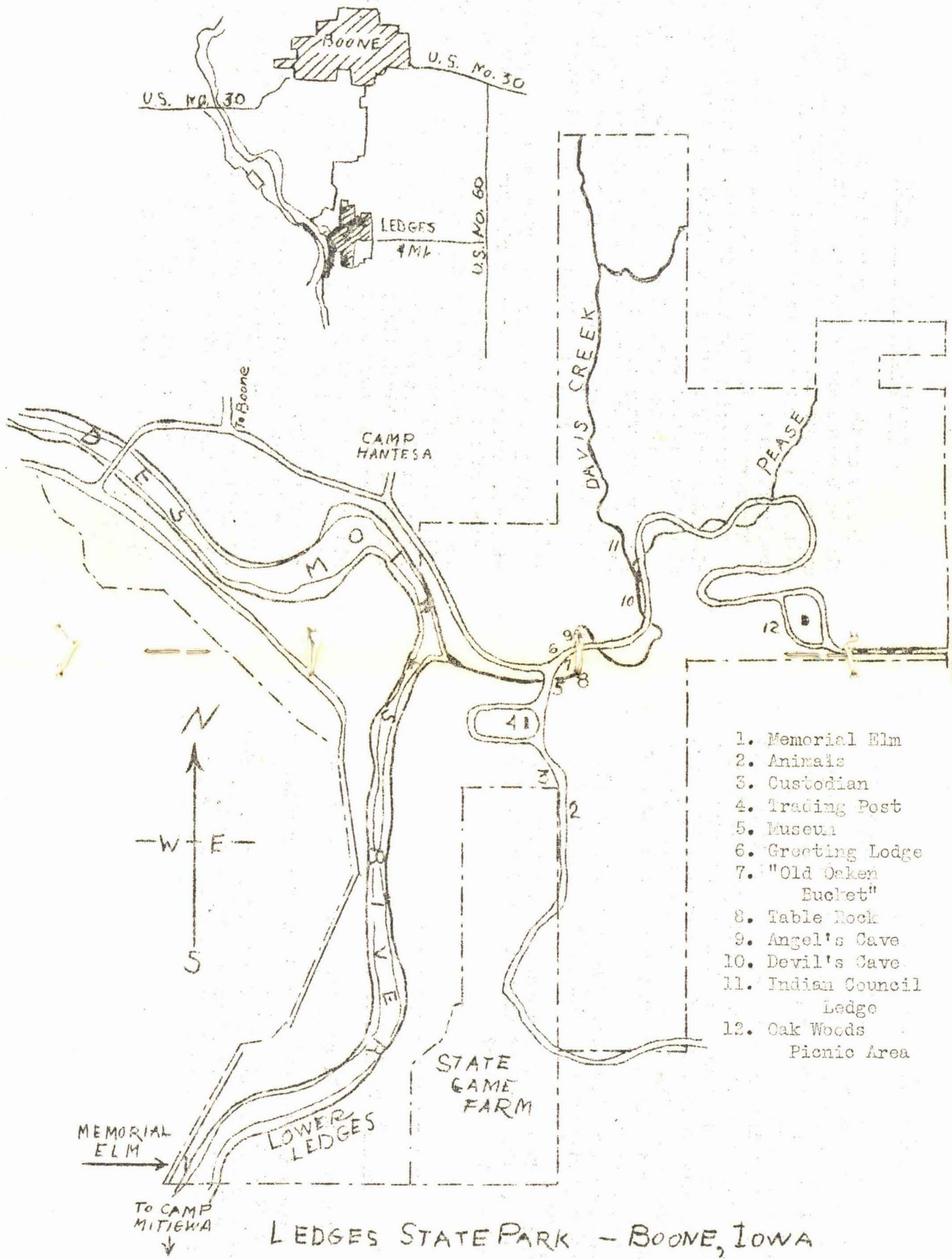
Each year the need of protection for our wild flowers becomes more apparent. With spring comes the urge to get out into the woods and very few can resist the temptation to carry back home some of the lovely flowers.

The more one learns about flowers the more one feels a protective interest in them. Learn to recognize them and you will learn which ones are rare and should be protected.

Some think the rule "Don't pick the flowers in the park" unnecessary and ask, "It wouldn't hurt if I picked one, would it?" Such people do not stop to think that at times there are 10,000 visitors in the park. If they all had the same idea, what would be left?

We all like to gather some flowers for enjoyment at home. Outside of state parks just remember the general rules: leave some of the flowers for others and some for seed; gather them carefully so the plant will not be uprooted; do not gather a flower if the entire plant must be taken to get the flower (such as Trilliums and Bluebells); do not take flowers if there are less than ten such plants in the vicinity. Blue violets may be picked without harm to the plant, and as a general rule most late summer flowers may be picked freely.

It is true that picking flowers has not decreased the numbers as rapidly as the extensive cultivation of prairies and pasturing of woodlands, but some people will say "Oh, how I love wild flowers" and gather handfuls only to see them wilt and die before they get home. "It is all right for a man to want to die with his boots on, but let's let the flowers die in their beds."



1. Memorial Elm
2. Animals
3. Custodian
4. Trading Post
5. Museum
6. Greeting Lodge
7. "Old Oaken Bucket"
8. Table Rock
9. Angel's Cave
10. Devil's Cave
11. Indian Council Ledge
12. Oak Woods Picnic Area

LEDGES STATE PARK - BOONE, IOWA



LET'S GO

DEER HUNTING ----

Got a camera?

Many park visitors who have admired the semi-domesticated deer in the forty acre range adjoining the zoo are surprised to learn that many others run at large in the park.

If you are observing, you will often notice their tracks crossing the foot trails.

If you are a skillful hunter and venture quietly into most any fairly open part of the park you may have the same thrill that the writer has had many times in the Ledges.

Have your camera ready. Here's hoping YOU don't get buck fever.

SEE IOWA FIRST

Some time this summer be sure to visit the ice-cave at Rixby State Park near Edgewood in Clayton County

More varied plant life can be seen in this park in a few minutes than in any other natural area the writer has been privileged to visit.

DAY BY DAY IN THE LEDGES

- March 30: Snow Trilliums in bloom. but scarce
 ---- Ice a foot thick in places along
 Pease creek but going rapidly
 ---- Park roads closed. Many people walked in.
 ---- Saw first buzzards (Turkey Vultures) of
 season
 ---- Saw four Mourning-cloaked butterflies
 ---- Chipmunks were out
 ---- Bees busily buzzing around the maple blossoms
- April 6: Hepaticas, Spring Beauties and Trilliums
 in full bloom, but not yet numerous
 ---- Fawn Lily (Dog-tooth violet) leaves were
 up but we found no flower buds
- April 9: Startled a deer which waved its tail like
 a white flag of truce. Succeeded in driv-
 ing it toward the car where my companion
 got a good look at it
 ---- Fawn lilies budded -- not quite open
 ---- Saw a phoebe carrying nesting materials.
 The nest under a bridge, was about half
 finished
 ---- Trillium flowers very numerous in certain
 areas
 ---- Fox Sparrows common
- April 21: Ruby-crowned Kinglets numerous in the Park
- April 27: Made an extensive tour of the park with an
 interested group of young women from the
 Y.W.C.A. in Des Moines
- April 28: Rain - no hikes
 ---- Saw deer near east park entrance
- April 29: Wild ginger in bloom. Several Juneberry trees
 in full bloom. First flowers observed three days
 ago.

V. 3 no. 2

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Des Moines, Iowa

LEOLES
NATURE
NOTES



WOODCHUCK or GROUNDHOG

W.L. 122

101-MR. 41

NATURE NOTES

Vol. III

May 19, 1940

No. 2

This bulletin is prepared by the Naturalist for the information of the guests of the Ledges State Park in order that the recreational and educational opportunities of an unspoiled primitive area may be more fully appreciated, utilized and protected. It is issued by the State Conservation Commission with the cooperation of the Recreational Department of the Works-Projects Administration and the Iowa State College Extension Service.

M. L. Jones

State Naturalist

"Lovely indeed the mimic works of art,
But Nature's work far lovelier."

---Cowper

WHAT TO SEE AND DO IN THE LEDGES

See the animals at the zoo. Early morning or late afternoon is the best time.

Go up on Table Rock--everyone does.

After standing on Table Rock, see it from the Riverview Heights Trail.

HIKE WITH A PURPOSE. Follow the marked Nature Trail.

Register and see the exhibit at Greeting Lodge.

See the Ledges with the Guide. He will save you time and steps.

JOIN THE NATURE TOURS: The Sunday Tours are not endurance hikes but are taken leisurely enough so that things of interest may be pointed out and questions answered.

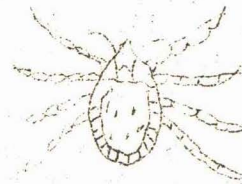
SUNDAY TOURS: 10 a.m. 1 p.m. 3 p.m.
Meet at Greeting Lodge

INFORMATION PLEASE

Have you ever heard of Screech Owls being raised in captivity? If you have Mr. Henning would like to know about it. So far he has not found anyone who knows of a single instance where these birds have raised young under caged conditions. He is trying to cooperate with the parents in feeding the young. There are no guide books on the subject, but so far our custodian has been very successful in raising caged birds and animals--and it isn't a matter of luck.

The Woodchuck, which you may have noticed sketched on the cover, is also a proud parent in our zoo. Do you know of any other similar breeding records?

Other recent baby arrivals are the Red Foxes, Timber Wolves, Coyotes and Skunks.



Sure there are WOODTICKS in the park, but you don't have to take them home with you.

They should be picked off as soon as found and found as soon as possible.

PRECAUTIONS: Don't sit on the ground! Keep on the trails! Avoid the underbrush!

A COLORFUL COMBINATION
Columbines and Hummingbirds

The Columbine is one of the best known and most loved of our wildflowers. Its true name, Columbine, is becoming more widely used but to many people it is still "honeysuckle."

It is a plant commonly found in home flower gardens but it never seems quite as beautiful there as it is in its natural surroundings hanging from some rocky ledge. We shall in all probability have Columbines as long as we have rocky ledges to protect them.

The Columbine's five "horns" are the petals and the rounded tips are filled with a nectar very much sought after by bumblebees. The Hummingbird, whose favorite color is red, is the chief pollen carrier for this flower in America. If you wish to see a Hummingbird then, a short wait near a few Columbines should bring the desired results.

The Columbine of Europe is blue and it is said that there are no Hummingbirds in Europe. How, then, do you suppose the flowers are pollinated?

It has been told that Indian bachelors used the seeds to make a paste which was placed in their clothes and produced a fragrant perfume.

A drink was also made by crushing the seeds and adding hot water. This was used as a cure for headaches.

The South Dakota Indians used the Columbine as a love charm. Pulverized seeds were rubbed into the palm of the hand and the suitor then contrived to shake hands with the desired one whose fancy it is expected will thus be captivated.

Indian girls were somewhat in fear of this plant because too strong a whiff of the odor was thought to cause nosebleed. Young Indian boys found much pleasure in tormenting the girls in this way.



EASY WAYS TO GET

POISON
IVY

Don't bother to stay on the trails, poison ivy doesn't grow there.

Pick all the flowers you can find that are associated with 3-leaved plants. (It's not legal, but you will receive punishment by due process of natural law.)

Wear peek-a-boo shoes and no socks.

(Ivy likes ankles.)

Play Tarzan on a poison ivy vine and then wipe the perspiration from your brow with your bare hands.

If blisters begin to itch a day or so after a hike, scratch vigorously. This is guaranteed to spread it all over the body.

Seriously speaking---

If you get it and decide you don't want it, consult the naturalist. He gets it every year (but checks it before it spreads).

If, after a day's hike, you wash all exposed parts of the body thoroughly with plenty of soap and warm water you are not likely to be affected.

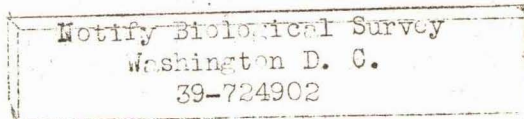
Most outdoor enthusiasts recommend that in severe cases one should see a doctor. It will be much less painful if you see your doctor.

The large number of birds seen on the annual field trip at the Iowa Ornithologists' meeting has brought forth many inquiries regarding the species seen. Following is a compiled list of the birds seen at Dubuque, Ia., May 12, 1940.

Those starred were seen by the Naturalist in the Ledges State Park this spring.

White-rumped Sandpiper	Least Sandpiper
Double Crested	Herring Gull
Cormorant	Ring-billed Gull
Great Blue Heron	Bonaparte's Gull
Eastern Green Heron	Black Tern
Black crowned Night Heron	*Mourning Dove
American Bittern	Yellow-billed Cuckoo
Mallard	Great Horned Owl
*Blue winged Teal	*Northern Barred Owl
Shoveller	*Eastern Nighthawk
Wood Duck	*Chimney Swift
*Turkey Vulture	*Rubythroated Hummingbird
Sharp shinned Hawk	*Eastern Belted Kingfisher
*Cooper's Hawk	*Northern Flicker
*Eastern Red-tailed Hawk	*Red-bellied Woodpecker
*Red shouldered Hawk	*Red-headed Woodpecker
Broadwinged Hawk	*Yellow-bellied Sapsucker
*Marsh Hawk	*Eastern Hairy Woodpecker
Eastern Bob-white	*Northern Downy Woodpecker
*Ring-necked Pheasant	*Eastern Kingbird
King Rail	*Crested Flycatcher
Virginia Rail	*Eastern Phoebe
Sora Rail	Acadian Flycatcher
American Coot	*Least Flycatcher
Semipalmated Plover	*Eastern Wood Peewee
Killdeer	Olive-sided Flycatcher
American Woodcock	Prairie Horned Lark
Wilson's Snipe	*Tree Swallow
Spotted Sandpiper	Bank Swallow
Eastern Solitary Sandpiper	*Rough-winged Swallow
Greater Yellowlegs	*Barn Swallow
Lesser Yellowlegs	*Purple Martin
	*Northern Blue Jay
	*Eastern Crow

*Black-capped Chickadee	Bay-breasted Warbler
*Tufted Titmouse	Blackpoll Warbler
*White-breasted Nuthatch	Western Palm Warbler
*Western House Wren	*Ovenbird
Carolina Wren	*Grinnel's Water Thrush
Prairie Marsh Wren	Louisiana Water Thrush
Short-billed Marsh Wren	*Mourning Warbler
*Catbird	*Wilson's Warbler
*Brown Thrasher	Canada Warbler
*Eastern Robin	*American Redstart
*Wood Thrush	*English Sparrow
*Olive-backed Thrush	Bobolink
*Gray-checked Thrush	*Eastern Meadowlark
Willow Thrush	*Western Meadowlark
*Eastern Bluebird	Yellow-headed Blackbird
Blue-gray Gnatcatcher	*Red-wing Blackbird
*Ruby-crowned Kinglet	*Baltimore Oriole
Migrant Shrike	*Bronzed Grackler
Sterling	*Eastern Cowbird
*Bell's Vireo	*Scarlet Tanager
*Yellow-throated Vireo	*Eastern Cardinal
*Blue-headed Vireo	*Rose-breasted Grosbeak
*Red-eyed Vireo	*Indigo Bunting
Philadelphia Vireo	*Dickcissel
*Warbling Vireo	*Eastern Goldfinch
*Black & White Warbler	*Red-eyed Towhee
Prothonotary Warbler	Eastern Savannah Sparrow
Golden-winged Warbler	Grasshopper Sparrow
*blue-winged Warbler	*Eastern Vesper Sparrow
*Tennessee Warbler	*Eastern Lark Sparrow
*Orange-crowned Warbler	Slate-colored Junco
Nashville Warbler	*Eastern Chipping Sparrow
Northern Parula Warbler	*Field Sparrow
*Eastern Yellow Warbler	*Harris's Sparrow
*Magnolia Warbler	*White-throated Sparrow
Black-throated Blue W.	*Lincoln's Sparrow
*Myrtle Warbler	*Swamp Sparrow
Black-throated Green W.	*Song Sparrow
Cerulean Warbler	Phileated Woodpecker
Blackburnian Warbler	Worm-eating Warbler
*Chestnut-sided Warbler	



Did you ever find a numbered band on a song bird or game bird? If you ever do, you will want to find out whether it was banded in this or some other state or nation and how long it has been banded.

To get this information send the band, or a record of the number, to the Biological Survey at Washington D.C. They will send you all the information they can about it.

WHY BAND BIRDS ?

This is question number one which most banders must answer.

Everyone knows the House Wren. We say "our Wren is back" or that "the same Wren has been building in that old box for the past 6 years". But how do we know? Probably a few of them do come back to nest 2 or 3 years in the same place but here are banding records which tell a different story. The writer has banded 126 Wrens and not one of them was ever trapped at the same locality again. Of course, many individual birds do come back year after year but only by banding records can we be sure of this.

Other questions answered from banding records are:- Do birds have personality? What is their normal length of life? When does each species migrate and where? How strong is the homing instinct? and many other questions.

HOW DO YOU CATCH THEM ?

This would surely be question two and a complete answer would be lengthy. Several methods have been devised but one of the most common employs the use of a cage-like enclosure provided with funnel openings or very light doors. A string may be attached to provide remote control.

WHO MAY BAND BIRDS ?

Only after receiving a permit from the Biological Survey may one legally trap birds for banding purposes.



RETURNS ON IOWA BIRDS

A Robin banded April 10, 1934 returned April 18, 1935, April 1, 1936 and was recaptured 5 times on April 2, 1936, three times on the third, once on the fourth and once on the fifth.

A male Downy Woodpecker banded March 14, 1935 was recaptured 16 times within less than 3 months.

A Lincoln's Sparrow banded April 26, 1935 near Rockwell City was found May 18, 1935 in Fargo, N.D.

A Downy Woodpecker banded near Fort Dodge March 24, 1934 and recaptured April 7, 1934 was captured alive in Raleigh, N. C. May 21, 1934.

A Tree Sparrow banded near Rockwell City Oct. 23, 1936 was found dead in April 1937 at Starving Lake, Saskatchewan, Canada.

A Rose-breasted Grosbeak banded July 19, 1936 at Ames was found about M.r. 15, 1939 at Chalmecca, near Nueva Arcadia, Copan, Honduras.

DO YOU KNOW THAT:

Cowbirds never build a nest yet they are one of our most abundant birds?

A snake can stick out its tongue without opening its mouth.

The tongue of the snake is believed to be used as an organ of feeling and hearing.

Snake's tongues never carry poison.

For a month the custodian and the naturalist have been trying to find live black snakes, bullsnakes and milk snakes for display purposes but without success.

HERE ARE THE FACTS.

---You Write the Story

Found (May 20) : nest of the Bell's Vireo. The nest contained only two eggs--Cowbird eggs. The eggs were different in shape and color markings.

Small holes were found in the eggs. The Vireos sang nearby but did not scold or seem interested when the nest was approached.

The same birds were observed carrying nesting material into a certain bush. Careful observation revealed the nest under construction.

Each time that a piece was added to the nest the builder stopped to sing.

The owners scolded at close range when the observer trespassed.

(The nest and cowbird eggs may be seen at Greeting Lodge.)

SEE IOWA FIRST

The next time you plan to be near Iowa City, Muscatine or Davenport why not picnic at Wild Cat Den State Park.

If you are plump, visit "Fat Man's Agony" before you eat.

You might hunt a long time before you would find a greater variety of ferns concentrated in one beautiful ravine. You should also see Steamboat Rock and the Devil's Punch Bowl as well as some of the rare plants of the park.

IOWA STATE PARKS

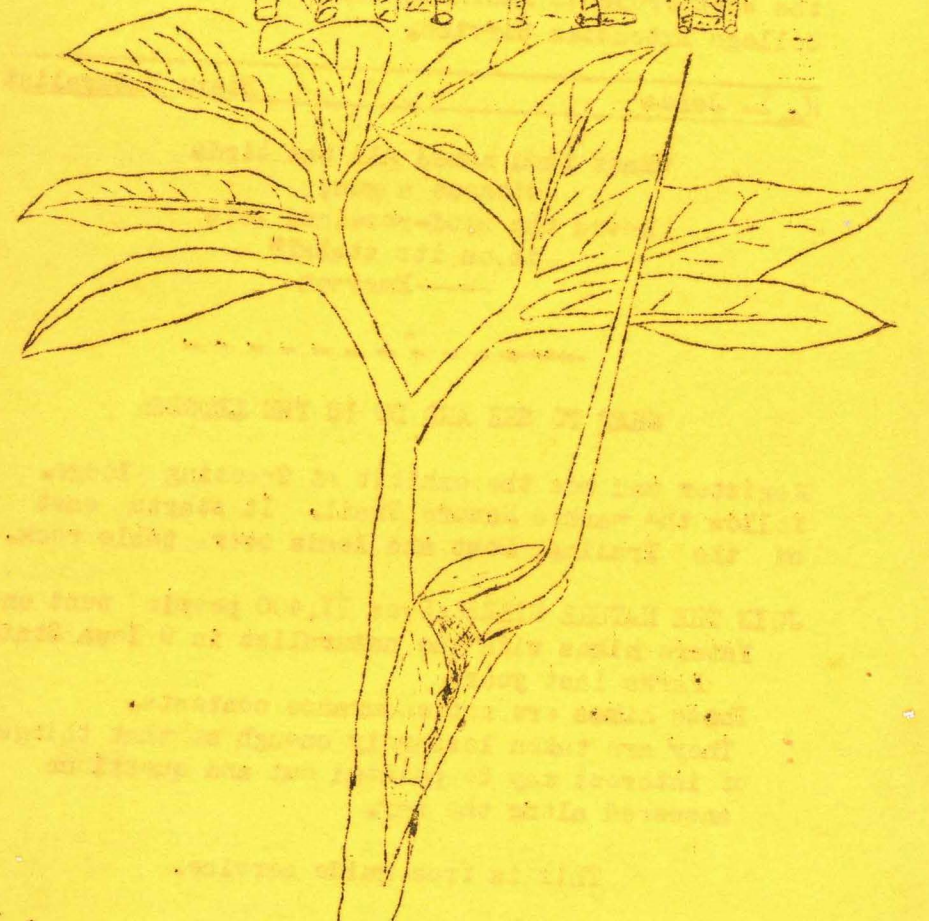
(The Naturalist attended the State Bird Meeting in Dubuque and visited several State Parks, hence these notes are substituted for the "Day by Day in the Lodges".)

- May 9: New bird arrivals for the season--Arkansas Kingbird, Wood Pewee, Grinnel's Water Thrush.
- May 10: New bird arrivals for the season-- Redstart, Wilson's Warbler, Blackburnian Warbler, Connecticut Warbler, Magnolia W.
- May 12: Field Trip. About 100 people hiking in small groups identified 148 species of birds. For complete list see center of booklet.
- May 13: Saw the Blue-gray Gnatcatcher at White Pine Hollow. Considered somewhat rare.
- The Large-flowered Trillium was in full bloom.
- Purple Trillium found in some abundance in Maquoketa Caves State Park.
- May 14: At Palisades-Kepler State Park found Shooting Stars, Bird-foot Violet and Wild Geranium in flower.
- At Wild Cat Den Park found a yellow Lady's Slipper (Hocassin flower) in bloom near the trail.
- Marvelled at the variety and great abundance of ferns in this park.
- May 15: At Farmington State Park found the Sora Rails unusually tame and abundant along the lake shore trail.
- May 16: Wild Blue Larkspur quite abundant at Lacey-Keosauqua State Park.
- The colorful Redbud trees so abundant in the park has just passed the period of greatest beauty.

V. 3 no. 3

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LEDEES
NATURE
NOTES



GREEN DRAGON WL-124

100-MR. 41

NATURE NOTES

Vol III

June 9, 1940

No. 3

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M. L. Jones

State Naturalist

"Hast thou named all the birds
without a gun;
Loved the wood-rose, and left
it on its stalk?"
-----Emerson

WHAT TO SEE AND DO IN THE LEDGES

Register and see the exhibit at Greeting Lodge. follow the marked Nature Trail. It starts east of the Trading Post and leads over table rock.

JOIN THE NATURE HIKES: Over 11,400 people went on Nature hikes with the naturalist in 9 Iowa State Parks last year.

These hikes are not endurance contests. They are taken leisurely enough so that things of interest may be pointed out and questions answered along the way.

This is free guide service.

(Greeting Lodge is Naturalist Headquarters.)

GREEN DRAGON IN THE PARK

Have you seen any Green Dragon in the Ledges? they are not animals, but plants. You may have seen them without noticing their odd method of flowering. The sketch on the cover shows the plant in bloom. The flowers are very small and are hidden inside the curled sheath at the end of the flowering stalk.

Just why it is called "Green Dragon" no one seems to know for sure... Some say that in the old world flowers of the Arun family, were called dragons and so the name became attached to this plant, a member of the Arun family, and it became "Green Dragon".

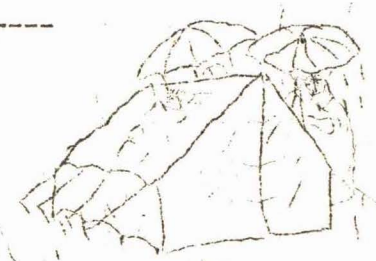
Perhaps the long yellow tongue-like projection on the flowering stalk suggested a resemblance to the long tongue of dragons in myths.

The Green Dragon is very closely related to the Jack in the pulpit and is also a close relative of the stately Calla Lily we prize so highly in our home gardens.

TOO BAD

they didn't rent one of the log cabins.

Rain or shine you can have a good time at the ledges in a real log cabin, -fireplace 'n everything.



SUNDAY NATURE HIKES

10 a.m. 1 p.m. 3 p.m.

week day hikes are best, especially for group. Tell the naturalist what you would like to see and arrange for the time.

DRIFT

Geologists tell us that in Iowa about a million years ago the land surface was as nearly level as erosion could make it.

Glaciers then moved into and across the state, first slightly leveling off any hills, but chiefly depositing glacial material in the valleys and in practically all parts of the state deposition took place on the hill tops as well. The coming and going of this glacier may have taken 75 thousand years. This was followed by a period estimated at about 300 thousand years in which Iowa may have been much as we know it today, except that no man lived to observe it or to modify it.

This first glacier is called the Nebraskian and probably covered Iowa to an average depth of from 100 to 150 feet.

Other glaciers followed, each with its intervening period of mild climate and gradual erosion.

During these inter-glacial periods the drainage pattern was again well developed but the next glacier destroyed such pattern, clogging rivers, filling whole valleys and creating lakes.

Probably the most discussed and best known glacier is referred to as the Wisconsin Drift. We are told that this ice sheet did not retreat until about 25,000 B.C. Geologically speaking 25,000 years is a very short time; so short that the Wisconsin Drift is typified by its poorly developed drainage system and by the fact that much of the surface is strewn with un-weathered granite boulders.

Another feature to which we have become so accustomed that we often do not question its origin is the presence of small hills or ridges which cannot be explained as usual erosional features.

These hills are called moraines and are formed either at the margin of a glacier or in its interior, being composed of unsorted glacial debris.

Without these glaciers do you think Iowa could have become the "Tall Corn State"?

OLD MOTHER EARTH

AGE 2,000,000,000 YEARS

A new and apparently accurate method of measuring geologic time is concerned with extremely slow but constant disintegration of uranium into lead and helium.

The rate of disintegration is not affected by chemical variation, temperature or pressure.

The oldest rock thus far found by this method is in Russia and is computed at 1,850,000,000 years old.

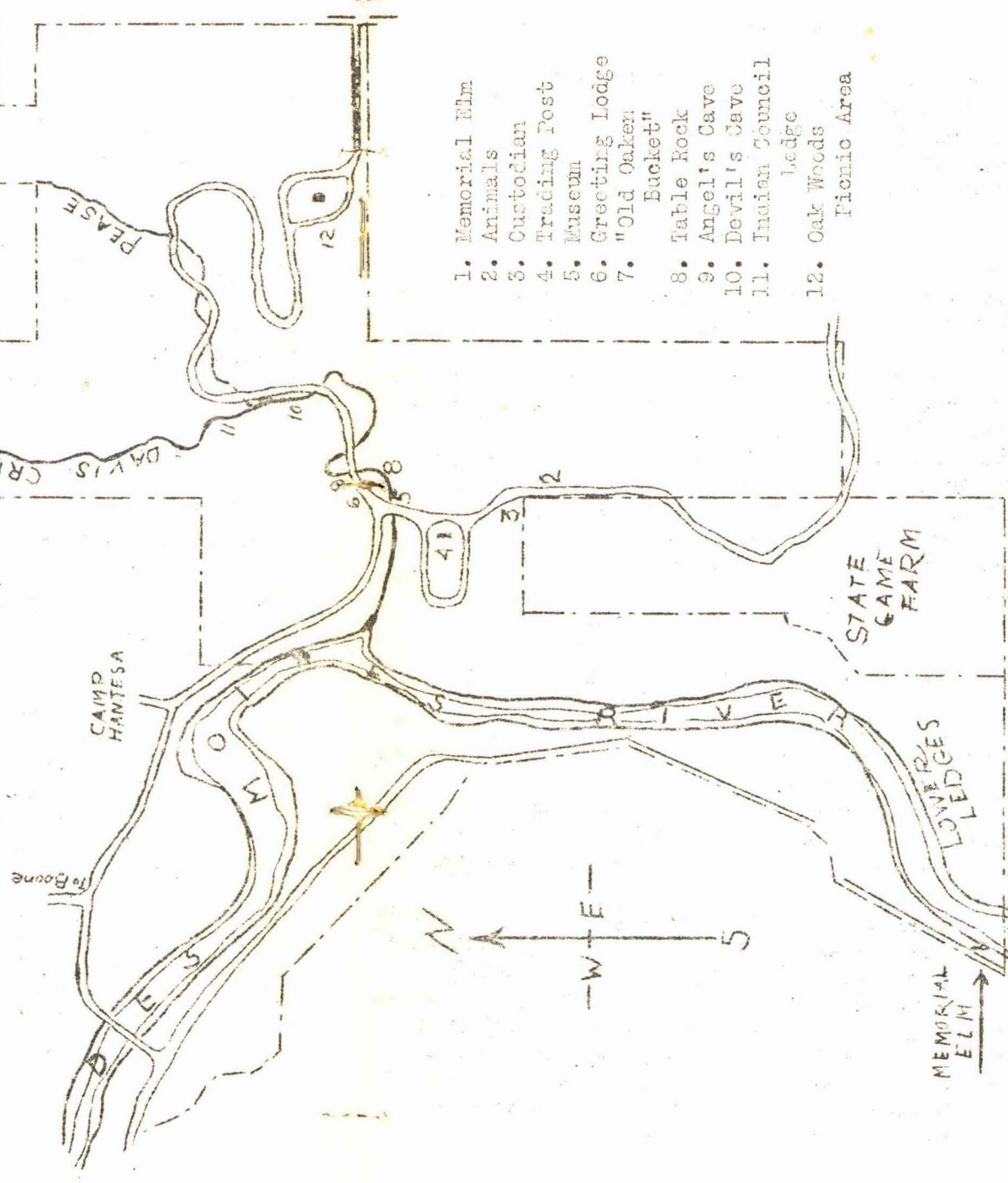
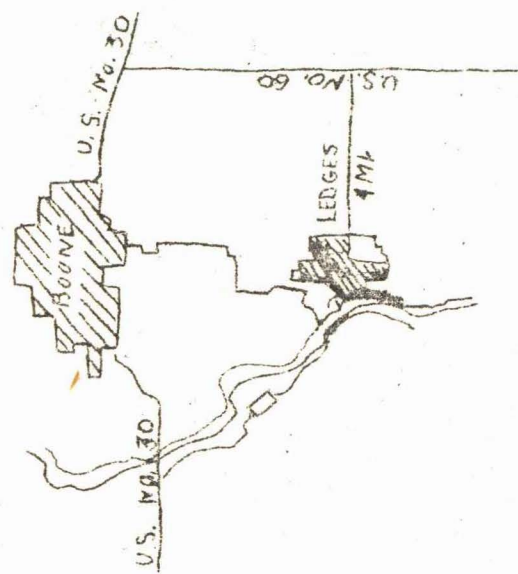
NOTHING NEW UNDER THE SUN

So called modern warfare is new to man but has been used by insects for ages. Did you ever roll a log over and meet with an insect gas attack?

The Caddis-fly drops an egg to the river bottom. These finally hatch into little wigglers which build silk-lined cases about themselves. These cases are covered with sand and sticks. By regulating the amount of air in the case they rise and sink at will. Is this unlike the submarine?

Dragon-flies are the world's most efficient pursuit planes refueling in mid-air. They capture their prey (which may be mosquitoes which we love not at all) and devour them while in flight using their legs as a sort of basket to hold the captive.





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LEDGES STATE PARK - BOONE, IOWA

THE STARLING

Every year since its introduction into the United States in 1890 the Starling has been increasing and pushing westward. It has few friends, but seems to be able to hold its own and even increase its numbers regardless of bounties.

IS IT A PEST?

Perhaps the greatest objection to the Starlings is their habit of collecting in the cities in winter in such great numbers that their noise and filth causes much annoyance. They seem to have lost their migratory instinct but have found the cities warmer than the open country.

Many condemn this bird as a fruit eater but others say he eats less fruit than robins.

Investigation shows that the Starling eats many harmful insects and has been pronounced a better insect-eater than the robin, catbird or blackbird.

Have we, then, been making "much about nothing"? Or has he other objectionable habits?

WHERE DOES THE STARLING NEST?

They nest in holes in hollow trees which is the same sort of location used by our native woodpeckers, Flickers and Bluebirds.

We are too particular now about having our lawns and groves look neat. Consequently, we cut out all dead trees and so leave few homes for hole-nesting birds.

If we allow the Starlings to increase so rapidly that they use all available nesting holes, what will become of our native Bluebirds and Woodpeckers?

Should the Starling be controlled? If we accept statistics and say the Starling is economically on a level with our native insect-eaters, it becomes a matter of opinion--do we prefer great flocks of the alien Starling with his raucous voice around our homes or the soft-voiced Bluebird?

LICHENS

(pronounced like-ens)

Lichens are the most widely distributed of all the visible forms of plant life and yet they usually go unnoticed, or are called "moss". They are the gray or gray-green covering we find on trees and rocks. When we begin to notice them we find they are everywhere--on the ground, on rocks, on stone buildings and wooden buildings. Even high towers are often covered with them.

They are not seasonal like our seed-bearing plants but persist throughout the year enduring sixty degrees below zero and the scorching heat of the desert. Even in the Antarctic the geologists of the Byrd expedition sometimes scaped away lichens to get specimens of the rocks.

Without lichens we probably would not have the soil for growing more highly developed plants. They spread over the rocks drawing out the minerals they need for growth and at the same time causing the rock to crumble and form soil.

Lichens have been used in many ways. When properly processed they yield dyes of many colors. The litmus paper we so often use is colored with a dye made from lichens. There is much food value in them and it is thought the manna with which the Israelites were fed was a species of lichen. In early days it was used as a medicine for dog bites.

In the Ledges the Reindeer Lichen is the most noticeable of this group. In the far north this is the principle forage crop for the reindeer of the Laplanders.

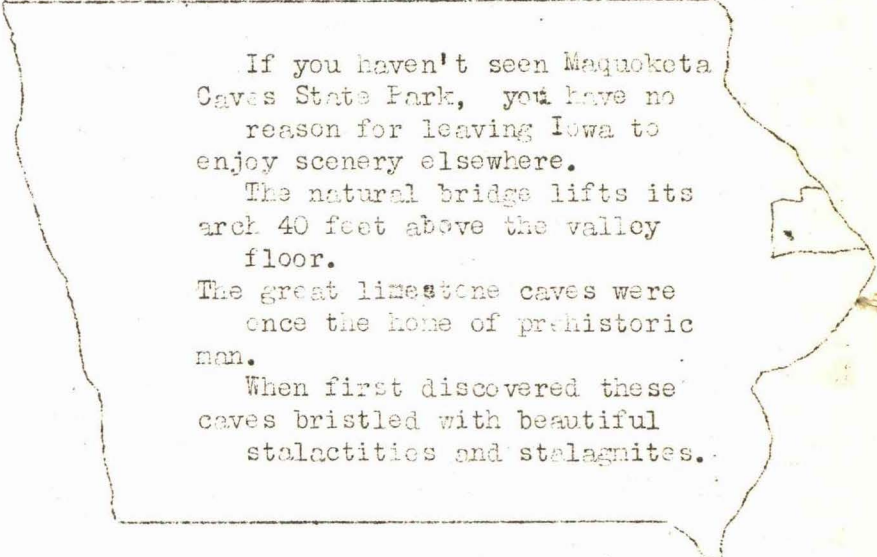
John Burroughs, the great American Naturalist, describes the rocks of England, Wales and Scotland as "dark, cold and unattractive" because they are not nicely decorated with lichens as are the rocks in our country. These little gray plants give our rocks a friendly touch.

WHAT IS THAT BUG ?

We are sometimes disappointed when we ask some well-known entomologist the name of an insect, for very frequently they will not give us a common name but perhaps only the family name, that is, the name applying to a large group of related insects. Do you know why? Here is one reason. To learn the names of all the insects it would require that we learn 25 new ones each day for 60 years.

To learn the names of all the different kinds of insects in the world would be a bigger task than to learn the names of all the people in a city four times the size of Des Moines.

SEE IOWA FIRST



If you haven't seen Maquoketa Caves State Park, you have no reason for leaving Iowa to enjoy scenery elsewhere.

The natural bridge lifts its arch 40 feet above the valley floor.

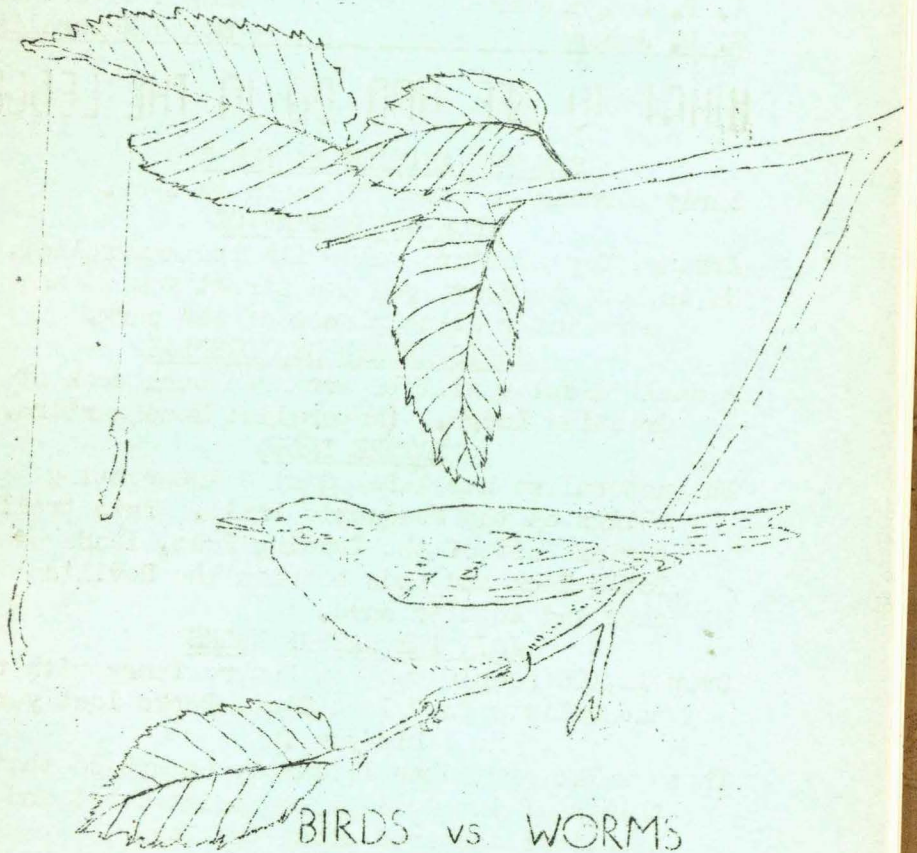
The great limestone caves were once the home of prehistoric man.

When first discovered these caves bristled with beautiful stalactites and stalagmites.

DAY BY DAY IN THE LEDGES

- May 18: Observed a pair of nuthatches which had developed a rainy day program. They were searching for insects under the eaves of the log cabin lodge where papa entertained mama by offering her worms.
- May 19: A group of Girl Scouts from Irwin, Ia, accompanied the naturalist on an early morning bird hike. Among the birds they found most interesting were the Tree Swallows, Indigo Bunting and Sapsucker.
- May 20: A Redstart was building its nest over the road west of the I6- I bridge. Families of Wrens, Catbirds and Warbling Vireos were all nesting in the near vicinity.
- May 20: Pink Lady's Slipper just pushing through the ground. Our best clump of these were lost in a landslide a few years ago.
- May 21: Took pity on our nearest neighbor, a catbird, which had apparently run out of building materials. They gladly dropped their pieces of paper and accepted the rags and string almost before they had fallen to the ground.
- May 25: Catbird neighbor has nest finished---unfurnished.
- May 26: Catbird neighbor on nest early--left 1 egg.
- May 27: Two eggs in Catbird nest this morning. Papa seems very happy about it.
- May 28: Catbirds---she contributes another egg; he more music.
- June 1: Canadian Anemones in bloom remind us that summer is at hand.
- June 1: The Catbird home is now completely furnished with a full set of 4 eggs.
- June 1: A Cuckoo or "Rain-crow" was observed building its nest-if you call the flimsy structure a nest.
- June 2; Yellow Lady's Slipper and Showy Orchis found in bloom in the park.

LEDGES NATURE NOTES



This bulletin is prepared by the Naturalists for the information of the guests of the Ledges State Park in order that the recreational and educational opportunities of an unspoiled primitive area may be more fully appreciated, utilized and protected. It is issued by the State Conservation Commission with the cooperation of the Recreational Department of the Work Projects Administration and the Iowa State College Extension Service.

K. P. Longnecker

Ledges Naturalist

M. L. Jones

State Naturalist

WHAT TO SEE AND DO IN THE LEDGES

SEE THE ANIMALS AT THE ZOO

Early morning or late afternoon is best.

FREE GUIDE SERVICE

Arrange for a nature walk with the naturalist. He is here to serve you and direct you to the more interesting places of the park.

REGISTER AND SEE DISPLAY

A small display will be arranged each week at Greeting Lodge. (Naturalist Headquarters.)

NATURE TRAIL

The naturalist has labeled some interesting things on the Mesquakie Trail. This trail begins east of the Trading Post, leads over Table Rock and ends between the Devil's cave and Angel's cave.

JOIN THE NATURE WALKS

Over 11,400 people went on Nature Tours with the naturalists in 9 Iowa State Parks last year.

Did you ?

These walks are taken leisurely enough so that things of interest may be pointed out and questions answered along the way.

CANKER WORMS

Our trails have been hung with the webs of the canker worms, and some of our most beautiful trees nearly defoliated. The only good thing we can say about them is that they won't last much longer. These worms are the larva of a small moth. The wingless females climb the tree trunk and deposit the eggs under the bark. The eggs hatch about the time the leaf buds begin to open, and the tiny worms begin to feed and grow. Their damage to the leaves is great--particularly on elm, white oak, basswood and a few others. Where infestations are heavy, and followed by a dry summer, trees not in good condition may die. White oaks may be so weakened that they succumb to the attack of wood borers.

Usually during June the worms become fully grown (one-half to one inch long) and drop to the ground. They pass into the pupa stage just below the surface, where they remain about nine months.

The natural controls are birds and destroyer insects. Birds are most important, eating countless millions of the worms. There are two methods for controlling the pests artificially; one is by banding the trees with a sticky material which prevents the wingless females getting up into the trees to lay their eggs. The other is by spraying with lead arsenate. A power spray apparatus capable of reaching the tops of the tallest trees was used in the Ledges.

----- HELP WANTED !

The Park Custodian tells us that it requires three days work each week for his force to keep the park clean. If everyone would cooperate, putting all picnic refuse, candy wrappers, etc., in the proper containers, the park force would have more time for constructive work. Will YOU help ?

CUSTODIAN'S HOME ENTERED

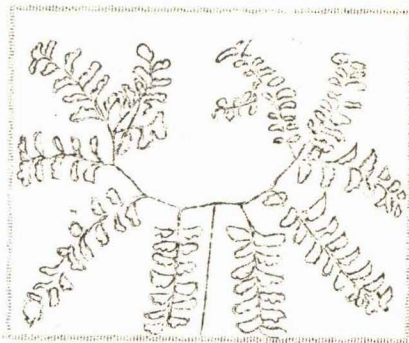
The home of our custodian, Mr. Henning, was entered about 5 a.m. on June 8th. Mr. Henning had left the house to search for Jackie, the pet monkey, which had broken out of his cage during the night. On his return he reported to Mrs. Henning that they had lost their best pet--Jackie was gone. Hearing a noise upstairs, Mr. Henning called "Jackie! Jackie!" and was answered by an excited chatter which was all too familiar. Upon going to his room the custodian found Jackie in his bed, attempting to pull the covers up over his head.

The monkey had first tried to gain entrance at the kitchen door; failing that, he had climbed to the roof of the summer kitchen, torn the screen off the bedroom window, and climbed in.

Could any animal pay a greater tribute to his keeper than to "break into" his home once he had gained his liberty?

OFF THE BEATEN TRAIL

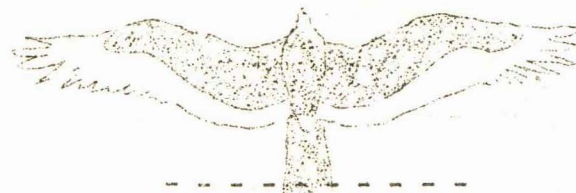
For the nature-lover who is especially interested in mosses, ferns, lichens, and liverworts, we have a special hike. It takes us up a hollow seldom visited by man, where those spore-bearing plants grow profusely. Here the beautiful maiden-hair ferns are common. We sincerely believe that there are few areas in the state which are equal to it. Ask to visit the moss and fern area--you won't regret it.



NOT HITLER'S PLANES

No, those dark soaring forms you see over the Lower (southern) Ledges are not Hitler's planes, they are Turkey Buzzards or Vultures.

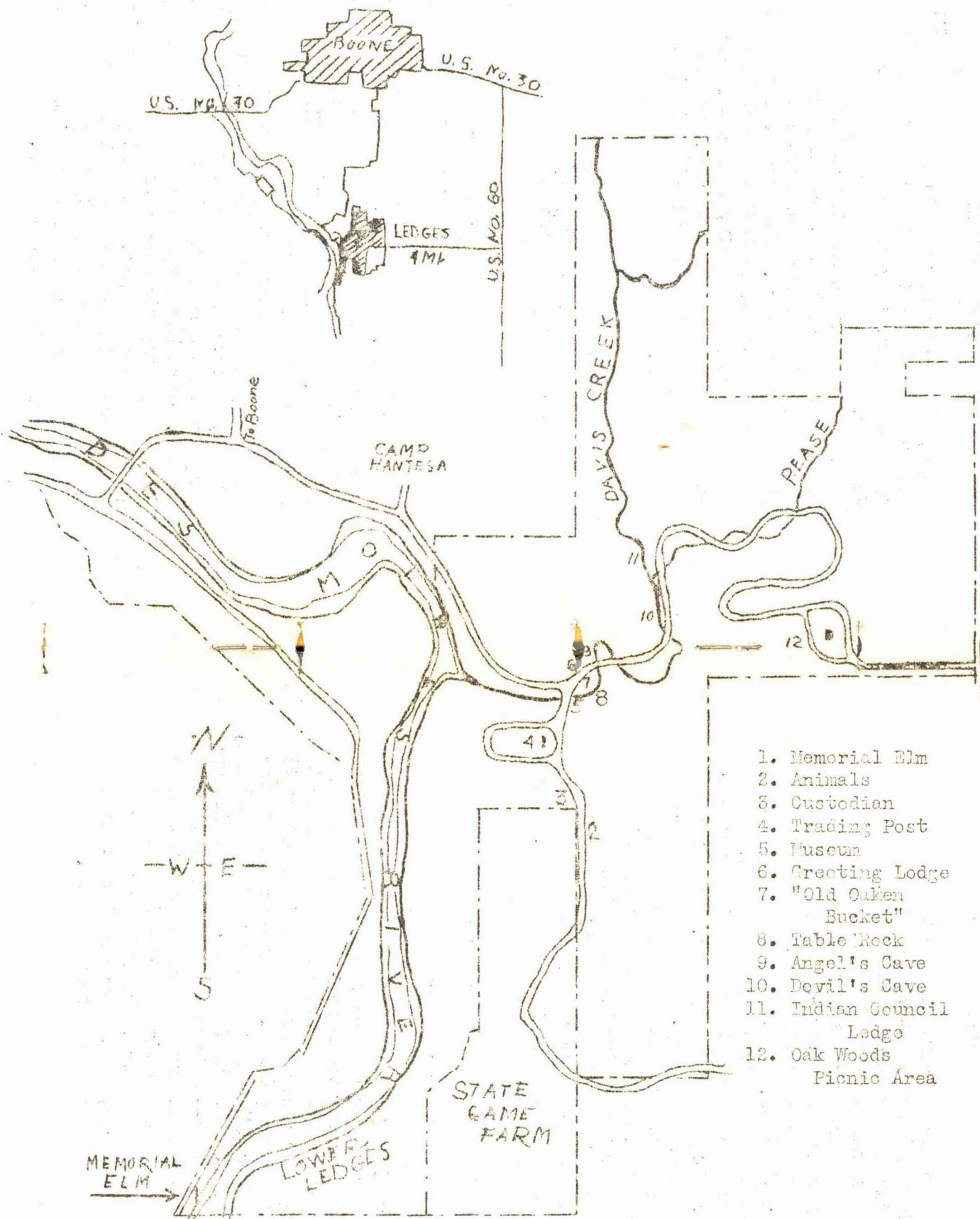
These birds are among Iowa's largest, the body being over two feet long, the wingspread almost six feet. They soar rather than fly, seldom flapping their wings. They are scavenger birds, feeding on dead animal bodies, which they seem to have an uncanny ability to locate. Bird students differ in opinion on the method used--some say by smell, others believe it is by their keen eyesight.



WILD SWEET WILLIAM

Most people have a mistaken idea of what this name refers to. The very blue wild flower so common in the woods the latter part of May is often called "Sweet William." The correct name is Wild Blue Phlox. The true Wild Sweet William is pinkish-purple in color, very showy and beautiful.

Two prominent clusters have been in evidence on a rocky ledge below Table Rock. A prairie flower, it invades woodlands, and undoubtedly was once much more common in the Ledges than it is now. What has happened to it? It has been loved to death; picked--or probably more often pulled up by the roots. The only reason these clusters remain below Table Rock is because one would have to be a human fly to get them. How much better it would have been if they had been admired and left to bloom again.



1. Memorial Elm
2. Animals
3. Custodian
4. Trading Post
5. Museum
6. Greeting Lodge
7. "Old Oaken Bucket"
8. Table Rock
9. Angel's Cave
10. Devil's Cave
11. Indian Council Ledge
12. Oak Woods Picnic Area

LEDGES STATE PARK - BOONE, IOWA

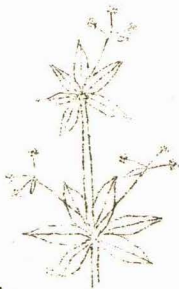
BEDSTRAW

The Northern Bedstraw is now in bloom in the Ledges. It is an erect plant, little more than a foot high, with small bright white flowers.

The plant has a square stem, and the leaves are in whorls--meaning that several arise from the same point on the stem. It is much in evidence along the trail to Table Rock.

We also have a great deal of the Rough Bedstraw growing in the low places. It may be three or four feet long, but is not erect--leaning on other plants for support. It also has a square stem and whorled leaves. Stem and leaves are covered with little hooked spines which cause it to cling to clothing. It is common to see park visitors pulling it off.

Who named it bedstraw? I don't know. I'm sure I wouldn't care to sloop on it, would you?



BRINGS 'EM BACK ALIVE

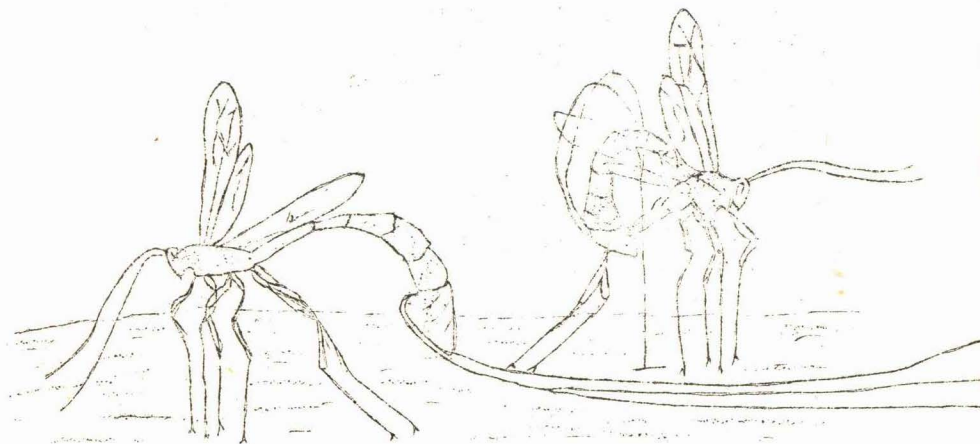
Ledges Park visitors often tell of generously proportioned snakes which they have seen outside of the park. Always an invitation was extended for them to bring the next one to our zoo or to the Lodge for a live display specimen but until recently no one obliged. This young man so inspired our confidence that a cage was loaned and, sure enough, when the farm work began to let up--if it ever does--he brought us a fine bull snake.

You may say it was good riddance but to a man who knows nature as Richard Guthrie does, it appears as a sacrifice. He and his father, Clarence Guthrie, of Woodward realize that harmless snakes fit into the farm picture.

ICHNEUMON WASPS OR FLIES

Recently the writer had the privilege of watching the Ichneumon Wasps or Flies depositing eggs. In case you don't know, these are insects, closely related to the bees and wasps, which lay their eggs on the backs of other insect larva, upon which the young feed. Thus they destroy many grubs and caterpillars. The body of the female Ichneumon wasps are almost two inches long, but the ovipositor; or egg-laying device, is twice that length. These long stinger-like structures are arched up over the back and down again. The ones observed were inserting their ovipositors into cracks and holes of a large dead log. As many as fifteen females were visible at one time. The males, which are smaller, lack the ovipositor. They were also in evidence.

The name Ichneumon was applied in Egypt to a Mongoose-like animal which keeps crocodiles from becoming too numerous by eating their eggs. These wasps keep other insects from becoming too numerous, so the name Ichneumon is given them.



THE BUMBLEBEE

You better not fool with a Bumblebee!--
Ef you don't think they can sting--you'll see!
They're lazy to look at, and kinda go
Buzzin' an' bummin' aroun' so slow,
An' ac' so slouchy an' all fagged out,
Danglin' their legs as they drone about
The hollyhawks 'at they can't climb in
'i thout ist a tumblin' out ag'in!
Wunst I watched one climb clean 'way
In a jimpson blossom, I did, one day,--
An' I ist grabbed it--an' nen let go--
An' "Ooh--ooh! Honey! I told ye so!"
Says the Raggedy Man; an' he ist run
An' pullt out the stinger, an' don't laugh none,
An' says: "They has been folks, I guess,
'At thought I wuz predjudust more or less,--
Yit I still maintain 'at a Bumblebee
Wears out his welcome too quick for me!"

---James Whitcomb Riley

FRIEND OR FOE?

Have you seen those great fields of Red Clover which are now so colorful? If you pause to admire one of these fair Iowa legume crops you may be impressed by the great number of bumblebees.

Those who have made careful studies of such things tell us that many flowers would not be pollinated if it were not for this husky bee. Then, of course, there would be no clover seed.

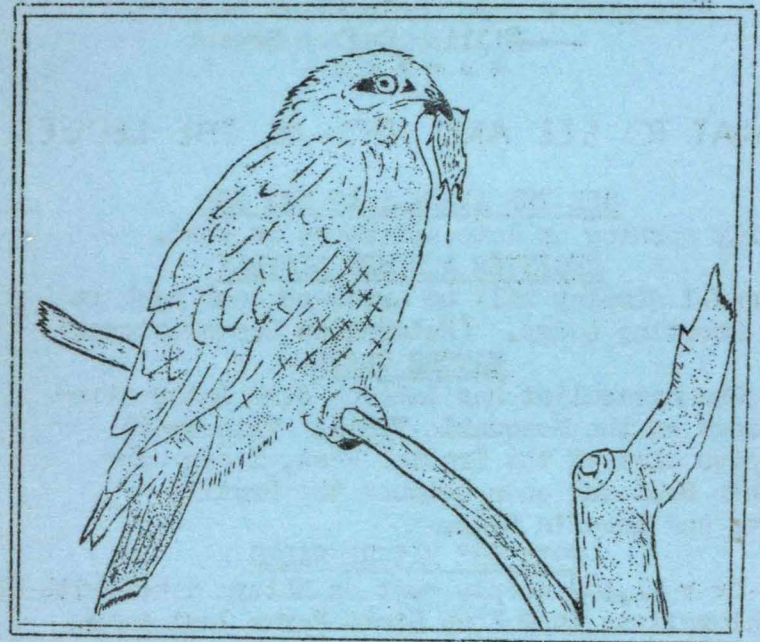
It seems that the bumblebee has a longer tongue than most bees and because of this can gather nectar which other bees can not reach.



DAY BY DAY IN THE LEDGES

- June 4: Found the nest of a chickadee in an old stump. The mother "sits tight" on the nest, not revealing its contents.
- June 5: Observed pair of Humming birds as they visited the wild Columbine in front of the Lodge. Saw Scarlet Tanagers for the first time this year.
- June 6: Wild Sweet William in bloom below Table Rock. Wild Roses blooming profusely.
- June 7: Hiked up "Walking Fern Hollow", one of the finest places for plant study now available. Saw two deer.
- June 8: Caught a specimen of De Kay's Snake about a foot long. That is the first snake the Naturalists have been able to find in the Ledges this year.
- June 9: Observed first Dogwood in bloom. Eggs disappeared from catbird nest near door of Lodge. Are the chipmunks guilty?
- June 10: Observed my first Indigo Bunting of the season. A sapsucker drumming on the tin chimney of the Log Cabin Museum sets up a din like a riveting machine.
- June 11: Observed aerial "dog fight" between several goldfinches and a blue-jay. The goldfinches darted at the intruder one after another until he was driven off.
- June 12: The catbirds, whose nest near the Lodge was destroyed, now have another nearby in the Dogwood.
- June 13: Chickadee's nest under observation found destroyed--female bird dead. Fox squirrel?
- June 14: Found site of sawmill built on Pease Creek in 1853.
- June 15: Catbirds new nest now has four eggs and incubation has begun.
- June 16: Wahoo, or Burning Bush, now in bloom, noticed by many park visitors.

LEDCES
NATURE
NOTES



RED-TAILED HAWK

WL-135

NATURE NOTES

Vol. III

July 7, 1940

No. 5

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K. P. Longnecker Ledges Naturalist
M. L. Jones State Naturalist

"The groves were God's first temples."

---William Cullen Bryant

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Did you?

Those walks are taken leisurely enough so that things of interest may be pointed out and questions answered along the way.

BAND CONCERTS IN THE PARK

A park visitor recently inquired concerning band concerts in the park. We told her that there were none. A few days later, while seated on a rock along Pease Creek, we decided we had misinformed the inquirer. For as we sat there, we heard an unexcelled concert.

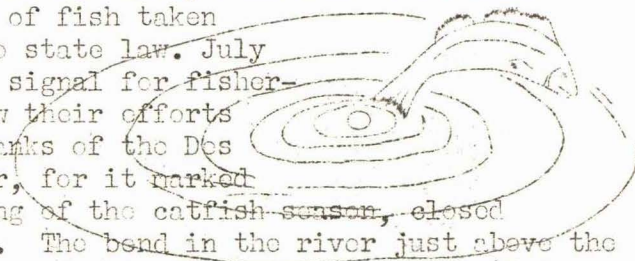
The red-eyed and warbling vireos vied with the redstart to carry the melody. The rose-breasted grosbeak and a proud "father" catbird sang solos, and the bell-like tones of a distant wood thrush added to the symphony.

A tree frog trilled a flute-like song, and far up the creek a rain-crow took the oboe part. The cardinal and many others, swelled the chorus.

Band concerts? Yes, lady, continuous daily performances.

FISHING IN THE LEDGES

The fisherman is a privileged character in the Ledges--he alone may take home "wild life" in the form of fish taken according to state law. July first was a signal for fishermen to renew their efforts along the banks of the Des Moines river, for it marked the reopening of the catfish season, closed during June. The bend in the river just above the mouth of Pease Creek offers deep water which is necessary for larger game fish. Catches are principally of catfish (the very desirable channel cat being most common), and bass, chiefly small mouth black bass. While the family prepares a picnic and enjoys the Ledges the fisherman may try his skill and luck. What more could you ask?



-3-

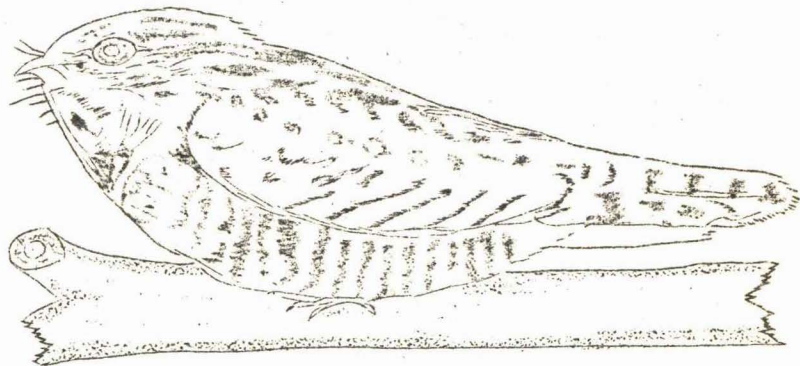
ANTROSTOMUS VOCIFERUS
(cave-mouth) (strong voice)

With a name like that wouldn't you holler too? But he seems to regard human vocal efforts with some disdain for he seldom begins his performance on time when there is a noisy crowd in the park.

On week-day evenings, if the skies are clear, the whip-poor-wills in the Ledges begin calling at about 8:15. His regularity is uncanny, seldom varying more than 5 minutes. On Sundays, when he has no doubt been driven from his usual haunts and further disturbed by the discordant efforts of humans who do not yet know how to enjoy the quiet of the woods, he may delay his calling until nearly 8:30. The influencing factor is doubtless the decreasing daylight for on cloudy nights he "jumps the gun".

Nearly everyone knows the call, but remarks made by park visitors would indicate that not one person in a hundred has ever actually seen a

Whip-poor-will.



Have you ever counted the number of calls given without a stop? One in the Ledges recently gave 750 without a pause--what a lashing that would be.

The rate at which they call would not seem to give them time to breathe for someone has clocked them at 48 to the minute.


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A WHIP-POOR-WILL NEST

It was recently the good fortune of the writer to find a whip-poor-will family. The mother bird did not flush until four noisy hikers bore down upon her. Another step might have snuffed out the lives of two very small baby "whippers".

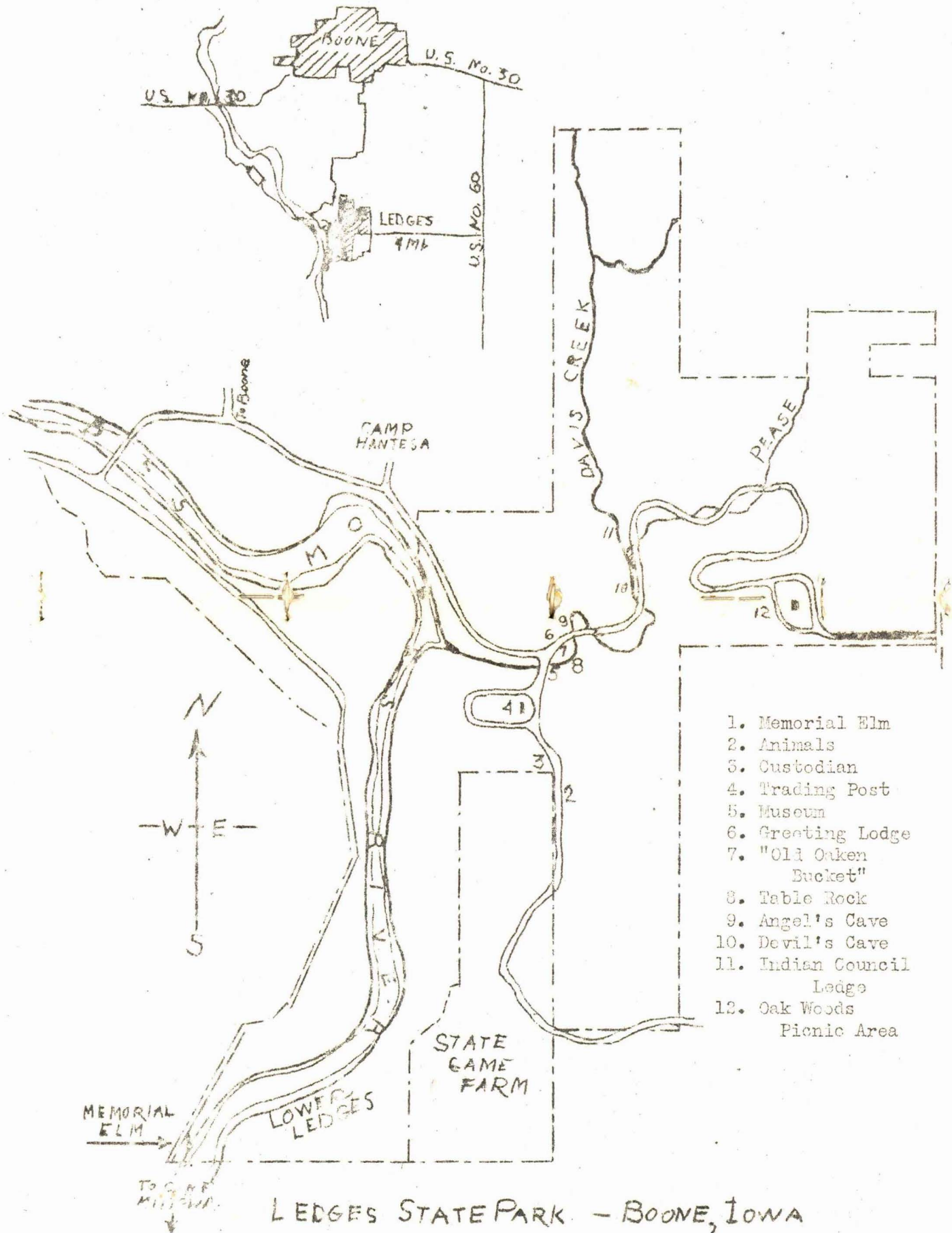
As is the usual custom, she uttered distress notes and put on a demonstration of a bird very much in need of first aid, if not a major operation. Her tricks, being well-known, availed her nothing for the young were spotted almost at once. Her extreme concern for her young made it a fairly simple matter to obtain several good pictures. In fact, she was not again left to enjoy the solitude of her wooded sanctuary until all available color film as well as black and white was used.

MULLEIN or VELVET WEED

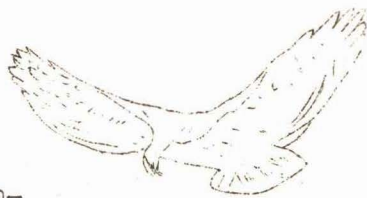


The common mullein is now blooming and reminds us of the late Dr. L. H. Pammell, a leader in conservation work in Iowa for many years. Dr. Pammell gave his services for many years in conducting Sunday Nature Hikes in the Ledges. In pointing out the mullein he used to relate how the Indians cut the hairy leaves in strips, and put great quantities of these in the streams which teemed with fish. The leaves would be taken in by the fish and would catch in their gills, causing the fish to float on their sides on the water. The Indians then went out and took what they needed, removed the leaves and freed the rest.

We are told that the "flappers" of pioneer days also had a use for mullein leaves. They rubbed their cheeks with them before parties, and produced a "rouged" effect in that way.



-7-
THE RED-TAILED HAWK
(Sketch on cover)



No, it isn't a chicken hawk! Actually a chicken hawk is an individual bird which has killed a chicken, just as a bank robber is not a race of people, but a wayward individual. Therefore, when we call a bird a chicken hawk we are covering up our ignorance or unjustly condemning a bird we have never seen before. One authority tells us that the Red-tailed Hawk is at least 85% beneficial. Only a few wayward individuals need to be eliminated.

If you destroy hawks and owls, you destroy yours and your friend's poultry and game, for it has been proven that rats actually destroy more poultry and game, both eggs and young chicks, than all the birds and wild mammals combined; yet some of our hawks and owls are persecuted almost to the point of extinction. Probably the greatest factor in the increase of rats, mice, and other destructive rodents in the U. S. has been the persistent killing off of the birds and mammals that prey upon them.

An enlightened public sentiment should cause the repeal of all bounties on these birds and afford a protection to the majority of them. In fact, in Iowa practically every hawk which is killed is "protected" by law, even though public sentiment is somewhat out of date, being based upon a desire to kill something rather than upon proper study and an understanding of the balance of nature.

As a rule the hawk that is easy to shoot is the very one that should be protected. Such hawks as the Cooper's and Sharp-shinned (not protected by law) are quite capable of keeping out of the way of the gunner and are not easily trapped but the larger hawks of Iowa are often as easy to shoot as the family cow.



-8-
POISON IVY --- POISON OAK



Many park visitors, especially after being shown poison ivy, ask about poison oak. According to Gray's Manual of Botany (the botanist's bible) the two are the same. The plant is unusual in that it has three forms. It is most familiarly known as a ground plant 3 to 15 inches high; if a rocky place or tree is near it often is a climbing vine, sometimes going up trees forty feet; occasionally it develops a woody stem and grows as a shrub, 3 to 6 feet high. This latter form probably has given rise to the name "poison oak". Gray's Manual also lists a poison sumac; however, we are told that this plant is not found in Iowa.

NOW YOU SEE IT --- NOW YOU DON'T !!

Pease Creek has a way of disappearing and re-appearing during dry weather which is rather interesting. At such times it flows along and then disappears, and a hundred feet farther on reappears again. This is due to the fact that the stream falls rapidly, and has a very sandy bed, through which the water filters in spots, only to reappear where the fall is not so rapid.

During the day the stream almost dries up, and the next morning flows merrily along. This is due to the evaporation rate by sun and wind being high by day, but not at night. It's rather puzzling to one who does not know the way of this little stream which "made" the Ledges.

The Ledges State Park has an area of 778 acres, and was obtained in 1921.

The beautiful little Goldfinches, often called "Wild Canaries", are extremely busy these days. While most other birds have finished, or at least are well along in their nesting activities, the Goldfinch is only starting. They are the latest of our birds to build nests.

Their nests are placed in small trees or shrubs and are lined with the softest material obtainable, thistle-down being commonly used.

The Goldfinch is the state bird of Iowa, and is really very common along roadsides, especially near streams. Unfortunately, most people drive so fast or make so little use of their eyesight, that they fail to see these colorful birds.



BUTTERFLY-WEED or MILKWEED ?

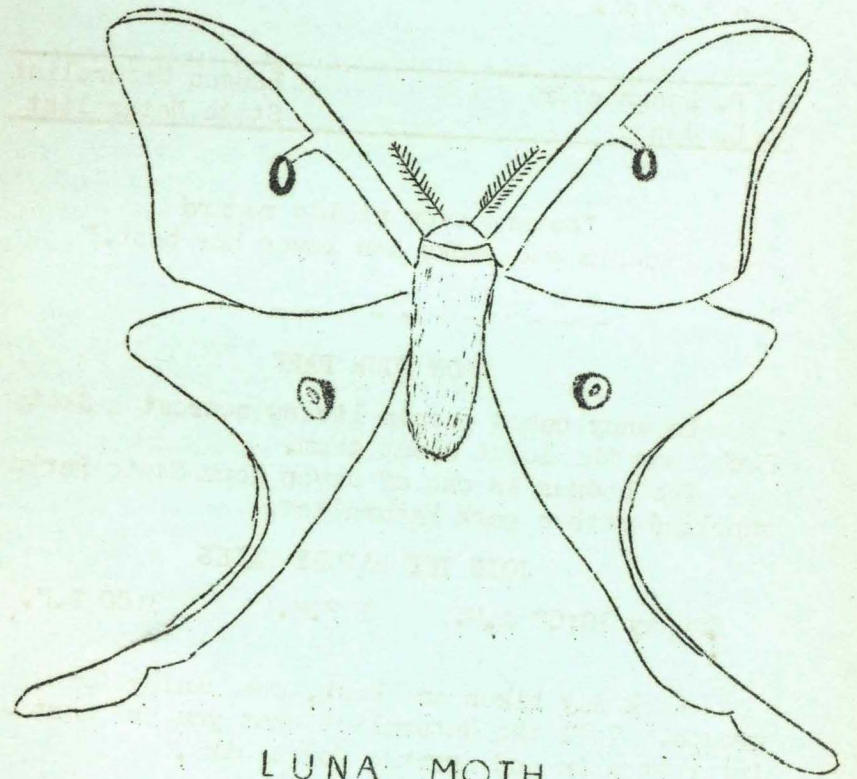
To notice and appreciate beauty in the commonplace things around us adds greatly to one's enjoyment of life. Many people do not know that the milkweeds produce beautiful flowers. The writer once showed the beautiful orange-colored blossom of the Butterfly-weed and called it by name and was immediately told it was "just a milkweed". Our reply was "Lady, it may be just a milkweed to you but it is still a Butterfly-weed to me."

The Purple Milkweed is now in bloom, and the Butterfly-weed will soon burst forth. If they were as rare as the Orchids they would rate along with them for beauty.

Butterfly-weed is also called Pleurisy-root, as it was used as a medicinal plant by the pioneers as well as by the Indians.

- June 17: Climbed to the spot where the few remaining pink lady's slipper plants are growing. No buds were found.
- June 18: Startled a doe near the river, and from the manner in which she snorted, knew she had a fawn. Tall weeds prevented seeing it however.
- June 19: Found a half-grown crow which had fallen out of the nest.
- June 20: On a solitary hike up Davis Creek four deer were observed, one a young fawn.
- June 21: Black-eyed Susans were found blooming in the meadow atop the hill back of the Lodge.
- June 22: Observed a towhee perched in a low shrub scolding angrily. Object of its wrath was a house cat--arch enemy of birds.
- June 23: The recent heavy rains washed many land snails out into the trails. They usually remain hidden under leaf mold in the woods.
- June 24: A trip up the river to the locality of the Barkley Preserve brought the reward of a chance to observe nestling whip-poor-wills. A treat for any nature-lover.
- June 25: Our caged Bullsake is resplendent in a bright new suit, having shed his skin today.
- June 26: Revisited a Phoebe's nest from which a Cowbird's egg was removed on June 11 and found three young Phoebes just hatched out, and three more eggs to hatch.
- June 27: Discovered Hummingbird's nest and watched female feeding the young.
- June 28: Took an interested group to our best fern areas. Found a large bed of Lady Ferns, a large fern of rare beauty.
- June 29: Saw a cerulean warbler--rare in Iowa.

LEDCES
NATURE
NOTES



LUNA MOTH

W.L. 139

NATURE NOTES

Vol. III July 21st, 1940 No. 6

This bulletin is prepared by the Naturalists for the information of the guests of the Ledges State Park in order that the recreational and educational opportunities of an unspoiled primitive area may be more fully appreciated, utilized and protected. It is issued by the State Conservation Commission with the cooperation of the Recreational Department of the Work Projects Administration and the Iowa State College Extension Service.

K. P. Longnecker	Ledges Naturalist
M. L. Jones	State Naturalist

"Nature ever yields reward
to him who seeks and loves her best."

KNOW YOUR PARK

In many cases people living nearest a State Park know the least about them.

The Ledges is one of seven Iowa State Parks supplied with a park Naturalist.

JOIN THE NATURE WALKS

Sunday 10:00 A.M. 1 P.M. 3:00 P.M.

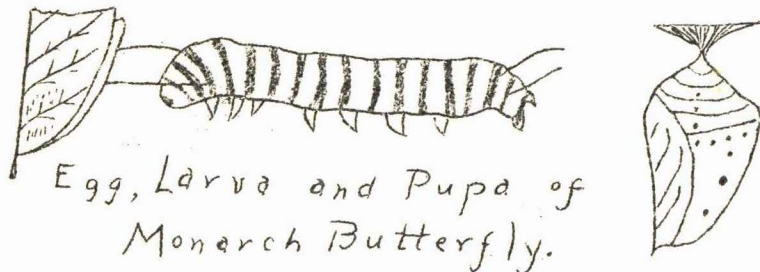
Week day hikes are best, especially for groups. Tell the Naturalist what you are most interested in and arrange for a hike.

BUTTERFLIES AND MOTHS

Many people confuse these two types of insects, which are similar in many ways. However, they may be rather easily distinguished, as butterflies ordinarily are day fliers, while moths fly at night. Moths are usually characterized by a thicker body and plume-like antennae (feelers). There are literally hundreds of different kinds of butterflies and moths found in this locality, but only a fraction of them are large and showy in coloration, thus attracting our attention.

LIFE HISTORY

While there is variation in the life history of such a large group, we may profitably review a general life history which might fit many of our common varieties. The females usually deposit eggs soon after they emerge as adults. The number of eggs varies, but most kinds lay between one and two hundred. The eggs are usually deposited on a plant which the larvae feed upon. After a week or two the eggs hatch into the larval state, which we commonly call "worms" or caterpillars. Though very small when hatched, they consume enormous quantities of food, and grow rapidly. When fully grown the larva "pupates" (forms pupa) which is a cocoon, or, if hard shelled is called a chrysalis. This is usually the stage in which they live over the winter and adults emerge in spring or early summer.

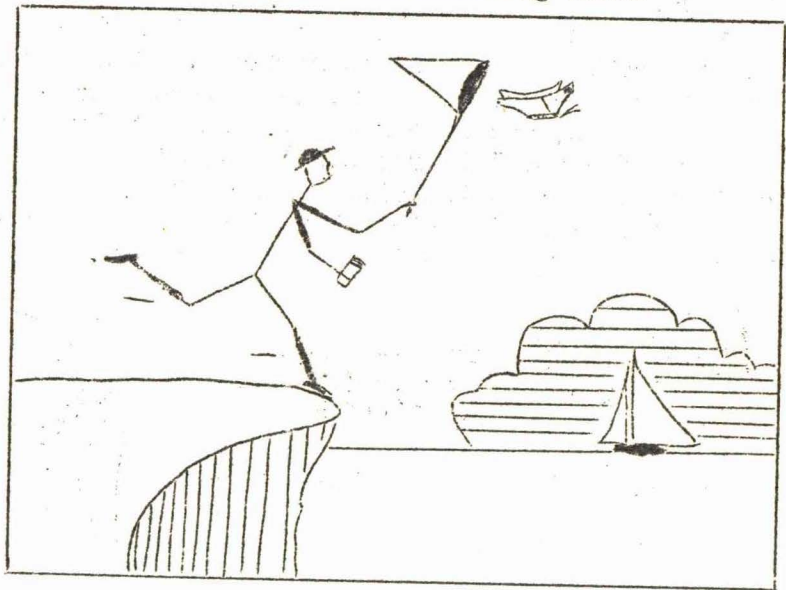


IMPORTANCE OF BUTTERFLIES AND MOTHS

Many people fail to realize the importance of these insects to man. The larva of many are very harmful to crops and ornamental plants. The canker worms, corn borer and ear worm, apple "worm" and many others are examples; the clothing moth is another destructive larval form. To the credit of these insects it might be said that they perform invaluable service to man in the pollination of flowers, and supply us with silk. Their bright colors add greatly to the beauty of nature.

COMMON KINDS

Because they are night fliers the moths are not often seen. The Sphinx Moth may be seen about a flower bed at dusk, and the colorful Luna and Cecropia Moths are fairly common. Butterflies are much more familiar, being day fliers. Common in the Ledges are the Monarch, Red Admiral, the Yellow or Sulphur, several of the Swallow-tails and Fritillaries, and the Mourning Cloak

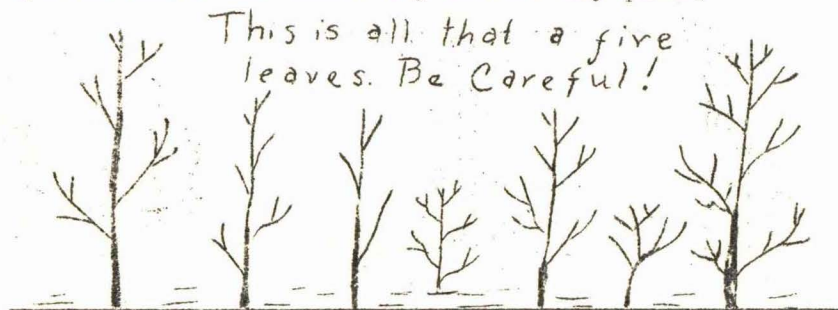


BE CAREFUL WITH FIRE!

One of our park rules reads: "No fires shall be built except in the places provided therefore, and such fire shall be extinguished when site is vacated unless it is immediately used by another party". The importance of park visitors observing this rule cannot be over-emphasized.

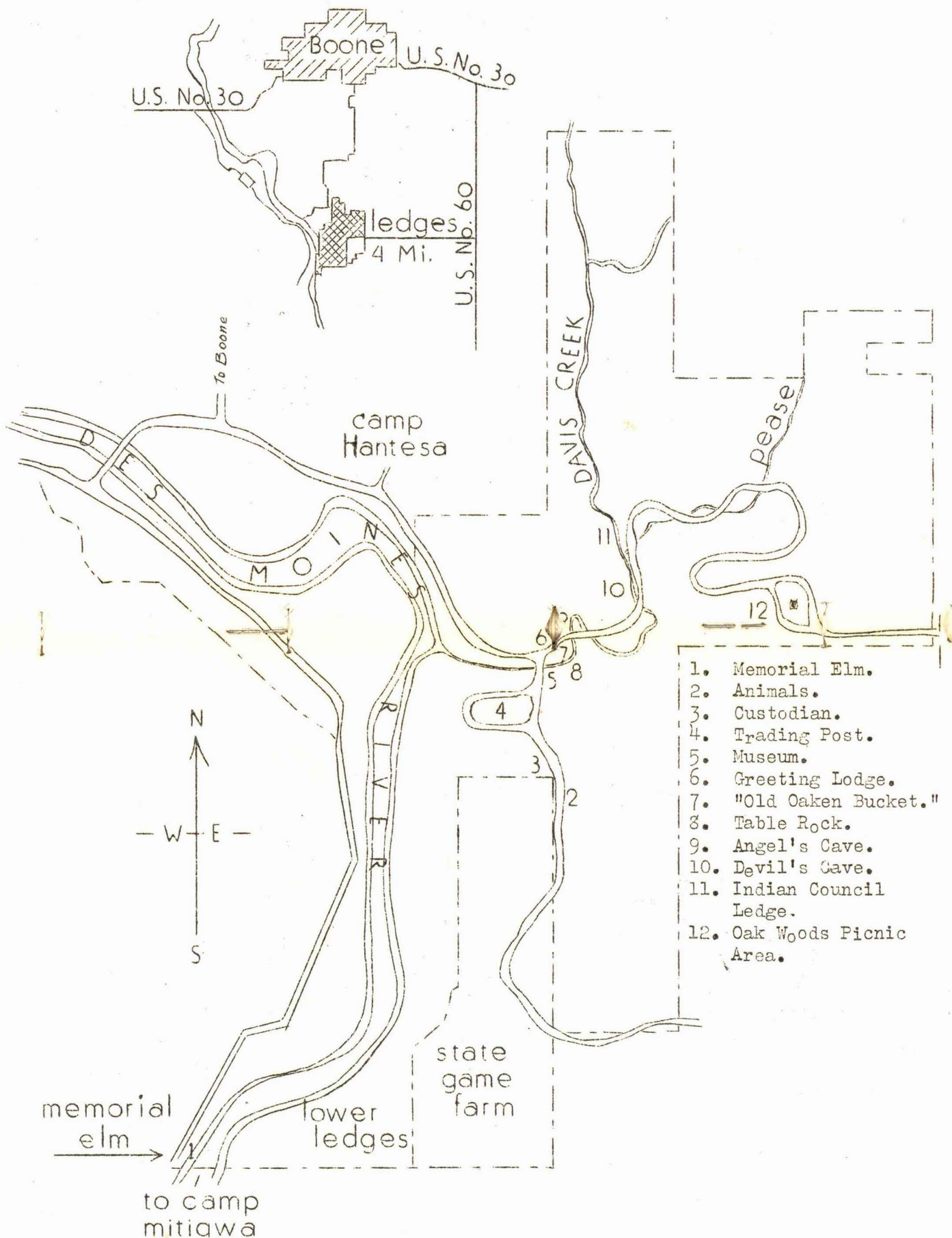
On July 10th a grass fire burned over several acres on top of the hill back of the Greeting Lodge. Several hundred trees, mostly Haw and Wild Crabs, were killed. Had the fire not been discovered and put out when it was, it would have swept into the heavy timber and might have caused enormous damage to the park and adjacent areas.

Smouldering logs of a camp-fire at the up-wind end of the burned area showed the origin of the fire. Be careful with fire! Obey the park rule quoted above--or there may not be any park.



WHO LIKES MULBERRIES?

The writer has noted the visitors to the free lunch stand offered in a mulberry tree in the park. Chipmunks and squirrels were frequent visitors; among the birds, the catbird was the most common. Other birds observed were the blue-jay, the downy and red-headed woodpecker, the flicker, rose-breasted grosbeaks and the scarlet tanager. Could anyone suggest a better use for our mulberry crop?



- 1. Memorial Elm.
- 2. Animals.
- 3. Custodian.
- 4. Trading Post.
- 5. Museum.
- 6. Greeting Lodge.
- 7. "Old Oaken Bucket."
- 8. Table Rock.
- 9. Angel's Cave.
- 10. Devil's Cave.
- 11. Indian Council Ledge.
- 12. Oak Woods Picnic Area.

LEDGES STATE PARK — BOONE, IOWA

OUR SNAKE LAYS EGGS

Our captive four and a half foot bullsnake always attracts the attention of those who come to the Greeting Lodge, Naturalist's headquarters. Brought in by Richard Guthrie of Woodward on June 9th, the snake moulted its skin on June 25th. On July 12th it further distinguished itself by laying ten eggs. The eggs are oval in shape and have an average length of almost two inches, and a diameter of about one and one-fourth inches. They are white in color, and have tough, parchment-like shells. From four to eight weeks are required for hatching, the young being about fourteen inches long when hatched.

Not all snakes lay eggs; about half of our Iowa species bear live young. The number of young varies according to the species of snake, and also its size. This is also true of the number of eggs in egg-laying species. The garter snakes, our commonest kind, may bear seventy-five or more young at a time. This accounts for their frequency, as no other species reproduces in such large numbers.

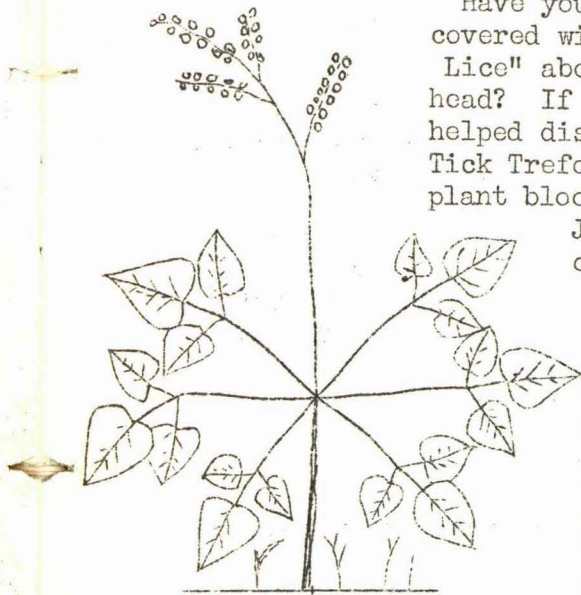
Under normal conditions snake eggs are laid in moist sand, decaying wood, etc., and the female does not return to them after they are laid. We will try to give our bullsnake eggs desirable hatching conditions and still keep them on display for the public to see.

HOW ARE YOUR PARK MANNERS ?

When a guest in a friend's home you would not carelessly or intentionally litter the home or deface furniture would you? Why should not the same rules of conduct be followed when one visits a park? Good breeding and good citizenship are shown when a person observes these rules in public places.

TICKSEED OR TICK TREFOIL

Have you ever had your clothes covered with oval-shaped "Beggar's Lice" about the size of a match head? If so, you probably have helped distribute the seeds of the Tick Trefoil or Tickseed. This plant blooms during the middle of July with small lavender-colored pea-like flowers.



The Tickseed is a good example of one of Nature's most successful methods of getting seed scattered. When you pull them off and drop them, you are helping the plant to spread. Clever idea, isn't it?

A SNAKE'S APPETITE

Attempts to feed a four and a half foot bullsnake, kept in a cage at the Lodge for the last five weeks, resulted in failure. Both a live and a dead mouse were put into the cage but not eaten. Why? The obvious explanation is that the snake is not hungry--yet. They often go for long periods of time without eating. The late Dr. J. E. Guthrie of Iowa State College, an authority on the snakes of this region, reports one case of a rattlesnake which he kept in captivity for fourteen months which steadily refused food. During that time the snake bore one litter of young, shed its skin three times, and shed and replaced its fangs seven times. The record, I believe, was set by a python in an eastern zoo, which fasted for two years.

FLYING LESSONS

Everywhere in the park flying lessons are being given daily. This has nothing to do with the National Defense program, as the student flyers are young birds. Within the last few days families of phoebes, chickadees, downy woodpeckers, rough-winged swallows and blue-jays have been observed, taking their first flights under the watchful eye of their parents. Young birds are probably really not taught to fly, but are rather protected by the adults while taking their first flights. Flight is undoubtedly instinctive, as is nest building and migration.

ADDITION TO THE ZOO

Six Black Crowned Night Herons were added to the zoo recently.

SEE IOWA FIRST

If you don't like big crowds, try a Sunday picnic at Pammel State Park.

Drive through the only highway tunnel in Iowa.

One of the most interesting upland prairies will be found on top of the long narrow ridge which gave to this park the name -----

Devil's Backbone State Park

later changed to -----



PAMMEL STATE PARK

DAY BY DAY IN THE LEDGES

- July 1: Found nests of Wood Pewee and Crested Fly catcher--both feeding young.
- July 2: New Jersey Tea, the plant used by the colonists after the Boston Tea Party, is in bloom on the trails.
- July 3: Great variety of butterflies noticed in the park. Took specimens for display.
- July 4: Observed Kingbird in Park for first time; it is not a woodland bird.
- July 5: First blossoms observed on Jewel Wood.
- July 6: Saw adult and four young minks at play in dry creek bed.
- July 7: Female Whip-Poor-Will and nest with two eggs seen in the park.
- July 8: Found nest of Towhee containing 3 eggs.
- July 9: The wrens who have a nest in a rafter log of the Lodge have a family--and are too busy even to sing.
- July 10: Helped beat out a grass fire in the park which had started from a camp fire which was not built in a fire-place; several acres burned, many trees killed.
- July 11: Saw a Blue Heron on a river sand bar.
- July 12: Our captive bullsnake laid ten eggs.
- July 13: Monarch butterfly emerged from chrysalis formed July 2, from striped caterpillar.
- July 14: The wren who has young in the nest over the porch scolded all day as the Sunday crowd passed.
- July 15: Attracted by the loud scolding of the wren I went out just in time to drive off a squirrel about to raid the wren's nest.

WL-145
V. 3 no. 7

IOWA STATE TRAVELING LIBRARY
Des Moines, Iowa

LEDGES
NATURE
NOTES



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K. P. Longnecker

Ledges Naturalist

WHY A NATURALIST PROGRAM?

Twenty-five years ago our native wild flowers, ferns and shrubs were so abundant that only a few far seeing individuals were interested in establishing wild life preserves. Now the destruction by civilization in Iowa has been so complete that the wild plants and animals which were well known to our fathers are now unknown to a great majority of our people.

Our State Parks and Preserves have been the final retreat for much of Iowa's natural beauty.

To be interested in the moccasin flower, the flying squirrel, or the maiden hair fern, you must know it and know where and when to look for it.

It is the sincere hope of many conservationists in Iowa that the Naturalists may help you to know the park as something more than a place to picnic.

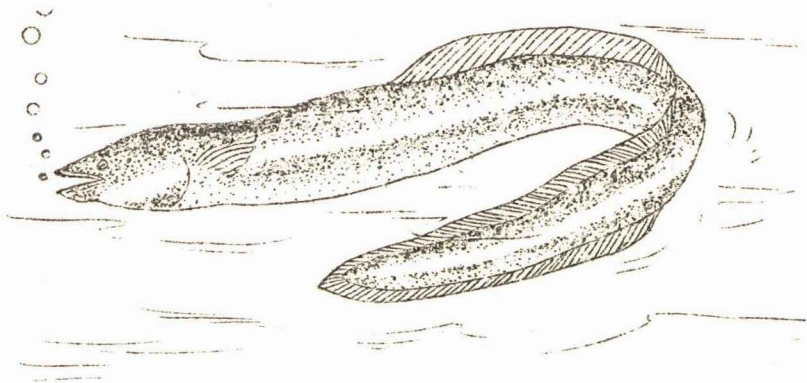
It is true that several of our custodians are qualified to do naturalist work, but only now and then can they spare the time from their ever increasing list of duties, made heavier by the

CHIPMUNKS IN THE LEDGES

The mammal which probably attracts the attention of more park visitors than any other is the Chipmunk, occasionally called the Rock Squirrel. They are very common in the park, as they prefer a home among rocks. They are entirely distinct from, and should not be confused with, the Ground Squirrels which inhabit the prairie and are seen along roadsides. Their call of "Chip, Chip, Chip, Chip", becomes very sharp and bird-like when they are angry or startled. If you pause to observe him, the Chipmunk may look at you very intently with ears erect, before darting off to the protection of one of his burrows, or a convenient hollow tree. When pursued by a dog they may climb a tree, being as agile as any squirrel.

The food of the Chipmunk is principally made up of nuts and acorns, but when these are not available they may take grain from nearby fields. They also use native fruits and berries when in season, the writer having seen them often feasting on gooseberries and mulberries. They sometimes resort to flesh food. One was observed this summer raiding the nest of a white-footed mouse, and eating one of the young. They occasionally, no doubt, raid a bird's nest, but do not do this frequently. They store up food for the winter in their burrows and in hollow logs. For carrying food they have large cheek pouches. A recent park visitor was telling of feeding peanuts to a chipmunk, and putting the peanuts in a milk bottle. The chipmunk crawled in, filled his cheek pouches, and was unable to get out thru the neck of the bottle.

The natural enemies of the chipmunk are the fox, weasel, mink, and birds of prey. He is too alert to be taken easily, however, and he seldom goes far from the protection of a burrow or hollow tree or log.



THE EEL

"Whenever fish looks so much like a snake that it is necessary to tell people that it is a fish, then that form should be put down at the foot of the class of fishes". From Hornaday's "American Natural History". This is true of the Common Eel, which occurs in the Des Moines River. On a recent hike along the river bank in the Ledges the writer found an eel, about two feet long, which had been taken from the water and left on the bank.

Sometimes we are asked why the eel is classed as a fish. The fact that they have gills, fins and scales is enough to justify this.

The life history of the eel was a mystery to man until about forty years ago. Aristotle thought they arose from the mud at the bottom of the sea. Various other theories, some more fantastic, were advanced before the truth was discovered. When ready to spawn, the eels from our waters go out into the mid-Atlantic, where a female thirty-two inches long may lay more than ten million eggs.

What do eels eat? They are scavengers, feeding chiefly on dead animals. Their flesh, however, is rather highly rated as food, commanding a good price on eastern markets. How large do they become? Sometimes four feet or more, but two to three feet is average.

HOW MUCH CAN AN EAGLE LIFT?

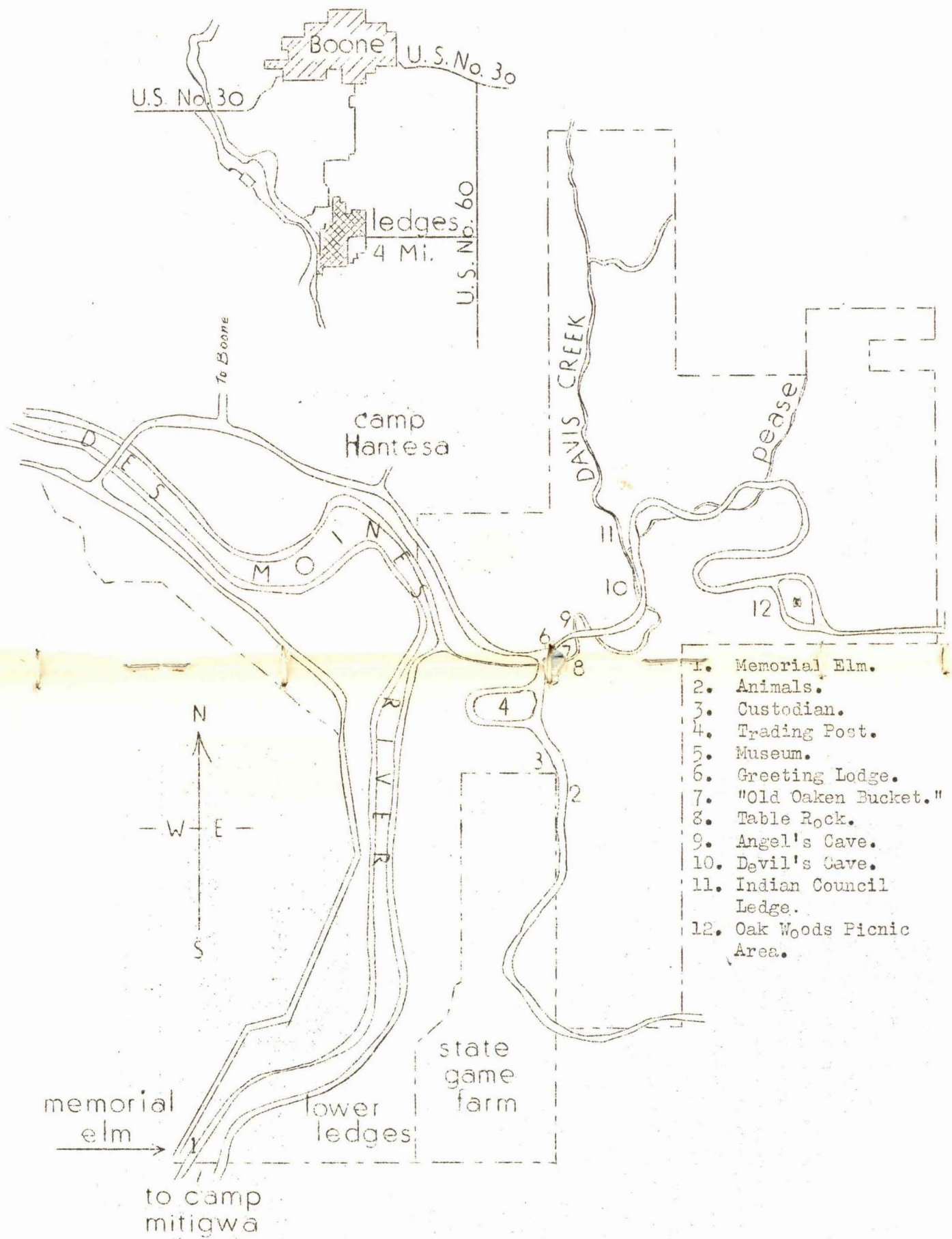
Golden Eagles may be seen in the Ledges Zoo, and Bald Eagles were observed by two bird experts in the park this spring. This brings up some of the old yarns of eagles carrying off babies, lambs, etc. A recent issue of Nature Magazine has a feature article on this subject, giving the results of careful experiments recently performed. It was found that normal full-grown eagles were unable to sustain flight carrying an eight pound weight even when launched into the air from an elevated platform. Six pounds seems to be maximum and the birds are unable to "take off" of level ground with such a burden. So don't worry nature lover, the eagles won't carry you away!



WHAT KIND OF WOODPECKER?

The writer was recently puzzled on seeing a woodpecker with coloration much like that shown in the sketch. What could it be? Our common woodpeckers are the Hairy, Downy, Red-Head, Flicker, Red-Bellied and the Sapsucker. Nope, it's none of those--or is it? Think hard--you ought to know this one. Why of course, it's an immature Red-Head.

Most immature birds have a color pattern entirely different from the adults, and they can easily fool you. Just now we have many of these immature birds, hatched this season. You must rely on your knowledge of the size, shape and manner of flight in recognizing them. That's what makes bird study fun.



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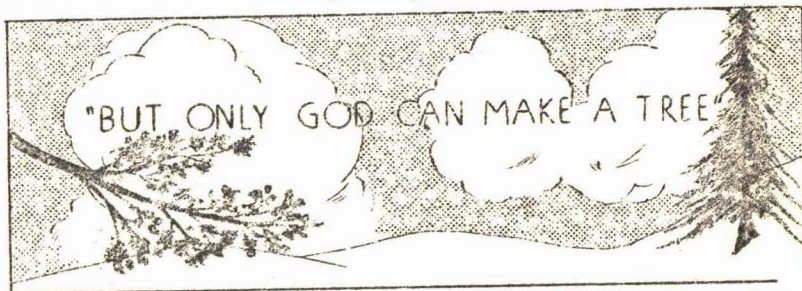
LEDGES STATE PARK — BOONE, IOWA

DON'T DIG 'EM UP

Today we have only a small fraction of the original acreage of timber left. Much that remains has been robbed of many of its most beautiful plants by persons who have dug them to transplant in gardens at home. Only a very small percentage of these plants live. Why? Because in most cases only a small part of the root system is secured, and these few roots cannot support the stem and leaves. Often, too, they are set into soil and surroundings entirely unsuited to them and are doomed from the start.

Various varieties of Wild Crab are now being used widely for landscape work. Strong young trees of this type, produced by grafting, are available from nursery companies. If one attempts to transplant those from the woods there is little possibility of success. It would be necessary for one to prune the root systems of these trees for two or three years before replanting to assure success. It is much easier, and little more costly, to buy them from a nursery.

Remember, before you attempt to dig up plants, that they have about as much root system under ground as they have stem above. If you can't get most of that root system, the plant will die.



Recent additions to the Ledges Zoo are a pair of Quail or Bob White, and a pair of Chukkar Partridge.

THESE SANDSTONE LEDGES

One of the most interesting features at the Ledges State Park, and one that attracts the attention of most visitors, is the massive rock from which the park is named. All of this rock is known as sandstone. It is composed of grains of sand which have been cemented together by a mineral substance, which has been slowly precipitated out from water moving through the sand. Thus we have evidence that this was at one time the bottom of an inland sea.

A very interesting feature of the sandstone is the presence of some boulder-like objects which project from the ledges in many places. They are rounded and somewhat flattened. Some of them appear so much like tree trunks that they are often referred to as petrified trees." Let us examine these and see how they compare with typical petrified wood, and whether they are really the petrified remains of tree trunks.

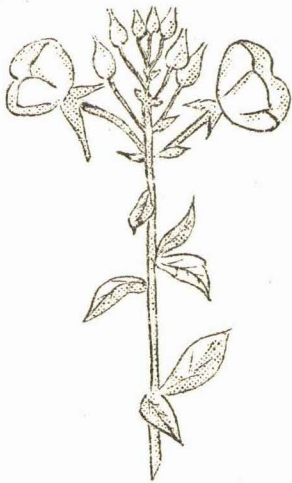
The various petrified woods of Arizona and other western states are actual replacements of wood by mineral matter. Commonly such petrified wood shows all the texture of the original wood, such as the cellular structure and the annual rings, with which everyone is familiar in tree trunks of the present day.

The objects at the Ledges quite certainly are not of this character, because upon examination they are found to consist almost entirely of sand grains and they show no traces of woody structure. The only great difference between the main mass of the sandstone and these objects is that the latter will be found to be cemented much harder than the rest of the sandstone. These harder masses are called concretions.

The Naturalist would be glad to conduct bird study hikes for groups desiring it. Early morning is the best time, but evening is also good. See the Naturalist at the Greeting Lodge, or make arrangements with the Custodian.

THE EVENING PRIMROSE

Did you ever watch the evening primrose open its petals? If not you have missed one of Nature's best shows. Late in the day, pause and observe the buds of this plant open. The petals untwist and spread themselves as you stand before them. One after another they will open for you. How do they know the time of day? How do they know they are evening primroses? We are saving some of these questions for the rising generation to answer for us.



"FOR THE ENJOYMENT OF THE PEOPLE"

On an enormous stone arch over the North gate to Yellowstone National Park are these words: "For the benefit and enjoyment of the people."

We have no elaborate arch ways at the entrance to the Ledges, but the purpose of this park is the same as the one mentioned above. Let everyone enjoy our State Parks to the fullest, and on departing, let us leave nothing behind that will prevent others from enjoying it just as we have.

Leave the picnic areas free from refuse, let the natural beauty of our parks be unmarred. In a democracy everyone is supposed to enjoy freedom, but not to interfere with others doing the same. Are you keeping the spirit of Democracy or would you prefer a Dictator?

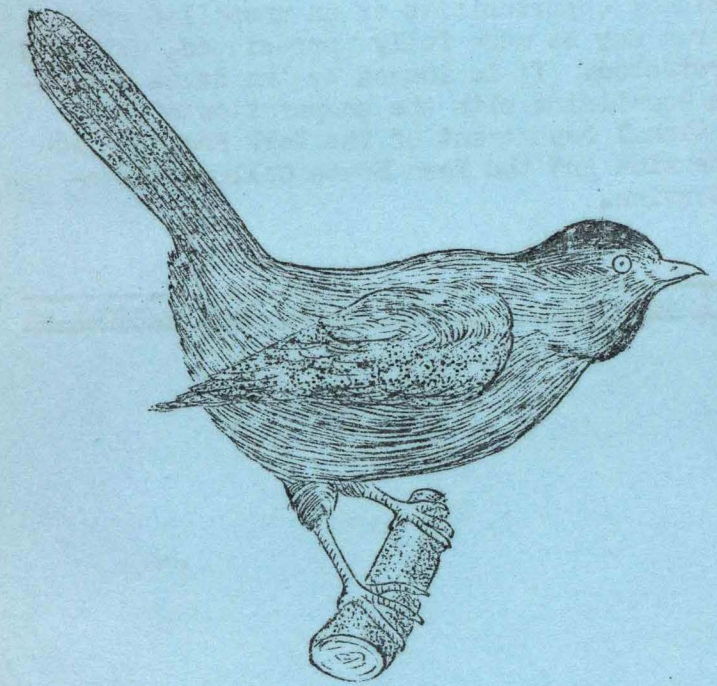
DAY BY DAY IN THE LEDGES

- July 17: The young wrens in nest in rafter log are growing at a remarkable rate.
- July 18: Birds all rosted in shade because of intense heat today.
- July 19: Young wrens took to the air today.
- July 20: Our captive bullsnake ate two mice today--the first food since it was brought to us June 9th. Less than three minutes from the time the snake set its teeth on the mouse, the tail disappeared.
- July 21: Great Lobelia in bloom along the trails.
- July 22: Pease Creek attracts many birds, as water is scarce. A Scarlet Tanager was observed there today.
- July 23: Evening Primroses now in bloom.
- July 26: Watched Goldfinch (Wild Canary) building nest. She was lining it with the down which surrounds the willow seeds, working it in with her breast.
- July 27: Joe Pye weed breaks into bloom.
- July 28: Female Whip-Poor-Will, who has been under observation since her nest and eggs were discovered three weeks ago, has abandoned the nest, the eggs unhatched.
- July 29. Welcome rains refresh the parched earth insuring life of many plants.

V. 3 no. 9

IOWA STATE TRAVELING LIBRARY
Des Moines, Iowa

LEDGES NATURE NOTES



CATBIRD
 $\frac{1}{2}$ NAT. SIZE

WL-151

NATURE NOTES

Vol. III

August 25, 1940

No. 9

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K. P. Longnecker

State Park Naturalist

-2-

THE CATBIRD

The Catbird is probably the most common bird in the Ledges, yet it is surprising how many people are not acquainted with it. Its name is believed by some to have been given because of the shrill cat-calls it often utters; others accuse it of cat-like ways in breaking up the nests of other birds. It is a fine singer, imitating many other birds, and when heard at a distance often confuses the novice. The only bird common to this region which exceeds it in vocal ability is the Brown Thrasher. Its song defies description, as it is extremely variable.

The nest is rather a bulky one of sticks, grass, etc., usually only a few feet from the ground in a bush or shrub. The writer has one nest in his yard in which the birds have utilized the skin shed by a garter snake. The eggs, four or five in number, are greenish blue, considerably darker than the robins.

In feeding habits the catbird is valuable, forty-four percent of its food being animal, chiefly insects. The remainder is plant food, wild fruits and berries being used. In the park the gooseberry bushes are a favorite nesting place, and the berries are relished by the birds. In fruit and berry raising areas the catbird has been accused of stealing much fruit. If this charge is true, it could be easily remedied by planting elder and other shrubs, whose fruit the birds prefer to the cultivated varieties.

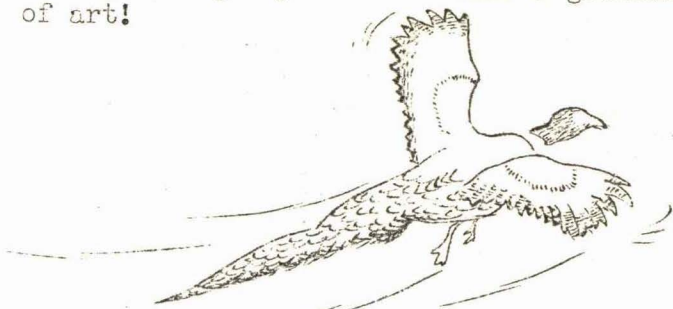
Bird-banding returns show that the catbird comes back to the same locality year after year. One mid-western bird-bander has taken the same banded catbirds in his traps seven years in succession.

After all is said, we have no doubt that the catbird is a valuable and interesting visitor.

GOLDEN ROD SEASON

The fact that the golden rod is beginning to bloom is welcome news to some, bad news to others. I doubt anyone could deny the beauty of the plant when blooming, yet many people hate to see the season begin. Why? Probably the commonest reason (and also the best) is because the pollen of this flower causes much hay-fever. We sympathize with those people. Several others have said they hated to see the golden rod begin to blossom because it means that autumn is almost here. The coming of autumn, with its beautiful foliage and frosty mornings always seem good to me. Who would want to live in a climate which had no change of seasons? Each season has its beauties and disadvantages. Why not enjoy the beauties, and try to forget the rest?

And speaking of beautiful autumn foliage--don't fail to visit the Ledges in October. It is worth coming a long way to see nature's greatest work of art!



The State Game Farm, at the south edge of the Ledges, is a point of interest that park visitors should not miss. During the hatching season it is impossible for Mr. Updegraff, in charge, to accommodate visitors. Now that the hatching season is over, visitors are welcome. More than thirty-five thousand pheasants have been hatched and sent out, besides many quail and chukkarpartridge. Don't miss seeing the game farm.

TIN CAN MEN

Many years ago an Iowa boy ran away from his Iowa home. He was found in the Indian country of the southwest where he is now acclaimed one of the finest photographers of Indian life in this country. From him, Harold E. Kellogg, comes the description of a San Ildefonso Pueblo dance which has distinct bearing upon our ideas of conservation in state or other park areas.

These Pueblo Indians have a dance known as the Tin Can Man's dance. In it, every brave wears Indian costume except for one article from the White Man's clothing. Thus, one may appear dressed in breech cloth, beads, moccasins, and a top hat. Another may wear breech cloth, moccasins and suspenders, etc.

The Indians enter the plaza making great noise, for that is the manner of the Tin Can Men.

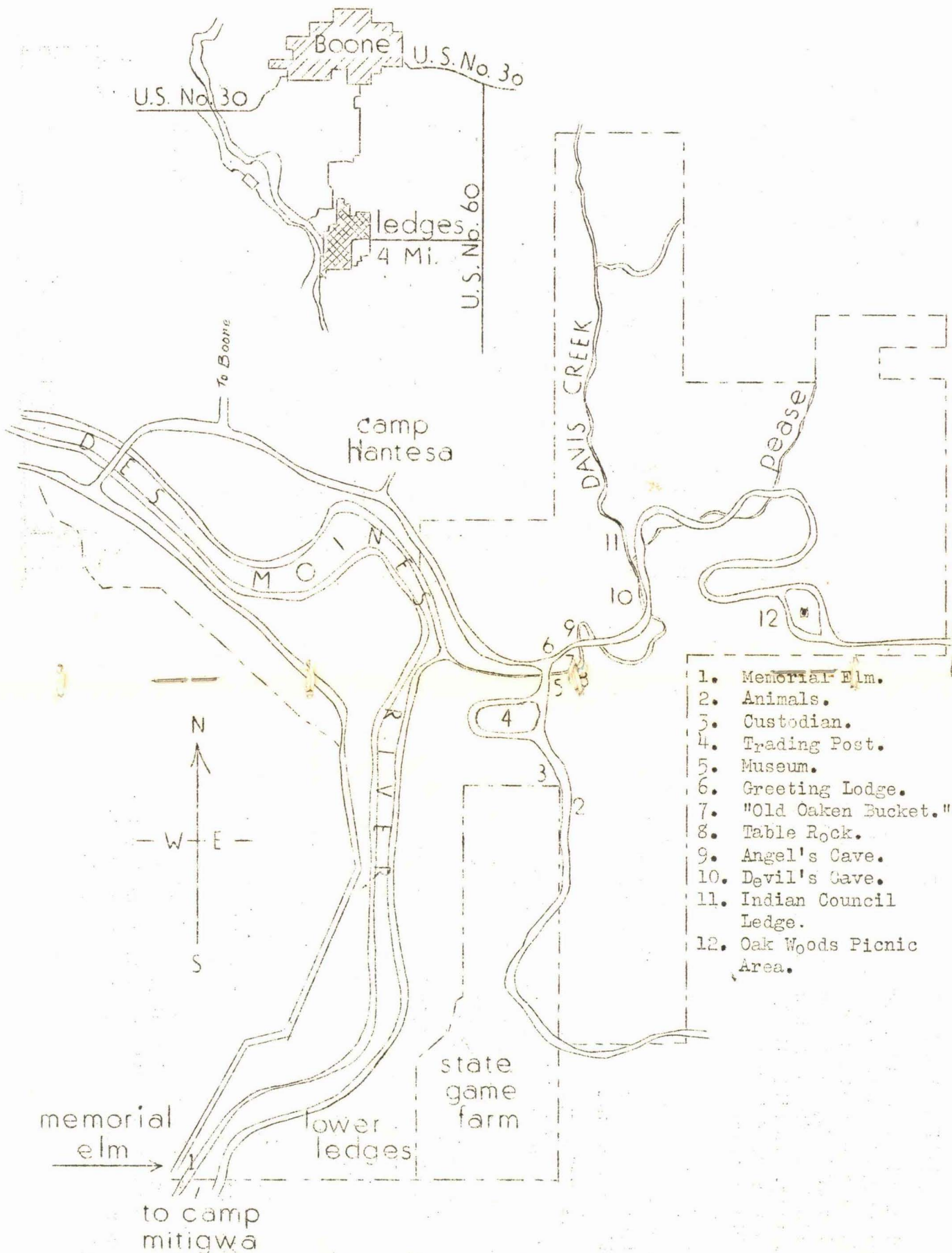
They pantomime the building of a fire, a fire too large for comfort.

Then they pantomime the White Man's picnic, gorging themselves and drinking, emptying boxes, tin cans, bottles and strewing them over the landscape. They also tear up newspapers and leave them scattered about. When they get through with the feast, they leave, making a great deal of noise as they do so. The fire is not put out, either, for again that is the way they have seen the Tin Can Men do.

Are we willing that this should be a picture of ourselves? The care of garbage, refuse and our attitudes around our State Parks will help to determine the answer.

(From Pike's Peak Nature Notes by H.C. Brown)





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LEDGES STATE PARK — BOONE, IOWA

VINING PLANTS OF THE LEDGES

Climbing vines enable plants to get up to the sunlight without developing a thick woody stem for support. Various devices are used by plants with this habit of life, and the seven kinds of climbing plants found in the Ledges use four methods for climbing. Possibly the least common is the climbing form of Poison Ivy. This is the only plant which develops special roots all along the stem which penetrate the crevices in the rocks or bark of trees, thus holding the plant up.

Virgin's Bower or Old Man's Beard uses another device which is not so common. It has leaf stalks (petioles) which twine about the support, thus supporting the plant.



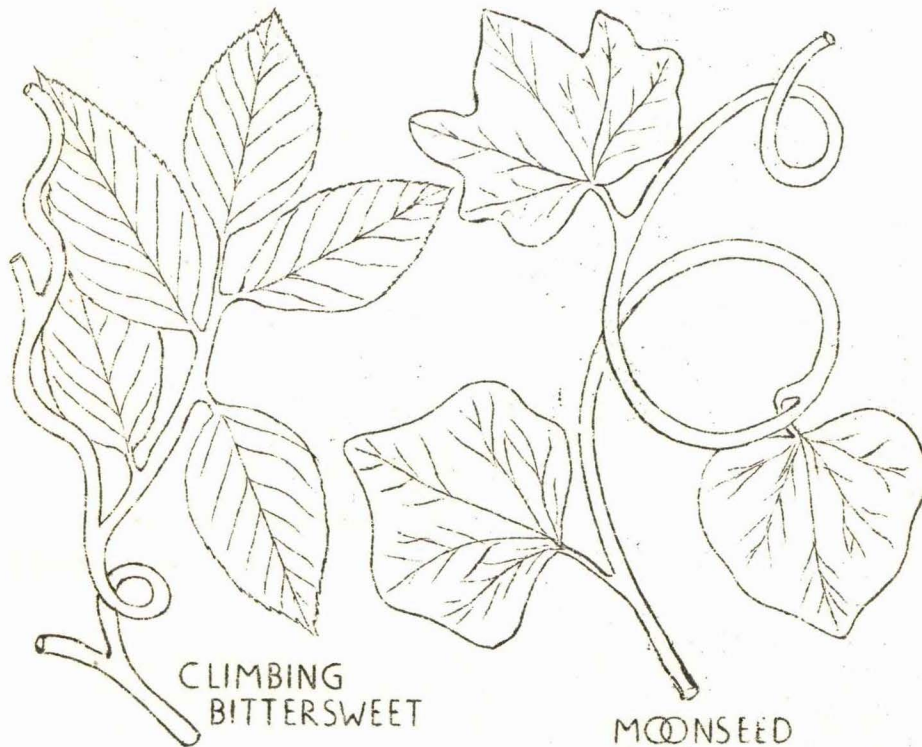
POISON IVY



Twining Leaf Stalks
VIRGIN'S BOWER
OR
OLD MAN'S BEARD

Two of our climbing plants make their way upward by means of twining stems. These are the Moonseed and Climbing Bittersweet, whose berries are so commonly used for winter bouquets. Their stems grow until they come into contact with a

support, and then the outer portion of the stem grows more rapidly, resulting in a spiral climbing stem.



CLIMBING BITTERSWEET

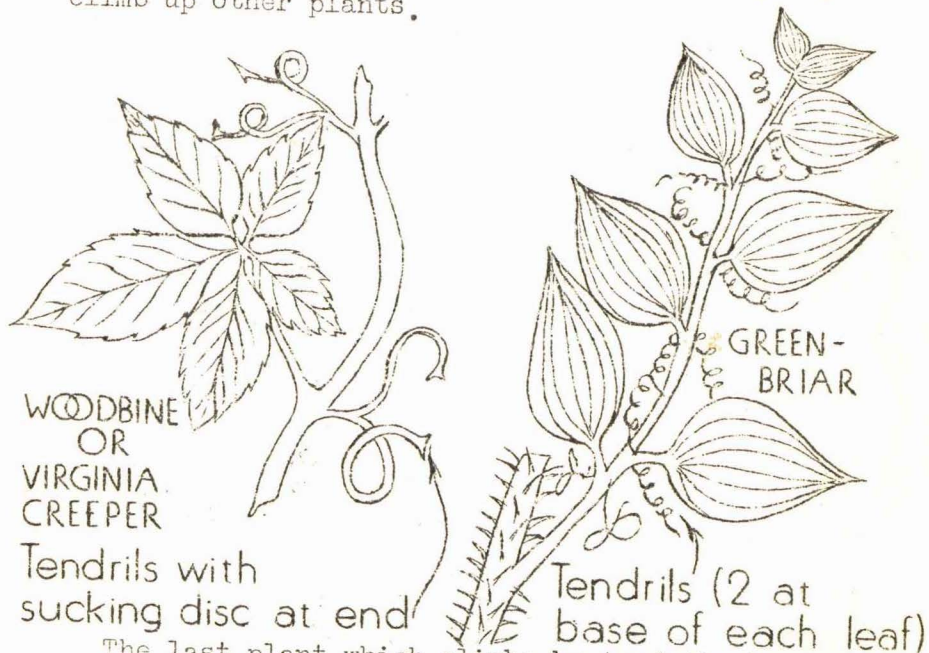
MOONSEED

We have three plants which use the last method of climbing--by means of tendrils. These are thread-like or stem-like structures which the botanist tells us are a modified form of leaves.

A common plant which uses this method is the Woodbine or Virginia Creeper. The tendrils of this plant are thread-like, and end in a circular suction disc, which enables the plant to climb up and hold onto a smooth wall. This plant is often grown as an ornamental vine on homes and buildings.

Another which climbs by tendrils is the Green-briar. This plant is somewhat shrubby, and often

has a woody stem much like a rose bush. The new shoots, however, have tendrils by which they may climb up other plants.



The last plant which climbs by tendrils is the wild grape. This plant is so familiar that it is not illustrated here, as are the others discussed. When the tendrils of the grape become dry they are tough and fibrous; once firmly fastened to a support they are very difficult to tear down.

Four methods of climbing, then, are used by the vining plants of the Ledges, tendrils, twining stems, twining leaf stalks, and climbing roots.

The most recent addition to the Ledges Zoo is a fifty-four inch bullsnake.

DAY BY DAY IN THE LEDGES

- July 30: Spent the day going through the park and seeing the damage done by the storm. Pease Creek, which had been dry for the past two weeks, was about ten feet deep in places. Damage necessitated closing much of park roadway.
- July 31: Artificial lake at Lower Ledges in filling up from recent heavy rains. One could see where the water had been going over Katina Falls, eighty feet high.
- Aug. 1: Two eggs in the Goldfinches nest under observation.
- Aug. 2: Cedar Waxwing reported in Park.
- Aug. 3: Four eggs in Goldfinches' nest.
- Aug. 4: Doe and half-grown fawn were seen in "Walking Fern Hollow."
- Aug. 5: "Upholstered" the Goldfinches' nest which was damaged by windstorm. Two of the five eggs had fallen out.
- Aug. 7: Our captive bullsnake ate a mouse. The snake, which at first refused food, now feeds frequently.
- Aug. 11: Heavy rain during night raised Pease Creek to a point that made crossing of fords impossible until afternoon.
- Aug. 12: Goldfinches' nest, which is in a willow near the river's edge, has been abandoned by the mother bird.
- Aug. 13: Very heavy rain during morning caused concrete ford, already undermined, to break down.

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