

**Illinois Natural Areas Inventory Evaluation
of Laona Heights Nature Preserve,
Winnebago County, Illinois.**

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Illinois Wildlife Preservation Fund
Small Project Proposal
4 June 2000**

Illinois Natural Areas Inventory Evaluation of Laona Heights Nature Preserve, Winnebago County, Illinois

Introduction

Laona Heights Nature Preserve located north of Durand lies in the Freeport section of the Rock River Hill Country Division of Winnebago County, Illinois. This 20-acre dry mesic upland woods is owned and maintained by the Winnebago County Forest Preserve District. Formal and informal studies of Laona Heights by the Illinois Natural Areas Inventory, E. W. Fell, and others have found the woodland to be of Grade B quality with a high diversity of wildflowers such as puttyroot (*Aplectrum hyemale*), maidenhair fern (*Adiantum pedatum*), wood fern (*Dryopteris spinulosa*), green dragon (*Arisaema dracontium*), blue cohosh (*Caulophyllum thalictroides*) and bloodroot (*Sanguinaria canadensis*). In 1994, Laona Heights suffered severe storm damage from high winds. No studies have been conducted from 1994 to date to measure the extent of damage and predict recovery within the forest. Products of this study reveal history, previous studies, vegetation lists, and maps of Laona Heights Nature Preserve.

Materials and Methods

Two east to west transect lines 231 feet apart were set in the Laona Heights Nature Preserve. Identifying these lines are two permanently placed quarter inch rebar rods located at the east end of the lines. For easier location of these two pins, two additional quarter inch rebar rods were installed along the southern boundary of the Nature Preserve: one 238 feet south of the southern transect line pin and the second 167 feet east of the third, indicating the southeast corner of the Nature Preserve.

A 100 meter tape measured the transect lines in a westerly direction from the transect line pins. Ten points were selected along each transect line thirty-three meters apart for a total of twenty points.

To achieve comparable notes for future evaluations, this study followed the recommendations illustrated in the Illinois Natural Areas Inventory updated manual. Data consists of tree basal area, tree, sapling, and shrub density, and ground layer vegetation frequency. Basal areas were sampled using a 3 BAF metric wedge prism. Tree density and sapling and shrub density were collected using a 0.025 hectare circular plot and 0.001 hectare square plot respectively. A 0.25 square meter was used in collecting ground flora frequency.

The Winnebago County Forest Preserve, Illinois Nature Preserves Commission, Natural Land Institute, Rock Valley College, and University of Wisconsin Arboretum were contacted or visited for history and previously collected information.

Results

Relative dominance of mature trees within Laona Heights Nature Preserve was measured using a 3 BAF metric wedge prism. Basswood (*Tilia americana*) occupies a basal area of 3.45 square meters/hectare producing a relative dominance of 20.17%. White oak (*Quercus alba*) and red elm (*Ulmus rubra*) occupy 3.30 square meters/hectare (19.30%). Tree species under 5% dominance are sugar maple (*Acer saccharum*), red elm (*Fraxinus rubra*), black walnut (*Juglans nigra*), ironwood (*Ostrya virginiana*), and black maple (*Acer nigrum*).

Relative densities of tree species occurring within Laona Heights was recorded using a 0.25 hectare circular plot. Red elm (*Ulmus rubra*) is found at the highest relative density of 35.42% (34 stems/hectare). Hackberry (*Carya occidentalis*) populates 16.67% (16 stems/hectare) with sugar maple (*Acer saccharum*) and basswood (*Tilia americana*) occurring in 12.50% (12 stems/hectare) of the preserve. Trees with relative densities under 5% (less than 5 stems/hectare) are yellow bud hickory (*Carya cordiformis*), white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), ironwood (*Ostrya virginiana*), and red oak (*Quercus rubra*).

A 0.001 hectare circular plot was used to gather sapling and shrub densities in the understory of Laona Heights. Of ten total points, four woody species were recorded. Gray dogwood (*Cornus racemosa*) has the highest density of 600 stems/hectare (relative density of 42.86%). Yellow bud hickory (*Carya cordiformis*) has 400 stems/hectare (28.57%) and black cherry (*Prunus serotina*) and black haw viburnum (*Viburnum prunifolium*) are measured at 200 stems/hectare (14.28%).

Frequency of ground flora occurring within Laona Heights Nature Preserve was recorded using a 0.25 square meter plot. Only species under one meter were included in the data. Of twenty points, garlic mustard (*Alliaria petiolata*) and false Solomon's seal (*Smilacina racemosa*) occurred in all but one and two plots producing relative frequencies of 13.28% and 12.59% respectively. Jack-in-the-pulpit (*Arisaema triphyllum*) is found in 11.19% of the preserve while catchweed (*Galium aparine*) and prairie trillium (*Trillium recurvatum*) occupy 9.79%. Least common species with occurrences under 1% are lady fern (*Athyrium filix-femina*), two *Carex* spp., field bindweed (*Convolvulus arvensis*), hazelnut (*Corylus americana*), tick trefoil (*Desmodium glutinosum*), white ash (*Fraxinus americana*), impatiens (*Impatiens* spp.), honeysuckle (*Lonicera* spp.), mayapple (*Podophyllum peltatum*), Virginia knotweed (*Polygonatum virginianum*), red elm (*Ulmus rubra*), and prickly ash (*Zanthoxylum americanum*).

History of Laona Heights Nature Preserve is provided by the Winnebago County Forest Preserve District along with George Poe's evaluation of the woodland and species list collected by an anonymous person. An aerial map, Illinois Natural Areas Inventory Evaluation, final report, Vicki Nuzzo's data, and Illinois Nature Preserves Directory information were provided by the Illinois Nature Preserves Commission. The Natural Land Institute supplied street, county, and topographic maps.

Informal plant surveys conducted by Rock Valley College, Rockford, Illinois students were not found and assumed recycled. John T. Curtis' study of the vegetation of Wisconsin is thought to include the Laona Heights area as it is similar to the dry upland woodlands found in the southwestern section of Wisconsin. This theory is still in question as no contact was made with the University of Wisconsin Arboretum in Madison.

In the fall of 1999, markers placed by Vicki Nuzzo in preparation of a study to document the spread of garlic mustard through a woodland community were found. Searches for these markers in the spring of 2000 were unsuccessful due to leaf litter and vegetation.

Discussion

The intent of this vegetational evaluation of Laona Heights Nature Preserve is to provide baseline documentation for succeeding evaluations of forest recovery over time. The storm damage suffered by the woodland provides adequate canopy openings to study the succession of plant species that develop the area. Although there is a large gap of time between the initial Illinois Natural Areas Inventory Evaluation and this study, both provide insight to the changes and potential future of the site. Maintenance of the woodland may be guided by the presence of invasive species, the necessity for their control, and the prevention of additional invaders.

The impact of the windstorm in 1994 opened pockets within the tree canopy over Laona Heights Nature Preserve. As a result, increased sunlight to the forest floor has aided in germination of tree, shrub, and herbaceous species. According to the vegetational information collected, many of the faster growing tree species such as red elm, yellow bud hickory, maples, and basswood are most prevalent throughout the woodland with many young hickories and cherries appearing in the sapling and shrub layer. Some slower growing saplings of oak and ironwood were growing in the blow down areas where they receive optimum sunlight but few were seen in denser shade.

In the ground flora layer, garlic mustard is the most obvious component indicating its thorough invasion. Over time, this species may crowd out the more conservative species of ferns and orchids growing in the woodland. Currently, few ferns and no orchids were found along with sparse patches of grasses and sedges.

Summary

The results of this Illinois Natural Areas Inventory evaluation of Laona Heights Nature Preserve along with the collection of previous biological background information will provide insight for management recommendations to the Winnebago Count Forest Preserve District and Illinois Nature Preserves Commission. This information may be used as baseline documentation for further monitoring and analysis of forest recovery over time.

Acknowledgements

Support for this project was provided by a grant through contributions made to the Illinois Wildlife Preservation Fund, Illinois Department of Natural Resources, Natural Heritage Division. Thanks to John Alesandrini for his assistance in data collection and project set-up; the Winnebago County Forest Preserve for permitting this study and providing information about Laona Heights Nature Preserve; Vicki Nuzzo for her data collection in preparation for a garlic mustard study; and Joe Hasenyager for his assistance in field data collection.

List of Tables and Maps

- Table 1: Tree Basal Area within Laona Heights Nature Preserve
- Table 2: Tree Density within Laona Heights Nature Preserve
- Table 3: Sapling and Shrub Density of Laona Heights Nature Preserve
- Table 4: Ground Flora Density of Laona Heights Nature Preserve
- Map 1: Location of Laona Heights Nature Preserve
- Map 2: Topographic Map of Laona Heights Nature Preserve
- Map 3: Aerial Photograph of Laona Heights Nature Preserve
- Map 4: Location of Transect Lines 1 and 2 within Laona Heights Nature Preserve
- Map 5: Slide and Photo Point Locations within Laona Heights Nature Preserve

Attachments

- History of the Forest Preserves of Winnebago County, Illinois, Laona Heights Chapter
- A Directory of Illinois Nature Preserves, Volume 2, Laona Heights Nature Preserve
- George Poe, Woodland Report, Laona Forest Preserve
- Illinois Natural Areas Inventory Evaluation Final Report, August 1977
- Illinois Natural Areas Inventory Evaluation, Fall 1999 – Spring 2000
- Victoria Nuzzo, Preliminary Information to Garlic Mustard Study, 1989
- Laona Heights, Plant List, Winnebago County Forest Preserve, 1971
- Laona Heights, Frequency Rating Vegetational Species List, Winnebago County Forest Preserve

Table 1

Tree Basal Area within Laona Heights Nature Preserve
3 BAF metric wedge prism, 20 plots total

<u>Species</u>	<u>Basal Area</u>	<u>Relative Dominance</u>
Tilia americana	3.45 m ² /hectare	20.17%
Quercus alba	3.30	19.30
Ulmus rubra	3.30	19.30
Carya occidentalis	1.35	7.89
Quercus rubra	1.35	7.89
Carya cordiformis	1.05	6.14
Prunus serotina	0.90	5.26
Acer saccharum	0.60	3.51
Fraxinus americana	0.60	3.51
Juglans nigra	0.60	3.51
Ostrya virginiana	0.45	2.63
Acer nigrum	0.15	0.88
TOTAL	17.10	99.99

Table 2

Tree Density within Laona Heights Nature Preserve
0.25 hectare circular plot, 20 plots total

<u>Species</u>	<u>Density</u>	<u>Relative Density</u>
Ulmus rubra	34 stems/hectare	35.42%
Carya occidentalis	16	16.67
Acer saccharum	12	12.50
Tilia americana	12	12.50
Quercus alba	6	6.25
Carya cordiformis	4	4.17
Fraxinus americana	4	4.17
Prunus serotina	4	4.17
Ostrya virginiana	2	2.08
Quercus rubra	2	2.08
TOTAL	96	100.01

Table 3

Sapling and Shrub Density of Laona Heights Nature Preserve
0.001 hectare circular plot, 10 plots total

<u>Species</u>	<u>Density</u>	<u>Relative Density</u>
Cornus racemosa	600 stems/hectare	42.86%
Carya cordiformis	400	28.57
Prunus serotina	200	14.28
Viburnum prunifolium	200	14.28
TOTAL	1400	99.99

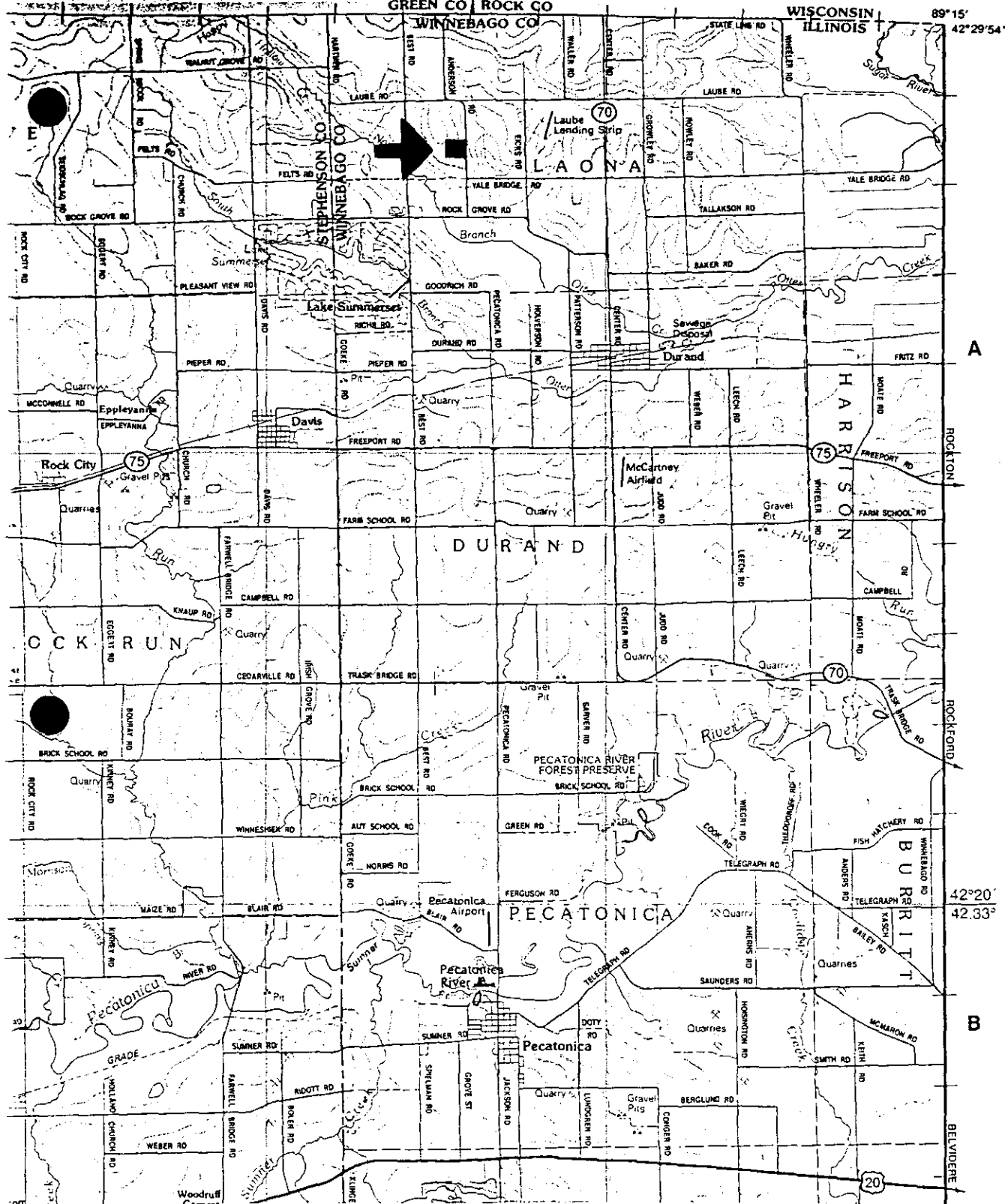
Table 4

Frequency Sampling of Ground Flora within Laona Heights Nature Preserve
0.25 m² square plot, 20 plots total

<u>Species</u>	<u>Absolute Frequency</u>	<u>Relative Frequency</u>
Alliaria petiolata	95%	13.28%
Smilacina racemosa	90	12.59
Arisaema triphyllum	80	11.19
Galium aparine	70	9.79
Trillium recurvatum	70	9.79
Parthenocissus quinquefolia	55	7.69
Circaea quadrisulcata	50	6.99
Geum canadense	35	4.89
Geranium maculatum	30	4.19
Rubus occidentalis	30	4.19
Ribes missouriense	25	3.50
Bromus purgans	10	1.40
Cornus racemosa	10	1.40
Athyrium felix-femina	5	0.70
Carex spp. #1	5	0.70
Carex spp. #2	5	0.70
Convolvulus arvensis	5	0.70
Corylus americana	5	0.70
Desmodium glutinosum	5	0.70
Fraxinus americana	5	0.70
Impatiens spp.	5	0.70
Lonicera spp.	5	0.70
Podophyllum peltatum	5	0.70
Polygonum virginianum	5	0.70
Ulmus rubra	5	0.70
Zanthoxylum americanum	5	0.70
TOTAL	715	99.99

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ILLINOIS ATLAS & GAZETTEER

Laona Heights Nature Preserve
 Laona Heights Forest Preserve,
 Laona Township, Winnebago County, Illinois
 South 1/2 of northwest 1/4 of northeast 1/4 of Section 32,
 Township 29 North, Range 10 East of the 4th Prime Meridian

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3169 11 SW WEST
(BRODHEAD WEST)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DURAND QUADRANGLE
ILLINOIS-WISCONSIN
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE 1/4 PECATONICA 15' QUADRANGLE

STATE OF
DEPARTMENT OF REGISTRY
GEOLOGICAL SURVEY
URBANA

3169
(BRODHEAD)

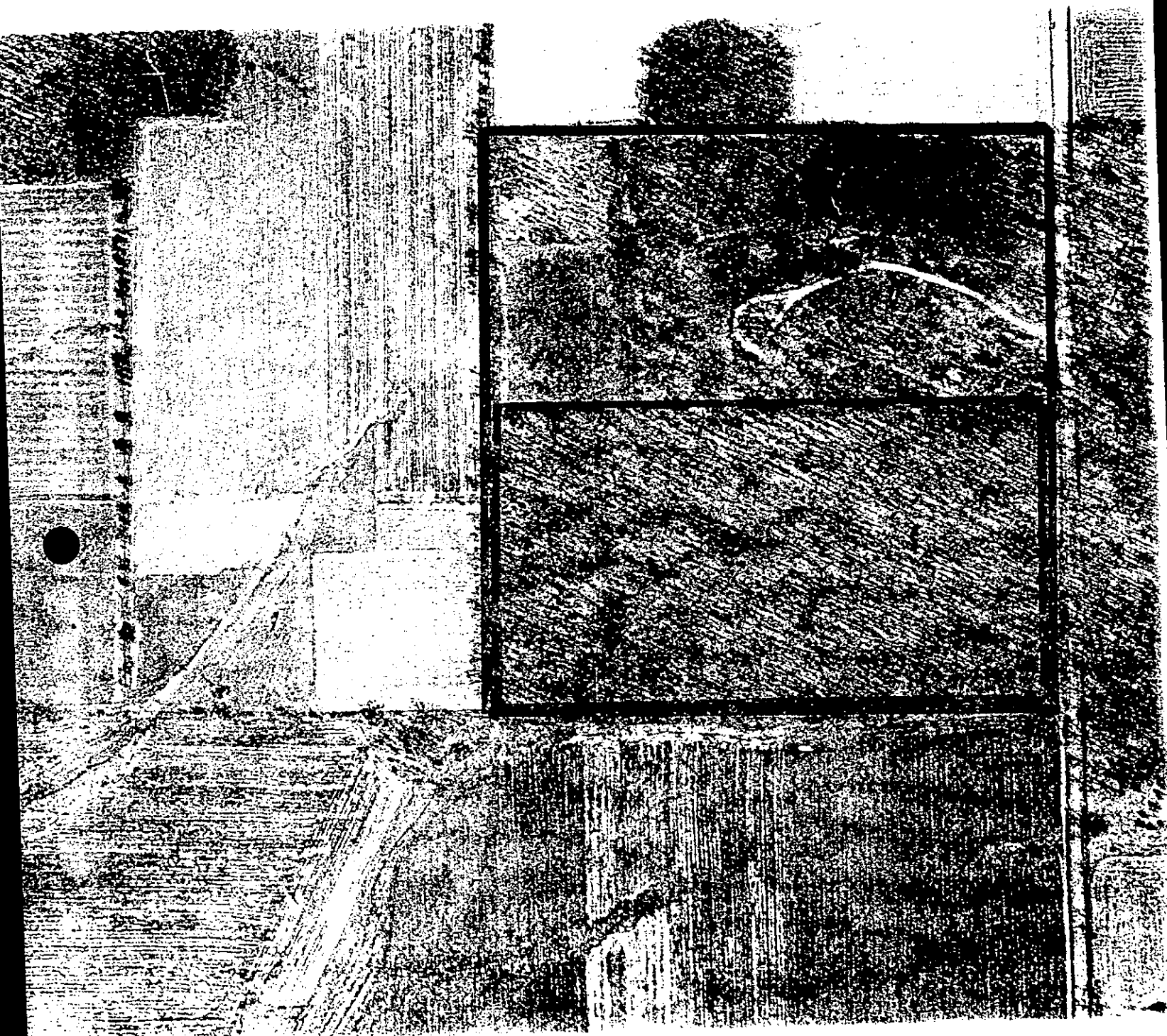


Laona Heights Nature Preserve
Laona Heights Forest Preserve,
Laona Township, Winnebago County, Illinois
South 1/2 of northwest 1/4 of northeast 1/4 of Section 32,
Township 29 North, Range 10 East of the 4th Prime Meridian

Key:
 Laona Heights Nature Preserve

Laona Heights Nature Preserve

Laona Heights Forest Preserve,
Laona Township, Winnebago County, Illinois
South 1/2 of northwest 1/4 of northeast 1/4 of Section 32,
Township 29 North, Range 10 East of the 4th Prime Meridian



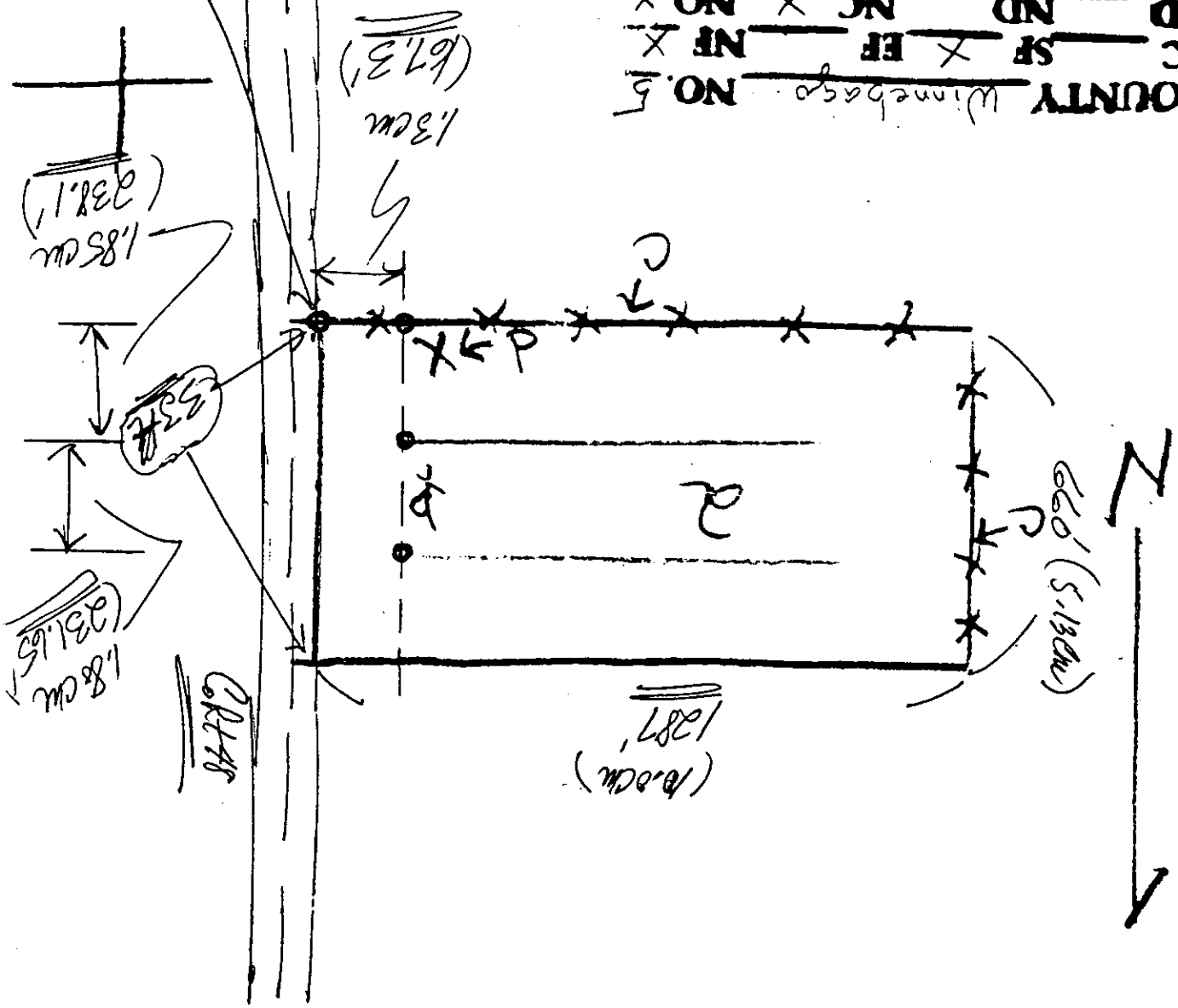
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Key:

- Laona Heights Forest Preserve
- - - Laona Heights Nature Preserve



COUNTY Winnebago NO. 5
 C. SF X EF NF X
 AD ND NC X NO X



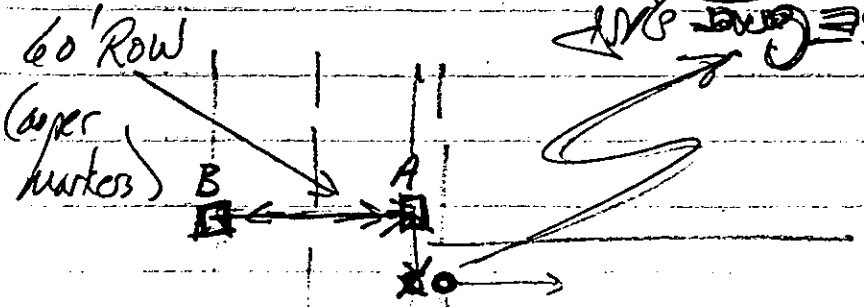
Laona Heights
 RIPC/H/100
 6/77
 for 100 ft
 after request
 as per request

10/77... as per request
 for 100 ft
 after request
 as per request
 for 100 ft
 after request
 as per request

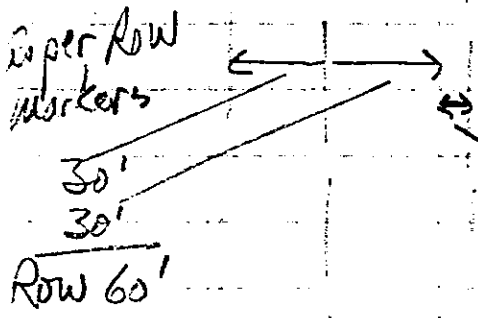
TRANS RIDE FROM
 SH. 9 NORTH 1/4 SEC 32

← copper wire 'balls' (pin w/HS) w/HS

SE



$A \rightarrow B$ is 83°
 $A \rightarrow X$ @ 0° ... 40ft
 $X \rightarrow O$ (pin) 270° ... 3ft



Laona Heights NP

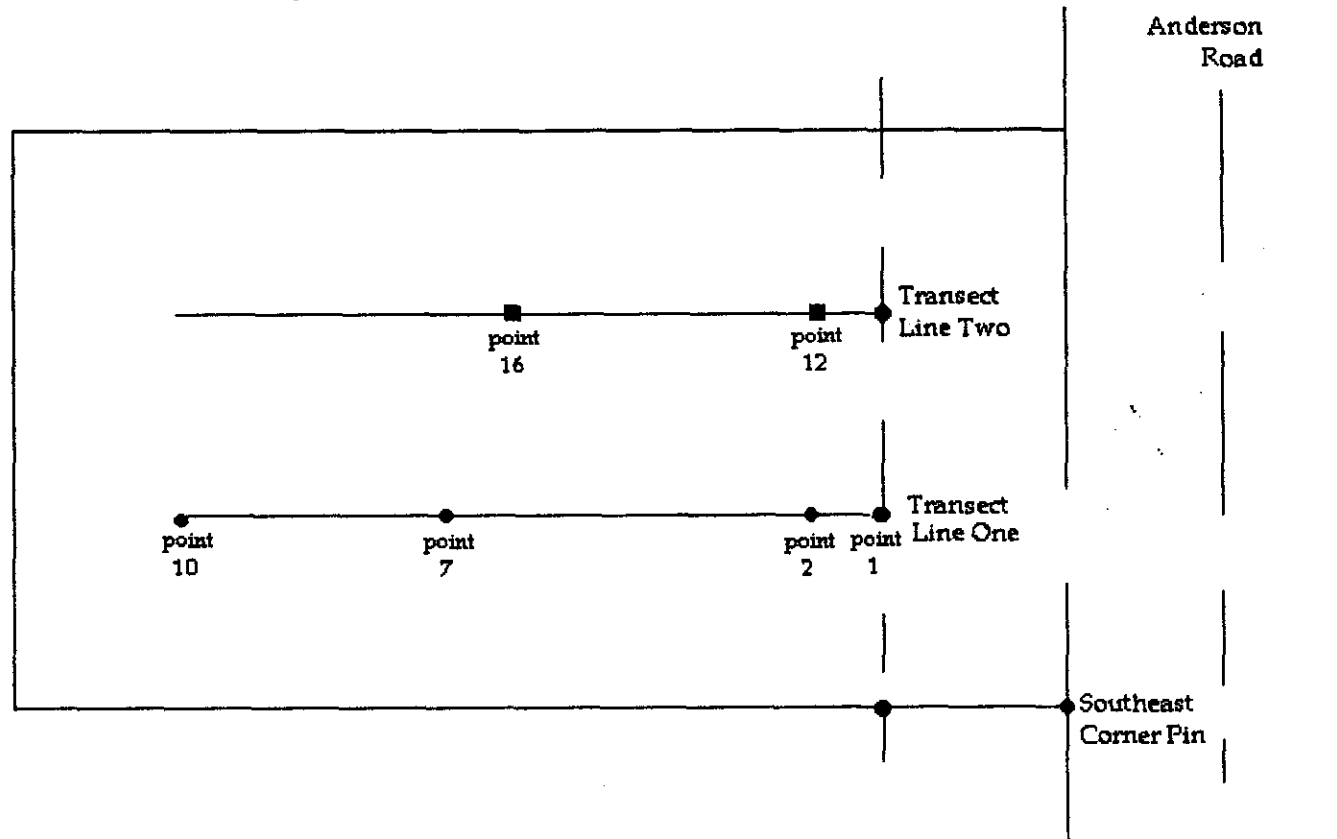
Note... NP described (see proposal)
 @ 33' from Row center
 (OR 3' w of Row marker ~~000~~)

- Row markers (concrete)
- ⊗ unmarked ref point
- pin (10/89x 1/4 w/HS)

Wine Colt 48



Map 5: Slide and Photograph Identification within Laona Heights Nature Preserve



● Photographs

1. East direction, red maples
- 2, 3. Northwest direction at point 2, opening in the canopy cover.
4. General view of ground flora within the Preserve. southeast direction at point 7.
5. General view of ground flora within the Preserve. south direction at point 10.
6. East direction at point 10.
7. Northeast direction at point 10.

■ Slides

1. Southern direction at point 12.
2. Transect line 2 near point 16.

HISTORY OF THE FOREST PRESERVES OF WINNEBAGO COUNTY, ILLINOIS

BY

DAVID BISHOP and CRAIG G. CAMPBELL

Cover drawing of the Whitman Trading Post,
Macktown Forest Preserve, by Mary Sovereign Hass
Original manuscript prepared by Jean Hoxie
Illustrations by Graphic Arts Department, Rockford Area Vocational Center

Printed by Balsley Printing, Inc. Rockton, IL.
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LAONA HEIGHTS

AREA HISTORY

The settlement of Laona Township began in 1836. A large number of the original settlers were from western New York State and it is possible that the name "Laona" is derived from the village of Laona in Chautauqua County, New York.

The village of Laona, Illinois, which was located at the junction of Eicks Road and Rock Grove Road (County Highway 19) was apparently established quite early. From 1840-57 a village post office, a general store, and a blacksmith shop were located in this vicinity. The blacksmith shop was located on the present day Joseph Gaffney farm and it was said to still be in use after the closing of the last post office in 1875.

Milwaukee was the nearest large city during the early years of the settlement of the township and many of the first settlers hauled brick from there for their homes.

A creamery was built in the township in 1893 at the total cost of \$1000. Area farmers brought their milk to the creamery in light wagons and the butter produced there was shipped to Rockford and neighboring towns. This building was destroyed by fire in 1918. A cheese factory was later constructed in the eastern part of the township and the structure has been converted into a residence which is still in use. It must be borne in mind that the population of Laona township has always been relatively small and, according to Charles A. Church, it numbered approximately 500 persons in 1910.

Three of the cemeteries in Laona Township were rehabilitated by township officials for the Bicentennial. Weeds and overgrowth were removed from the Baptist cemetery on the Joseph Walsh farm, the Laona Township cemetery, and the Catholic cemetery. The ground for both of the latter cemeteries had been donated by James Fenlon, a descendent of Patrick Fenlon who came from Ireland with his wife and six children and settled in the Sugar River Precinct of Laona Township in 1836. Any property owner in Laona Township was entitled to be buried in the township cemetery free of charge. A potter's field and space for itinerants was also provided. The Catholic cemetery contains the graves of several members of the Fenlon family as well as the forbearers of several families still in the Laona area. Patrick Fenlon's son Peter received a grant for the present day Bernard Highlands property in 1843-45. The first Catholic mass in the area was celebrated by a traveling priest in Peter Fenlon's log cabin.

James Fenlon also donated the land for the Fenlon school in which many of the area's children were educated. Land for Laona Center School was deeded by Asa and Molly Barker, December 4, 1852, for a consideration of \$5 and it was located at the northwest corner of Yale Bridge Road and Eicks Road. The township elections were held at this school until April 1935 when they were transferred to the town hall. An addition for voting purposes was added to the town hall in 1974.

In early May 1950 the Laona Center School was sold to Walter Randall. It was rented as a home before it was purchased by Claude Oakley who razed the building and constructed a new home on the site.

ACQUISITION AND HISTORY OF LAONA HEIGHTS FOREST PRESERVE

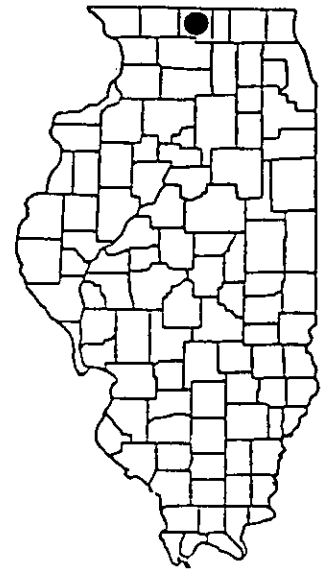
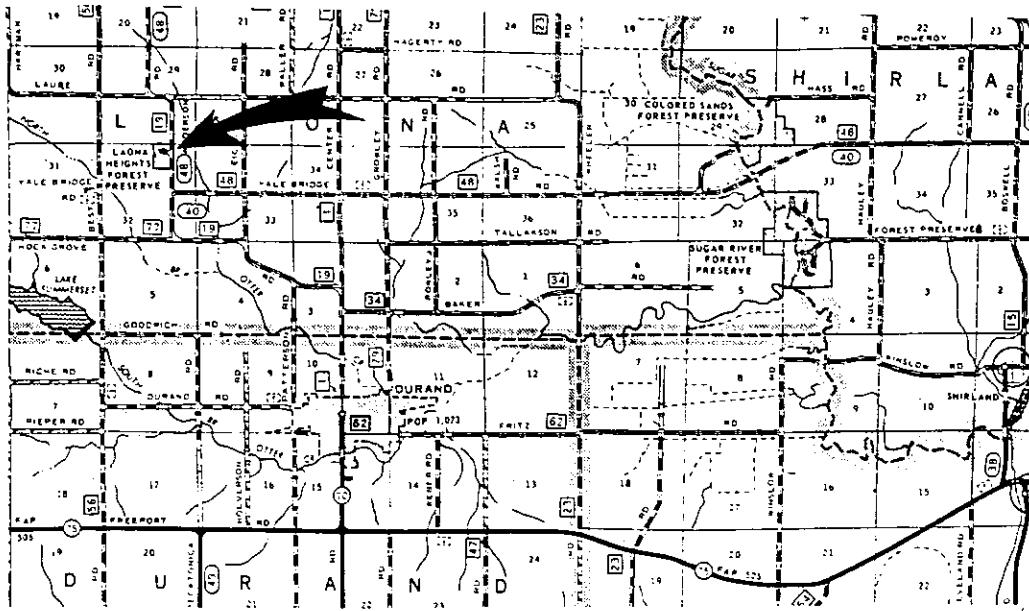
The original owner of the land that comprises the Laona Heights Forest Preserve was John Lockwood who acquired the 40 acre tract on December 12, 1845. An atlas published in 1871 indicates that the north twenty acres of the tract belonged to E. (Let) Norton and the south 20 belonged to A. McDonald. The ownership is shown to be the same on subsequent atlases published in 1866 and 1905. The 1886 atlas does indicate the existence of a dwelling in the northeast corner of the north 20, but this building had apparently disappeared by 1905.

Shortly prior to its purchase by the Forest Preserve District the north twenty was acquired by two Durand men, Millard Mann and William "Billy" Walsh. These men cut off some of the timber.

The Winnebago County Forest Preserve District acquired the north 20 acres of the property from Mann and Walsh for the price of \$4,000 on September 4, 1924. The south portion consisting of 19.9 acres was acquired from Harry S. and Susan L. Deal on September 17, 1926, for the price of \$2,500.

Laona is described in a 1927 brochure published by the District as "one of the few remaining forests of virgin timber" in the area. The 40 acre preserve was comprised of 18 acres of virgin timber, 15 acres second growth, and 7 acres of open ground. The brochure suggested that "the way to appreciate the beauty of this forest is to spend one day communing with it in the study of the things of nature which can be found in no other part of the county". Laona became well known for wildflowers, wildfern, white-pine, maples, bass and oak woods. A tornado swept through the preserve in the late 1940's and destroyed all the large trees in its path.

Many area residents will recall that the caretaker of the Laona Preserve for 4 years was Charlie Traum, who retired from his job in March 1975 at the remarkable age of 83. Traum served under four different superintendents of the Forest Preserve District and his efforts in maintaining the preserve made it a popular place for family reunions.



Laona Heights Nature Preserve

Location and Access:

From Durand, take Center Road north 2.2 mi. to Yale Bridge Road, then turn and go west 1.7 mi. to Anderson Road, then turn and go north 0.3 mi. to Laona Heights Forest Preserve. The nature preserve is in the forest preserve and is west of the road.

Description:

Laona Heights is an example of dry-mesic upland forest once common in the Freeport Section of the Rock River Hill Country Natural Division. The preserve is located in the rolling uplands above the Otter Creek floodplain. Here, the native forest community is dominated by white oak, white ash, and basswood, but sugar maple prevails in the damper ravine. A rich herbaceous under-

Winnebago County

story includes bloodroot, prairie trillium, bellwort and puttyroot. Data from this area was included in the classic book Vegetation of Wisconsin by John T. Curtis.

Ownership: Winnebago County Forest Preserve District

Dedicated: September 1982

Size: 19.5 acres

Topo Map: Durand 7.5

For Further Information Contact: Winnebago County Forest Preserve District, 5500 Northrock Dr., Rockford, IL 61103 (815/887-6100)

A DIRECTORY OF ILLINOIS NATURE PRESERVES

Volume 2

Northwestern, Central and Southern Illinois

Illinois Department of Natural Resources
Division of Natural Heritage
Don McFall and Jean Karnes, Editors
1995

WOODLAND REPORT
LACNA FOREST PRESERVE

prepared by
George C. Poe
1975

8th in series of 12

LOCATION: NW $\frac{1}{4}$ of NE $\frac{1}{4}$, Section 32, T29N-R10E

This report is a statement of specific woodland conditions regarding the composition, volume, condition, and size distribution of the trees.

MAP COLOR: ORANGE

20 acres

Description:

A. Species Composition:

- 1) Mature trees:
 - White oak
 - Red oak
 - Red elm

Ash

Basswood

Black walnut

- 2) Pole size trees:
 - Ash
 - Basswood

B. Reproduction:

Bitternut hickory

Red elm

Is

C. Volume (mature trees only):

This timber contains about 2000 board feet per acre.

10% of the volume is contained in dead trees still

standing. 10% of the volume is in trees of declining

health or near death.

D. Condition and Size Distribution:

The stand is a young forest of about 20 years

of age. The trees are mostly pole size and

have good form. There are several very large ash

and black walnut trees.

The diameter class distribution is white oak, shiving

and black walnut trees.

MAP COLOR: RED

2 acres

Description:

This is a young scattered natural stand of small saplings and reproduction, consisting of black cherry, red elm and ash.

MAP COLOR: BLUE

3 acres

Description:

Red elm, red oak, ash, black walnut, basswood, and black cherry make up this pole size timber. Saplings and reproduction of the same species are abundant. This stand is in good condition.

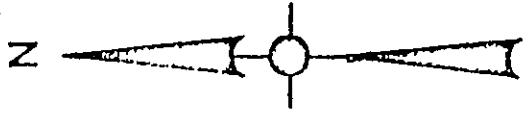
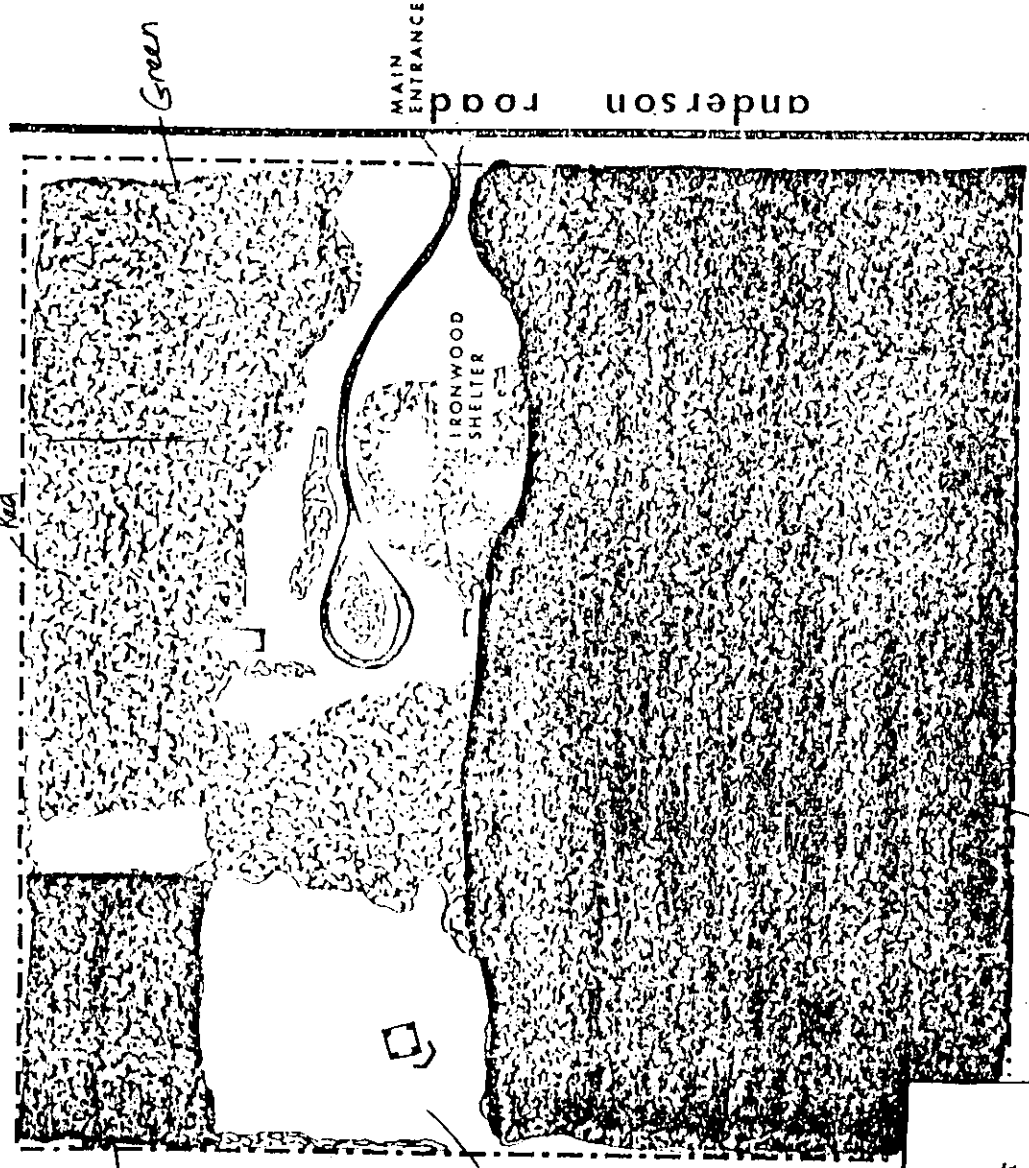
MAP COLOR: GREEN

3 acres

Description:

This is an open plantation of white pine. Hardwood species have established themselves and are abundant throughout the stand. The average white pine diameter is about 16 inches. Total volume is about 20,000 board feet of white pine. The trees are in generally good condition. Spacing is adequate for healthy growth.

LACONA HEIGHTS FOREST PRESERVE



- LEGEND
- ▲ PLAYGROUND EQUIPMENT
 - ▲ BOT SCOUT CAMPING
 - PUBLIC CAMPING
 - ⌵ TOILETS
 - ↑ WATER
 - ⊞ BALL DIAMOND
 - FOREST PRESERVE BUILDINGS
 - ⌵ SHELTER HOUSE
 - HARD SURFACE ROAD
 - ⊞ GRAVEL ROAD

Lacona 40 acres

ILLINOIS NATURAL AREAS INVENTORY
MAIN DATA FORM

BASIC INFORMATION

(1) Index no. 938

(2) County Winnebago (3) Ref. no. 5
(4) Natural area name Laona Heights Forest Preserve.

SIGNIFICANCE

(5) Natural area categories and significant features

a. Cat	* Lgd	b. Description of significant feature
<u>I</u>	<u>a</u>	<u>Grade B dry-mesic upland forest</u>

(6) Exceptional features and notable features

a. Cat	* Lgd	* E/N	b. Description of feature
<u>II</u>	<u>b</u>	<u>N</u>	<u>Aplectrum hyemate (mesic forest)</u>

(7) PV score 5 (8) Evaluator Harty & Paulson (2) (8') Date 16 August 1977

LOCATION

(9) Legal location: T. 29N, R. 10E, 4 P. M., sec. 32 (2*)

(9') Access: From preserve drive off Anderson Road.

(10) Topographic quadrangle Durand 7.5 (13a)

(11) Watershed 4 (12) Specific stream Otter Creek

(13) Legislative district 35 (14) Municipality —

NATURAL CHARACTERISTICS

(15) Altitude: a. minimum 860 b. maximum 920

(16) Topography:
a. Physiographic unit 31 b. Major feature 48 c. Individual feature 6

(17) Geologic formation 216, 202, 31, 32

(18) Soil association (State) Y

(19) Soil association (County) DUBUQUE - RITCHEY

NATURAL CHARACTERISTICS, cont.

(20) Natural community classification and (21) rarity index (RI)

* NC#	a. Natural community name	b. ND-S	c. Community-type	RI
1	Dry-mesic upland forest	2a	Forest (1)	3

(22) Diversity index 1

(23) Natural quality: (a) acreage of natural communities by grades, and (b) description

* NC#	A	B	C	D	E	Tot	Description of natural quality
1		20				20	Mature forest; understory damaged by grazing
TOT		20				20	(24) Total acreage of natural area

(25) Vegetation types

* NC#	a. SAF	b. Plant community name
1	52	Quercus ¹⁹⁵ alba - Fraxinus ¹⁰¹ americana - Tilia ²⁶⁷ americana

LEGAL STATUS & USE

(26) Ownership type: 1. Pv 2 Pc 3. Uk

(27) Number of owners 1

(27') Owner or custodian: Winnebago County Forest Preserve
District, Rockford

LEGAL STATUS & USE, cont.

(28) Use of natural area:

a. Cat. 2.1 b. Description -

(29) Use of surrounding land:

a. Wildland 10 % b. Farmland 90 % c. Developed land 0 %

(30) Nearest SMSA 7

(31) Distance to nearest SMSA 0

(32) Number of nearby schools 3

(33) Nearest school 31

(34) Number of nearby DOC facilities 2

(35) Other land management facility 541

(36) Manageability: (1) Yes 2. No

(36') Management problem description

Impact			Effort			
1	2	3	1	2	3	4
		X			X	
		X	X			

(37) Preservation status

Cat	%	Description of preservation status
4	100	Undeveloped part of preserve

(37') Attitude of owner or custodian toward preservation (contacted? YES): Probably receptive to preservation.

(38) Threats

a. Cat	* SF	b. Description of threat
4		-

DISCUSSION OF PRESERVATION VALUES

(39) Classic dry-mesic forest according to Curtis' "Vegetation of Wisconsin"

↙ Laona Heights Forest Preserve includes a 20-acre stand of high quality upland forest. It was chosen for inclusion in the book, "Vegetation of Wisconsin."

ADDITIONAL NOTES

(39') _____

ILLINOIS NATURAL AREAS INVENTORY
 CATEGORY I SIGNIFICANT/EXCEPTIONAL FEATURE FORM
 RELATIVELY UNDISTURBED NATURAL COMMUNITY

Type: significant exceptional County Winnebago Ref. no. 5
 Name of feature Grade B dry-mesic upland forest
 Investigator Harty and Paulson Date 16 August 1977

NATURAL QUALITY. (Describe the natural community in terms of natural quality. Emphasize the structure and composition, and describe characteristics that indicate the degree of disturbance or recovery from disturbance.)

Score 87 Discussion Mature forest with few scattered old growth trees that are obviously culls from former timbering. Understory has gap but recovering from past grazing. Most trees 48-50 years old. Understory composed of Ulmus rubra and other canopy species.

HISTORY OF USE. (Describe past use that determined the present natural quality, and that was not described above. Examples: number of years that an area has been protected; amount of timber that has been cut; and length and intensity of grazing.)

Logged and grazed before being sold to the F.P. Dist in the early 1920's. Left undeveloped except for mowed trails and removal of dead timber.

VEGETATION DESCRIPTION. (If the plant community was sampled, describe how the stand was chosen and how the points were located. Describe unusual circumstances that required that the standard procedures be changed. If the plant community was not sampled, describe how the species composition was determined.)

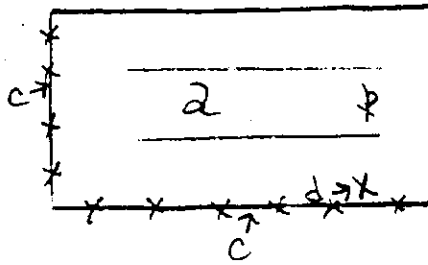
Sampled according to standard methods

DISTURBANCE FEATURES

Lgd	A/N	Description of disturbance feature
<u>c</u>	<u>A</u>	<u>Fences.</u>
<u>d</u>	<u>N</u>	<u>blow-down area from tornado in 1950's</u>

ADDITIONAL NOTES: _____

COUNTY Winnebago NO. 5
C SF X EF NF X
AD ND NC X NQ X



A-2-6-70-30



N

671-1

F-18.6

F-31

671-1

COUNTY
ALBERTA
S.E. 1/4
T. 18.6 N.
R. 18.6 W.

ILLINOIS NATURAL AREAS INVENTORY
 FOREST SAMPLING
 TREE BASAL AREA (m²/ha)

3 BAF Metric Wedge Prism
 Number of points: 20

Investigator Harty and Paulson

Date 16 August 1977

Conversion factor: 0.15
 (Total stems → Stems/ha)

County Winnebago No. 5

Stand No. _____

Species	Tally by Sampling Point																				TOT	BA	REL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	stems	m ² /ha	%
<i>Quercus rubra</i>	12	1.8	6.3
<i>Quercus alba</i>	40	6.0	21.2
<i>Fraxinus americana</i>	40	6.0	21.2
<i>Juglans nigra</i>	22	3.3	11.6
<i>Celtis occidentalis</i>	2	0.3	1.0
<i>Ulmus rubra</i>	22	3.3	11.6
<i>Carya ovata</i>	1	0.15	0.5
<i>Carya cordiformis</i>	1	0.15	0.5
<i>Tilia americana</i>	46	6.9	24.3
<i>Prunus serotina</i>	2	0.3	1.0
<i>Ostrya virginiana</i>	1	0.15	0.5
																							99.7
TOTAL	15	11	6	5	12	15	12	11	10	4	9	9	10	8	9	12	7	12	5	9	250.9		

ILLINOIS NATURAL AREAS INVENTORY
 FOREST SAMPLING
 TREE DENSITY (stems/ha)
 0.025 hectare circular plot
 Number of plots: 20

Investigator Harty and Paulson
 Date 16 August 1977
 Conversion factor: 2
 (Total stems → Stems/ha)

County Winnebago No. 5
 Stand No. _____

Species	Tally by 1-decimeter Diameter Class											TOTAL	DEN	REL DEN
	2	3	4	5	6	7	8	9	10	11	12+ (list)	stems	st/ha	%
<i>Quercus rubra</i>	I		I	III		I			I			9	18	8.9
<i>Quercus alba</i>	II		III	III	III	I						16	32	15.8
<i>Fraxinus americana</i>	I	I	II	III	I	II	III					14	28	13.9
<i>Lilja americana</i>	III	III II	III III	III III	III	II	I					36	72	35.6
<i>Ulmus rubra</i>	III II	III	III	II								18	32	17.8
<i>Juglans nigra</i>		I		III	II	I	I					8	16	7.9
														99.9
TOTAL	15	13	24	24	10	7	5	0	1			101	202	

ILLINOIS NATURAL AREAS INVENTORY
 FOREST SAMPLING
 SAPLING & SHRUB DENSITY (Stems/ha)

Investigator Harty and Paulson

County Winnebago No. 5

Date 16 August 1977

Stand No. 1 Sheet 1 of 2

0.00²/₂ hectare circular plot

Conversion factor: 100 25

Number of plots: 10
20

(Total stems → Stems/ha)

Species	Tally by Sampling Plot										TOTAL		REL
	1X	2X	3X	4X	5X	6X	7X	8X	9X	10X	stems	st/ha	DEN
<i>Xanthoxylum americanum</i>	"		|||							"	5		
<i>Cornus racemosa</i>	|										1		
<i>Ulmus rubra</i>	|	"				"	|	|			7		
<i>Fraxinus americana</i>	"		|								4		
<i>Prunus serotina</i>	||||					"					7		
<i>Carya cordiformis</i>	|	"		"	-		|				7		
<i>Prunus virginiana</i>	|				-						6		
<i>Ribes missouriensis</i>	|										1		
<i>Celtis occidentalis</i>			|		-						2		
<i>Tilia americana</i>				"							2		
<i>Corylus americana</i>						"					2		
TOTAL	13	4	5	4	7	7	2	1	0	6			

ILLINOIS NATURAL AREAS INVENTORY
 FOREST SAMPLING
 SAPLING & SHRUB DENSITY (Stems/ha)

Investigator Harty and Paulson

County Winnebago

No. 5

Date August 16, 1977

Stand No. 1

Sheet No. 2 of 2

0.00² hectare circular plot

Number of plots: ~~10~~
20

Conversion factor: 100 25

(Total stems → Stems/ha)

Species	Tally by Sampling Plot										TOTAL	DEN	REL DEN
	11X	12X	13X	14X	15X	16X	17X	18X	19X	20	stems	st/ha	%
<i>Xanthoxylum americanum</i>											5	125	5.3
<i>Cornus racemosa</i>	|||||										14	350	14.9
<i>Ulmus rubra</i>		I			I	I		II	NO		12	300	12.8
<i>Fraxinus americana</i>											8	200	8.5
<i>Prunus serotina</i>											7	175	7.4
<i>Carya cordiformis</i>	II	II				III		II	SHRUBS	III	20	500	21.3
<i>Prunus virginiana</i>									SHRUBS		6	150	6.4
<i>Ribes missouriensis</i>									SHRUBS		1	25	1.1
<i>Corylus americana</i>									SHRUBS		2	50	2.1
<i>Celtis occidentalis</i>							I				3	175	3.2
<i>Tilia americana</i>				II							4	100	4.2
<i>Rubus allegheniensis</i>	I				I						2	50	2.1
<i>Rubus occidentalis</i>		I	||||				I				7	175	7.4
<i>Juglans nigra</i>					I						1	25	1.1
<i>Quercus rubra</i>						I					1	25	1.1
<i>Viburnum pennifolium</i>							I				1	25	1.1
													100.00
TOTAL	16	3	6	2	3	5	3	4	0	31	94	50	

ILLINOIS NATURAL AREAS INVENTORY
WOODY PLANT LIST

Area Name Laura Heights Forest Preserve
County Winnebago No. 15
Section 32 T. 2N R. 10E
Investigator Harty and Paulson
Date 16 August 1977

Annotations

- | | |
|------------------|----------------|
| 1. Rare | L. Local |
| 2. Occasional | A. Adventive |
| 3. Common | N. Naturalized |
| 4. Abundant | |
| 5. Very abundant | |

<u>2</u> Acer negundo	Hypericum	Rubus argutus
— Acer nigrum	— Ilex decidua	<u>3</u> Rubus occidentalis
— Acer saccharinum	— Juglans cinerea	— Rubus pensylvanicus
<u>2</u> Acer saccharum	<u>2</u> Juglans nigra	— Rubus
— Acer rubrum	— Juniperus virginiana	— Salix amygdaloides
— Aesculus glabra	— Liquidambar styraciflua	— Salix interior
— Ailanthus altissima	— Linderia benzoin	— Salix nigra
— Amelanchier arborea	— Liriodendron tulipifera	— Salix rigida
— Amorpha fruticosa	— Lonicera prolifera	— Salix
— Ampelopsis cordata	— Maclura pomifera	<u>2</u> Sambucus canadensis
— Asimina triloba	— Malus ioensis	— Sassafras albidum
— Betula nigra	— Morus alba	— Smilax hispida
— Campsis radicans	— Morus rubra	— Staphylea trifolia
— Carpinus caroliniana	— Nyssa sylvatica	— Symphoricarpos orbiculatus
<u>3</u> Carya cordiformis	<u>2</u> Ostrya virginiana	<u>2</u> Tilia americana
— Carya glabra	<u>4</u> Parthenocissus quinquefolia	— Ulmus americana
— Carya illinoensis	— Platanus occidentalis	<u>3</u> Ulmus rubra
— Carya laciniata	— Populus deltoides	— Vaccinium
— Carya ovalis	<u>4</u> Populus grandidentata	<u>1</u> Viburnum prunifolium
<u>3</u> Carya ovata	— Populus tremuloides	<u>2</u> Viburnum <u>raefinescens</u> ?
— Carya tomentosa	<u>4</u> Prunus americana	— Vitis aestivalis
— Carya	— Prunus hortulana	— Vitis cinerea
— Ceanothus americanus	<u>3</u> Prunus serotina	— Vitis riparia
— Celastrus scandens	<u>4</u> Prunus virginiana	— Vitis vulpina
— Celtis laevigata	— Prunus	<u>3</u> Xanthoxylum americanum
<u>1</u> Celtis occidentalis	— Ptelea trifoliata	<u>1</u> <u>Panax quinquefolius</u>
— Cephalanthus occidentalis	<u>3</u> Quercus alba	<u>2</u> <u>Menispermum canadense</u>
— Cercis canadensis	— Quercus bicolor	
— Cornus alternifolia	— Quercus imbricaria	
— Cornus drummondii	— Quercus macrocarpa	
— Cornus florida	— Quercus marilandica	
— Cornus obliqua	— Quercus muhlenbergii	
— Cornus racemosa	— Quercus palustris	
— Cornus	<u>3</u> Quercus rubra	
<u>2</u> Corylus americana	— Quercus stellata	
— Crataegus crus-galli	— Quercus velutina	
— Crataegus mollis	— Quercus	
— Crataegus	— Quercus	
— Crataegus	— Rhus aromatica	
— Diospyros virginiana	— Rhus copallina	
— Euonymus atropurpureus	— Rhus glabra	
— Fagus grandifolia	<u>4</u> Rhus radicans	
<u>3</u> Fraxinus americana	— Ribes americanum	
— Fraxinus lanceolata	— Ribes cynosbati	
— Fraxinus pennsylvanica	<u>3</u> Ribes missouriense	
— Fraxinus quadrangulata	— Robinia pseudoacacia	
— Gleditsia triacanthos	— Rosa carolina	
— Gymnocladus dioica	— Rosa	
— Hamamelis virginiana	— Rubus allegheniensis	

Remarks: _____

ILLINOIS NATURAL AREAS INVENTORY

FERNS AND FERN ALLIES

Relative abundance

1. Rare
2. Occasional
3. Common
4. Abundant
5. Very abundant

2 Adiantum pedatum

___ Asplenium platyneuron

___ Asplenium rhizophyllum

___ Asplenium _____

2 Athyrium filix-femina

___ Athyrium pycnocarpon

___ Athyrium thelypteroides

___ Azolla mexicana

___ Botrychium dissectum var. dissectum

___ Botrychium dissectum var. obliquum

2 Botrychium virginianum

___ Cheilanthes _____

___ Cystopteris bulbifera

___ Cystopteris fragilis

___ Dryopteris carthusiana

___ Dryopteris intermedia

___ Dryopteris marginalis

___ Equisetum arvense

___ Equisetum hyemale

___ Equisetum laevigatum

___ Equisetum _____

___ Isoetes _____

___ Lycopodium _____

___ Onoclea sensibilis

___ Ophioglossum _____

___ Osmunda claytoniana

___ Osmunda regalis

___ Pella _____

___ Polypodium _____

Area Name Laona Heights F.P.County Winnebago No. 5Section 32 T. 29N R. 10EInvestigator Harty and PaulsonDate 16 August 1977

___ Polystichum acrostichoides

___ Pteridium aquilinum

___ Selaginella _____

___ Thelypteris hexagonoptera

___ Thelypteris palustris

___ Woodsia obtusa

Remarks:

ILLINOIS NATURAL AREAS INVENTORY
SUMMER BIRD LIST

Area Name Loons Heights F.P.
 County Winnebago No. 5
 Section 32 T. 29N R. 10E
 Investigator Harty + Paulson
 Date 16 August 1977

- American BITTERN
- Least BITTERN
- Brewer's BLACKBIRD
- Common BLUEBIRD
- BOBWHITE
- Indigo BUNTING
- CARDINAL
- Gray CATBIRD
- Yellow-breasted CHAT
- Black-capped CHICKADEE
- Carolina CHICKADEE
- CHUCK-WILL'S-WIDOW
- American COOT
- Brown-headed COWBIRD
- Common CROW
- Black-billed CUCKOO
- Yellow-billed CUCKOO
- DICKCISSEL
- Mourning DOVE
- Rock DOVE
- Wood DUCK
- Common EGRET
- Snowy EGRET
- Common FLICKER
- Acadian FLYCATCHER
- Alder FLYCATCHER
- Great-crested FLYCATCHER
- Willow FLYCATCHER
- Blue-gray GNATCATCHER
- American GOLDFINCH
- Common GRACKLE
- Pied-billed GREBE
- Rose-breasted GROSBEAK
- Herring GULL
- Cooper's HAWK
- Marsh HAWK
- Red-shouldered HAWK
- Red-tailed HAWK
- Black-crowned Night HERON
- Great Blue HERON
- Green HERON
- Little Blue HERON
- Ruby-throated HUMMINGBIRD
- Blue JAY
- Dark-eyed JUNCO
- KESTREL
- KILLDEER
- Eastern KINGBIRD
- Belted KINGFISHER
- Horned LARK
- MALLARD
- Purple MARTIN
- Eastern MEADOWLARK
- Western MEADOWLARK

- MOCKINGBIRD
- Common NIGHTHAWK
- White-breasted NUTHATCH
- Northern ORIOLE
- Orchard ORIOLE
- OVEN-BIRD
- Barred OWL
- Screech OWL
- Eastern Wood PEWEE
- Ring-necked PHEASANT
- Eastern PHOEBE
- King RAIL
- Virginia RAIL
- American REDSTART
- REDWING
- ROBIN
- Upland SANDPIPER
- Yellow-bellied SAPSUCKER
- Loggerhead SHRIKE
- SORA
- Chipping SPARROW
- Field SPARROW
- Grasshopper SPARROW
- House SPARROW
- Song SPARROW
- Vesper SPARROW
- STARLING
- Bank SWALLOW
- Barn SWALLOW
- Rough-winged SWALLOW
- Tree SWALLOW
- Chimney SWIFT
- Scarlet TANAGER
- Summer TANAGER
- Blue-winged TEAL
- Least TERN
- Brown THRASHER
- Wood THRUSH
- Tufted TITMOUSE
- Rufous-sided TOWHEE
- Bell's VIREO
- Red-eyed VIREO
- Warbling VIREO
- White-eyed VIREO
- Yellow-throated VIREO
- Black VULTURE
- Turkey VULTURE
- Kentucky WARBLER
- Parula WARBLER

- Prairie WARBLER
- Prothonotary WARBLER
- Yellow WARBLER
- Yellow-throated WARBLER
- Louisiana WATERTHRUSH
- Cedar WAXWING
- WHIP-POOR-WILL
- Downy WOODPECKER
- Hairy WOODPECKER
- Pileated WOODPECKER
- Red-bellied WOODPECKER
- Red-headed WOODPECKER
- Carolina WREN
- House WREN
- Long-billed Marsh WREN
- Common YELLOW-THROAT

ILLINOIS NATURAL AREAS INVENTORY
REPTILES, AMPHIBIANS, AND MAMMALS

Area Name Ladna Heights F.P.
County Winnebago No. 5
Section 32 T. 29N R. 10E
Investigator Harty + Paulson
Date 16 August 1977

Amphibians

Spotted Salamander
 Marbled Salamander
 Small-Mouthed Salamander
 Eastern Tiger Salamander
 Central Newt
 American Toad
 Fowler's Toad
 Blanchard's Cricket Frog
 Western Chorus Frog
 Northern Spring Peeper
 Eastern Gray Treefrog
 Northern Crayfish Frog
 Bullfrog
 Green Frog
 Pickerel Frog
 Northern Leopard Frog
 Southern Leopard Frog
 Eastern Wood Frog

Reptiles

Common Snapping Turtle
 Stinkpot
 Blanding's Turtle
 Eastern Box Turtle
 Ornate Box Turtle
 Midland Painted Turtle
 Western Painted Turtle
 Red-Eared Turtle
 False Map Turtle
 Map Turtle
 Smooth Softshell
 Eastern Spiny Softshell
 Northern Fence Lizard
 Western Slender Glass Lizard
 Six-Lined Racerunner
 Ground Skink
 Five-Lined Skink
 Broad-Headed Skink
 Midwest Worm Snake
 Prairie Ringneck Snake
 Eastern Hognose Snake
 Rough Green Snake
 Western Smooth Green Snake
 Eastern Yellow-Bellied Racer
 Black Rat Snake
 Western Fox Snake
 Bullsnake
 Prairie Kingsnake
 Speckled Kingsnake
 Black Kingsnake
 Eastern Milk Snake
 Red Milk Snake
 Western Ribbon Snake

Eastern Plains Garter Snake
 Eastern Garter Snake
 Chicago Garter Snake
 Western Earth Snake
 Midland Brown Snake
 Northern Red-Bellied Snake
 Yellow-Bellied Water Snake
 Northern Copperbelly
 Graham's Water Snake
 Diamond-Backed Water Snake
 Northern Water Snake
 Broad-Banded Water Snake
 Northern Copperhead
 Eastern Massasauga
 Timber Rattlesnake

Mammals

Opossum
 Eastern Mole
 Short-Tailed Shrew
 Least Shrew
 Little Brown Bat
 Eastern Pipistrel
 Big Brown Bat
 Red Bat
 Evening Bat
 Raccoon
 Long-Tailed Weasel
 Mink
 Striped Skunk
 Badger
 Red Fox
 Gray Fox
 Woodchuck
 Thirteen-Lined Ground Squirrel
 Franklin's Ground Squirrel
 Eastern Chipmunk
 Eastern Gray Squirrel
 Eastern Fox Squirrel
 Southern Flying Squirrel
 Plains Pocket Gopher
 Beaver
 Deer Mouse
 White-footed Mouse
 Meadow Vole
 Prairie Vole
 Muskrat
 Norway Rat
 House Mouse
 Eastern Cottontail
 White-Tailed Deer

ILLINOIS NATURAL AREAS INVENTORY
FOREST SAMPLING

TREE BASAL AREA (m²/ha)

3 BAF Metric Wedge Prism (total stems X 0.15 = m²/ha)

Number of plots: 20

COUNTY Winnebago

AREA NO. _____

NATURAL AREA NAME Lacuna Heights

INVESTIGATOR Heather Swenson

DATE 29 Oct. 99

NATURAL COMMUNITY Dry mesic Woodland

Tally by Sampling Point

Species	Tally by Sampling Point																				TOT	BA	REL.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	stems	m ² /ha	%
<i>Quercus rubra</i> (Red oak)	•	•	•	••						•		•	•					•			9	1.35	7.89
<i>Ulmus americana</i> (Elm)		••	•		••				••	••	•	••		•	•			••	•	••	22	3.30	19.30
<i>Carya occidentalis</i> (Hackberry)		•			•						•	•	•					••	•		9	1.35	7.89
<i>Tilia americana</i> (Passwood)	••	•				••	•		•	••		•		••	••	•	••		••	•	23	3.45	20.17
<i>Quercus alba</i> (White oak)			•		•	••	••	••		••		•		••	•		•		••	••	22	3.30	19.30
<i>Fraxinus americana</i> (White ash)			•		•			•		•											4	0.60	3.51
<i>Carya cordiformis</i> (Cyclobalanopsis)			•	•		•		•	•		•								•		7	1.05	6.14
<i>Prunus serotina</i> (Black cherry)				•	•				••	•								•			6	0.90	5.26
<i>Acer nigrum</i> (Black maple)								•													1	0.15	0.88
<i>Juglans nigra</i> (Black walnut)										•		•						•	•		4	0.60	3.51
<i>Acer saccharum</i> (Red maple)	••										••										4	0.60	3.51
<i>Ostrya virginiana</i> (Ironwood)												•							•	•	3	0.45	2.63

FOREST SAMPLING
TREE DENSITY (stems/ha)

COUNTY Winnebago AREA NO. _____

NATURAL AREA NAME Laurel Heights

0.025 hectare circular plot (total stems x 2 = st/ha)

INVESTIGATOR Heather Swanson 29 Oct 1999

Number of plots: 20

NATURAL COMMUNITY Dry Mesic Woodland

Tally by 1-decimeter Diameter Class

TOTAL DEN REL. DEN

Species	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120	11st	stems	st/ha	REL. DEN
<i>Ulmus americana</i> (Elm)	••	•••	•	••									17	34	35.42
<i>Carya occidentalis</i> (Hackberry)	••	•	•										8	16	16.67
<i>Quercus rubra</i> (Red oak)											•		1	2	2.08
<i>Tilia americana</i> (Basswood)	•	••		•	•								6	12	12.50
<i>Prunus serotina</i> (Black cherry)	•												2	4	4.17
<i>Quercus alba</i> (White oak)			•			•	•						3	6	6.25
<i>Fraxinus americana</i> (White ash)	•			•									2	4	4.17
<i>Acer saccharum</i> (Red maple)	•••		•										6	12	12.50
<i>Carya cordiformis</i> (y. bud hickory)	••												2	4	4.17
<i>Ostrya virginiana</i> (Ironwood)	•												1	2	2.08
TOTAL	27	9	4	4	1	1	1				1		48	96	100.01

FOREST SAMPLING

SAPLING & SHRUB DENSITY (stems/ha)

0.001 hectare circular plot (total stems X 100 = st/ha)

Number of plots: 10

 COUNTY Winnebago AREA NO. _____

 NATURAL AREA NAME Laona Heights

 INVESTIGATOR Heather Swanson

 DATE 29 Oct. 99

 NATURAL COMMUNITY Dry Mesic Woodland

REL.

DEN

Tally by Sampling Plot

TOTAL DEN

Species	81	83	85	87	109	1211	1413	1615	1817	2019	stems	st/ha	%
<i>Carya cordiformis</i> (y. bud hickory)		.	.	.				.			4	400	28.57
<i>Prunus serotina</i> (black cherry)	.			M	M	.			M		2	200	14.28
<i>Cornus racemosa</i> (grey dogwood)	.	.				.	.		M	.	6	600	42.86
<i>Viburnum</i>								.			2	200	14.28
TOTAL	3	1		1		1	2				11	1100	77.14

ILLINOIS NATURAL AREAS INVENTORY
 FREQUENCY SAMPLING (0.25 sq. meter circular plot)

COUNTY Winneshake AREA NO. _____
 NATURAL AREA NAME Laura Heights Nature Preserve
 INVESTIGATOR J. Hasenberger DATE 20 May 2000

NATURAL COMMUNITY Dry Mesic Woodland
 NUMBER OF PLOTS 20 STAND NO. _____ SHEET 1 OF 1

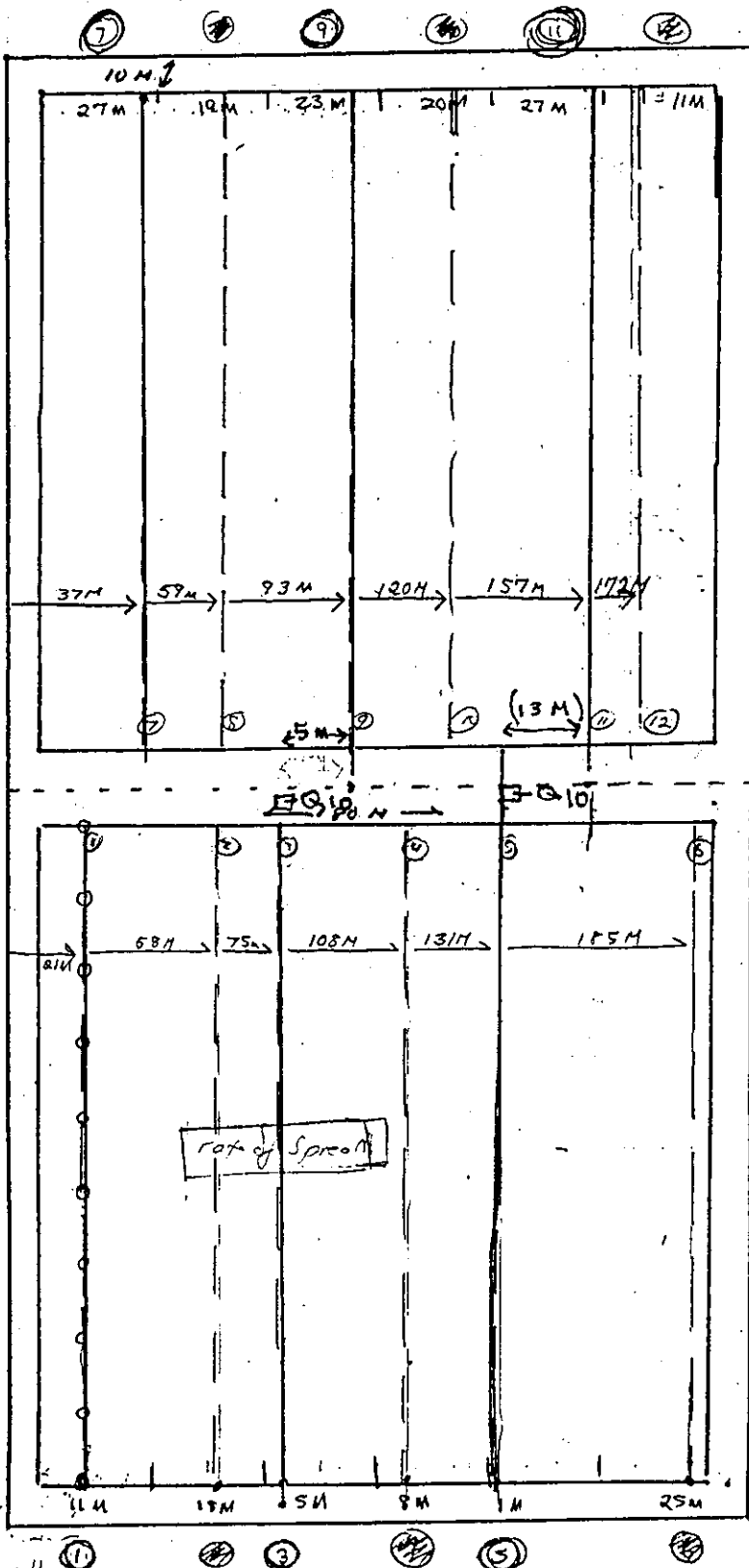
Species	Presence by Sample Plot																														TOT	A/FQ	R/FQ		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	plots	%	%		
Garlic Mustard	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X											19	95	13.3	13.28
Enchanters Nightshade	X			X		X	X	X	X	X	X	X			X	X	X															10	50	7.0	6.99
Jack-in-the-Pulpit	X	X	X	X	X	X	X	X			X	X	X	X			X	X	X	X												16	80	11.2	11.18
Gallomarine	X	X	X	X	X		X	X		X	X	X	X		X			X	X													14	70	9.8	9.79
Prairie Trillium	X			X	X	X	X	X	X		X	X	X		X	X	X	X	X	X												11	70	9.8	9.79
Wild Geranium		X		X	X	X	X	X																								6	30	4.2	4.19
False Solomon's Seal		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											18	90	12.6	12.58
White Asters		X	X	X		X	X	X			X		X																			7	35	4.9	4.89
Virginia Creeper		X	X	X	X	X					X	X			X	X	X	X														11	55	7.7	7.69
Hog Peanut			X																													1	5	0.7	0.70
Lady's Thumb			X																													1	5	0.7	0.70
Sedge spp.			X																													1	5	0.7	0.70
Fern Lady			X																													1	5	0.7	0.70
Sedge spp.				X																												1	5	0.7	0.70
Raspberry				X	X	X		X	X							X																6	30	4.2	4.19
Impatiens								X																								1	5	0.7	0.70
Honeysuckle								X																								1	5	0.7	0.70
Field Bindweed									X																							1	5	0.7	0.70
Gooseberry										X		X			X						X	X										5	25	3.5	3.50
Prickly Ash										X	X																					1	5	0.7	0.70
Ash										X																						1	5	0.7	0.70
Mayapple											X																					1	5	0.7	0.70
Downy wood Peuce											X	X																				2	10	1.4	1.40
Elm												X																				1	5	0.7	0.70
Gray dogwood													X									X										2	10	1.4	1.40
Hazelnut																	X															1	5	0.7	0.70

LAONA

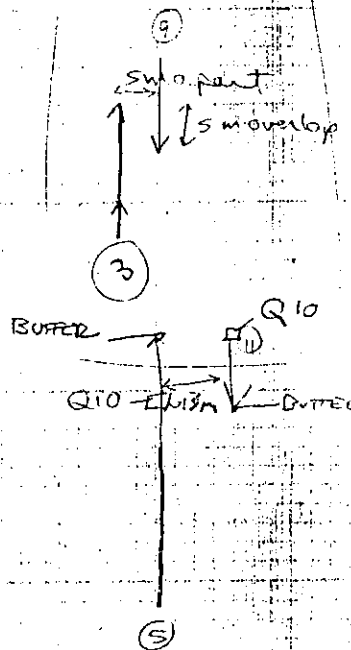
$\frac{1}{2} m^2 Q @ 20 m intervals$
 $\therefore 10 Q / transect$
 6 transects / 60m

← 200 M →

1989



↑ 400M
↓



93

SOUTH

NORTH

- | | |
|------------|-------------|
| Tr 1 (11M) | Tr 7 (27M) |
| Tr 2 (19M) | Tr 8 (19M) |
| Tr 3 (5M) | Tr 9 (23M) |
| Tr 4 (8M) | Tr 10 (20M) |
| Tr 5 (11M) | Tr 11 (27M) |
| Tr 6 (25M) | Tr 12 (11M) |

LOCATION LACONIA HTS DATE 9-22-89

COVER CLASS 1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS MURTO Hendry

TRANSECT 15 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Acer negundo												2								
Acer saccharum																				
Adiantum pedatum																				
Agrinonia																				
Alliaria officinalis			4	3	7		3			6						2				
Allium tricoccum			2																	
Amphicarpa bracteata				2																
Apocynum androsaem.																				
Arisaema triphyllum								1												
Aster sagittifolius	1	1		1			1	2	1								1			
Aster shortii																				
Aster																				
Athyrium filix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans																				
Campanula americana																				
Carex pensylvanica																				
Carex	2			2									4							
Carex													1							
Carya cordifolia																				4
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis			3				3				1									
Circaea quadrifidata	1		2	1	2	1	2	3	3	3	3	3	3	6	2	3				3
Cornus racemosa																				
Corylus americana																				
Crataegus mollis																				
Cryptotaenia canad.																				
Desmodium glutinosum							2		2						2				2	
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Pestuca obtusa																				
Praxinus americana		1	1	1	2	2	1	3	2	2	1			1		1	1	1	2	
Galium aparine				1								3			2		3			
Galium																				
Geranium maculatum						1		1												
Geum canadense		3		2		2	2	2	2	2						1				3
Hydrophilum virginianum													2							
Hystrix patula																				
Impatiens capensis																				
Laportea canadensis																				
Menispermum canadense	2	2										2		4						
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus				3			3	3		3	2	3	4					2	3	
Phytolacca leptostachya																				
Pilea pumila								1									1			
Poa pratensis																				
Podophyllum peltatum																				
Polygonatum can.																				
Prunus serotina	1	3		1																
Prunus virginiana	2																			3
Quercus alba																				
Quercus rubra																				
Ranunculus abortivus																				
Ranunculus septen.																				
Rhus radicans																				
Ribes missouriense							2						3					4		
Ribes																				
Rubus allegheniensis																				
Rubus occidentalis								3												

revisited
 seedling
 h. produce
 flowers
 count / 200
 seedling
 seedling

LOCATION Laona Height DATE 8/2/89

COVER CLASS 1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS Nurze, Koenig

TRANSECT 1, 5 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20

Sambucus canadensis																				
Sanguinaria canadensis																				
Sanicula																				
Smilacina racemosa	1			2	2	3	4	2	2	4	3	3	3	3	3	3	3	3	3	3
Smilax echinata	3	3						2			2									
Solidago																				
Toxaria virginianum								2	1	2				3		1				
Trillium recurvatum																				
Ulmus americana				1					1					(4)	1	1				
Ulmus sp. (rubra)																				
Urtica procera																				
Uyularia grandiflora							2			1										
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia																				
Xanthoxylum americanum			3			3		2												

Bare earth	3	2	2	3	3	2	2	6	6	3	0	3	2	3	2	5	4	2	2	3
Fuel Load	5	3	5	5	5	5	3	2	2	3	7	3	2	5	6	4	4	5	3	2
Wood litter	3	6	3	3	3	2	4	2	4	3	2	5	4	2	2	2	3	3	3	4

Dioscorea 2
 Tilia 3
 Chen. base 1

T₁ started @ fence post + "hole"
 Q₁ T₁ @ 20m, Q₂ @ 25m
 (b/c initial location "atypical")

CATION Laona Heights DATE 8.22.89

COVER CLASS 1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS AB/JAA

TRANSECT 3 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Acer negundo																				
Acer saccharum																				
Adiantum pedatum																				
Agrimonia																				
Alliaria officinalis *					2															
Allium tricoccum																				
Amphicarpa bracteata																				
Apocynum androsaem.																				
Arisaena triphyllum																				
Aster sagittifolius					1															
Aster shortii																				
Aster																				
Athyrium felix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus pürgans																				
Campanula americana																				
Carex pennsylvanica																				
Carex hairy					13															
Carex																				
Carex																				
Carya cordiformis								4												
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis																				
Circaea quadrisulcata	3	5	4	1	2	1	3	1	3	3										
Cornus racemosa																				
Corylus americana																				
Crataegus mollis																				
Cryptotaenia canad.																				
Desmodium glutinosum								2		2										
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Pestuca obtusa																				
Fraxinus americana					1	2	1	1	1	2										
Gallium aparine																				
Gallium																				
Geranium maculatum																				
Geum canadense						3	3	1		2										
Hydrophyllum virginianum																				
Hystrix patula																				
Impatiens capensis						2	3													
Laportea canadensis (wood nettle)																				
Menispermum canadense								4	3											
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus	3		1						3	3	3									
Phytolacca leptostachya																				
Pilea pumila										2										
Poa pratensis																				
Podophyllum peltatum											3									
Polygonatum can.																				
Prunus serotina																				
Prunus virginiana							4		4											
Quercus alba																				
Quercus rubra																				
Ranunculus abortivus																				
Ranunculus septen.																				
Rhus radicans																				
Ribes missouriense																				
Ribes																				
Rubus allegheniensis																				
Rubus occidentalis						3														

* a sockets
 to seed plants

CAPTION L. rone

DATE 8-22-89

COVER CLASS 1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS AS/JAA

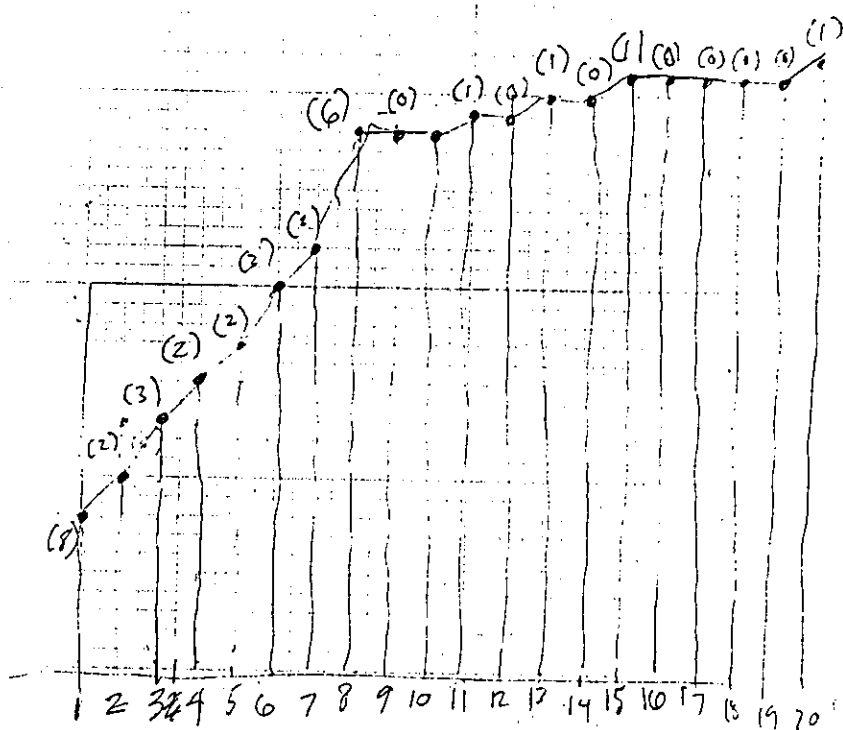
TRANSECT 3 p.v. (Q1) (Q2) (Q3) (Q4) (Q5) (Q6) (Q7) (Q8) (Q9) (Q10) Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20

Sambucus canadensis																				
Sanguinaria canadensis																				
Sanicula																				
Smilacina racemosa			4	3	3	3	3	4	4											
Smilax echinata																				
Solidago																				
Toxaria virginianum								1												
Trillium recurvatum																				
Ulmus americana																				
Ulmus rubra					1	1														
Urtica procera																				
Uvularia grandiflora																				
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia																				
Xanthoxylum americanum																				

Rare Earth	1	3	2	6	2	2	2	2	5	4
Litter (leaf) etc	5	5	6	2	6	6	6	2	3	4
Fuel (Wood)	4	4	3	1	3	2	2	5	3	3
<u>Dioscorea villosa</u>				2						

Q4-6 base of woodchuck den / 2-3m. from entrance
 Q7 Galium aparine... visible dead stems @ 3
 Q8 at 141 m (moved 1m W. to avoid Ulmus rubra)
 Q10 tree base (Ulmus rubra) 5% cover

LAONA
1989



1) new.

1 added w/us (Pachyphyllum)

SPECIES RICHNESS CURVE E 1/2 LAONA

8/22/89

(Tr. 1, 3, 5)

LOCATION

Laona

DATE

8/22/89

COVER CLASS

1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS

AB/JAA

TRANSECT

7

B

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Acer negundo																				
Acer saccharum																				
Adiantum pedatum																				
Agrimonia																				
Alliaria officinalis*																				
Allium tricoccum																				
Amphicarpa bracteata										2										
Apocynum androsaem.																				
Arisaema triphyllum																				
Aster sagittifolius										2										
Aster shortii																				
Aster																				
Athyrium filix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans																				
Campanula americana																				
Carex pensylvanica																				
Carex hairy																				
Carex																				
Carya cordiformis																				
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis		7																		
Circaea quadrisulcata		1	2	3	3	3	2	2	3	2										
Cornus racemosa																				
Corylus americana																				
Crataegus sp.						2			2											
Cryptotaenia canadensis																				
Desmodium glutinosum					3				1	1										
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Festuca obtusa																				
Fraxinus americana	1	1	1	2	2	2	2	1	2	2										
Galium aparine																				
Galium sp.	1	1																		
Geranium maculatum	2			3				3	4	2	3									
Geum canadense			3																	
Hydrophyllum virginianum	3	2																		
Hystrix patula																				
Impatiens capensis																				
Laportea canadensis																				
Menispermum canadense				3	3				2											
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus				3			3	3	4	2										
Phytolacca leptostachya																				
Pilea pumila																				
Poa pratensis																				
Podophyllum peltatum																				
Polygonatum can.																				
Prunus serotina																				
Prunus virginiana																				
Quercus alba			4																	
Quercus rubra																				
Ranunculus abortivus																				
Ranunculus septem.																				
Rhus radicans																				
Ribes missouriense																				
Ribes																				
Rubus allegheniensis																				
Rubus occidentalis				5					4	3										

* a rosettes
 b seed plants

CATION

Laona

DATE

8/22/89

COVER CLASS

1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS

AB/JAA

TRANSECT

7 p2 B

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20

7kg X2

Sambucus canadensis																				
Sanguinaria canadensis																				
Sanicula																				
Smilacina racemosa	2	3	4	3	1	4	2		2											
Smilax echinata																				
Solidago																				
Toxaria virginianum																				
Trillium recurvatum																				
Ulmus americana																				
Ulmus rubra sp.	1							2	1											
Urtica procera																				
Uyularia grandiflora				2					2											
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia																				
Xanthoxylum americanum																				

Bare Earth	1	5	3	3	2	2	2	2	2	3										
Litter (leaf, etc)	6	3	5	5	6	6	5	6	6	5										
Fuel (wood)	3	3	3	2	2	3	3	2	3	2										

Smilacina stellata 2 2

Dioscorea villosa 3

Q4 at 61m. (+ 1m to avoid base of med. Prunus serotina)

LOCATION Laona HTS DATE 8/22/89

COVER CLASS 1 2 3 4 5 6 7
 0-1% 1-7% 7-25% 25-50% 50-75% 75-93% 93-100%

INVESTIGATORS Nozzo, Kennedy

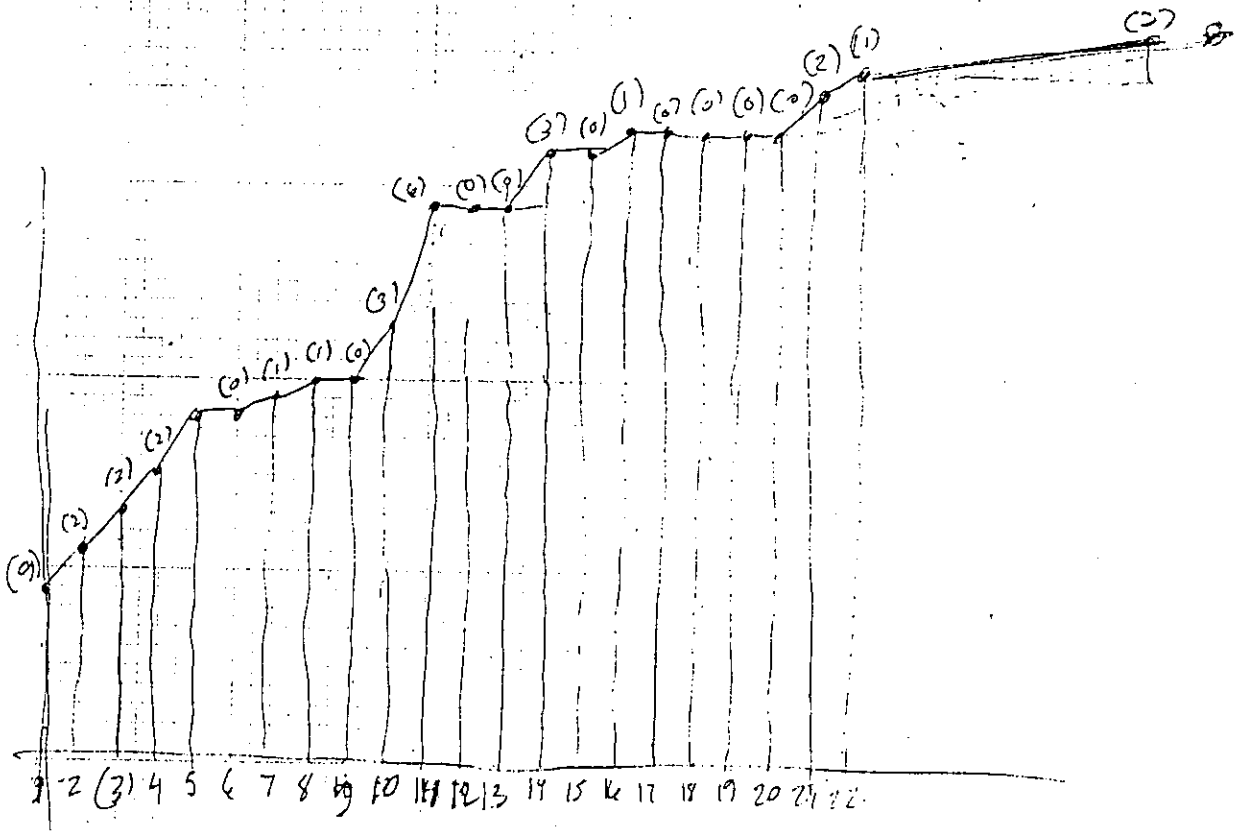
TRANSECT 9, 11
 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10

Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20/10
 more woody understorey

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20/10	
Acer negundo																					
Acer saccharum																					
Adiantum pedatum																					
Agrimonia																					
Alliaria officinalis																					
Allium tricoccum																					
Amphicarpa bracteata																					
Apocynum androsaem.																					
Arisaema triphyllum								1													
Aster sagittifolius				1																	
Aster shortii																					
Aster																					
Athyrium filix-femina																					
Botrychium virginianum																					
Brachyelytrum erectum																					
Bromus pürgans																					
Campanula americana																					
Carex pensylvanica																					
Carex hairy											2										
Carex																					
Carya cordiformis	3																				
Caulophyllum thal.																					
Celastrus scandens																					
Celtis occidentalis											2								4		
Circaea quadrisulcata	1		2					2	2		2	2	3		3					3	
Cornus racemosa	3	2	2	3																	3
Corylus americana																					
Crataegus mollis																					
Cryptotaenia canad.																					
Desmodium glutinosum														4		2				2	
Dryopteris spinulosa																					
Erythronium albidum																					
Eupatorium purpureum																					
Eupatorium rugosum																					
Pestuca obtusa																					
Fraxinus americana (sp)	3	3(1)		1	2	2	2	3	1		4	1	1				1				2
Gallium aparine														2	2						
Gallium																	2				
Geranium maculatum	2		2		2						2										
Geum canadense			3		2		3		2												2
Hydrophyllum virginianum																					
Hystrix patula																					
Impatiens capensis																					
Laportea canadensis								5													
Menispermum canadense	3	3																			3
Muhlenbergia tenuiflora																					
Osmorhiza longistylis																					
Ostrya virginiana																					
Parietaria																					
Parthenocissus	2	4	3			3	5	2		3	2	6		4		4	2				2
Phytolacca leptostachya																					
Pilea pumila																					
Poa pratensis																					
Podophyllum peltatum																					
Polygonatum can.																					
Prunus serotina																					
Prunus virginiana									5		1										
Quercus alba																					
Quercus rubra																					
Ranunculus abortivus																					
Ranunculus septen.																					
Rhus radicans										3											
Ribes missouriense					4	2				3		3					5	4			
Ribes																					
Rubus allegheniensis					2	3		5													
Rubus occidentalis					2	3					2		7		5						

of sp are damaged / stored up
 L to sampling

LAONA 1989



SPECIES RICHNESS CURVE w/ 1/2 LAONA

8/22/89

(T 7, 9, 11)

WINNEBAGO COUNTY - LAONA HEIGHTS - Woody plant list, 1971

<i>Acer nigrum</i>	Black maple
<i>Acer saccharum</i>	Sugar maple
<i>Carya cordiformis</i>	Yellowbud hickory
<i>Carya occidentalis</i>	Hackberry
<i>Celastris scandens</i>	Climbing bittersweet
<i>Cornus racemosa</i>	Gray dogwood
<i>Euonymus atropurpureus</i>	Wahoo
<i>Fraxinus americana</i>	White ash
<i>Juglans nigra</i>	Black walnut
<i>Lonicera prolifera</i>	Yellow honeysuckle
<i>Ostrya virginiana</i>	Ironwood
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Prunus serotina</i>	Black cherry
<i>Prunus virginiana</i>	Choke cherry
<i>Quercus alba</i>	White oak
<i>Quercus rubra</i>	Red oak
<i>Rhus radicans</i>	Poison ivy
<i>Sambucus canadensis</i>	Common elderberry
<i>Smilax hispida</i>	Greenbriar
<i>Tilia americana</i>	American basswood
<i>Ulmus rubra</i>	Slippery elm
<i>Viburnum prunifolium</i>	Black haw
<i>Viburnum rafinesquianum</i>	Arrowwood
<i>Xanthoxylum americanum</i>	Prickly ash

Fern species

<i>Adiantum pedatum</i>	Maidenhair fern
<i>Athyrium felix-femina</i>	Lady fern
<i>Botrychium virginianum</i>	Rattlesnake fern
<i>Dryopteris spinulosa</i>	Wood fern

Herbaceous plant list

<i>Agastache scrophulariaefolia</i>	Purple giant hyssop
<i>Allium tricoccum</i>	Wild leek
<i>Amphicarpa bracteata</i>	Hog-peanut
<i>Aplectrum hyemale</i>	Puttyroot or Adam and Eve
<i>Apocynum androsaemifolium</i>	Spreading dogbane
<i>Aquilegia canadensis</i>	Columbine
<i>Arisaema atrorubens</i>	Jack-in-the-pulpit
<i>Arisaema dracontium</i>	Green dragon

Herbaceous plant list - continued

<i>Aster sagittifolius</i>	Arrow-leaved aster
<i>Aster shortii</i>	Short's aster
<i>Brachyelytrum erectum</i>	Long-awned wood grass
<i>Bromus purgans</i>	Woodland brome
<i>Campanula americana</i>	Tall bellflower
<i>Carex</i> sp.....	Sedge species
<i>Caulophyllum thalictroides</i>	Blue cohosh
<i>Cirsium altissimum</i>	Tall wood thistle
<i>Cryptotaenia canadensis</i>	Honewort
<i>Cypripedium calceolus</i> var. <i>pubescens</i>	Large yellow lady's slipper
<i>Desmodium glutinosum</i>	Pointed tick-trefoil
<i>Elymus villosus</i>	Silky wild rye
<i>Eupatorium purpureum</i>	Purple Joe Pye weed
<i>Festuca obtusa</i>	Nodding fescue
<i>Geranium maculatum</i>	Wild geranium
<i>Geum canadense</i>	White avens
<i>Hydrophyllum virginianum</i>	Virginia waterleaf
<i>Hystrix patula</i>	Bottlebrush grass
<i>Impatiens capensis</i>	Spotted touch-me-not
<i>Impatiens pallida</i>	Pale touch-me-not
<i>Lactuca</i> sp.....	Wild lettuce species
<i>Mnispermum canadensis</i>	Canada moonseed
<i>Muhlenbergia tenuiflora</i>	Slender satin grass
<i>Orchis spectabilis</i>	Showy orchis
<i>Osmorhiza longistylis</i>	Smooth sweet cicely
<i>Phryma leptostachya</i>	Lopseed
<i>Pilea pumila</i>	Clearweed
<i>Podophyllum peltatum</i>	Mayapple
<i>Polygonatum</i> sp.....	Solomon's seal species
<i>Ranunculus abortivus</i>	Kidneyleaf buttercup
<i>Ranunculus septentrionalis</i>	Swamp buttercup
<i>Sanguinaria canadensis</i>	Bloodroot
<i>Sanicula</i> sp.....	Snakeroot species
<i>Smilacina racemosa</i>	False Solomon's seal
<i>Solidago</i> sp.....	Goldenrod species
<i>Trillium recurvatum</i>	Prairie trillium
<i>Urtica procera</i>	Stinging nettle
<i>Uvularia grandiflora</i>	Bellwort
<i>Viola</i> sp.....	Yellow violet species

PRESERVE: _____
AREA _____
DATE _____

HERBACEOUS PLANTS

*Abutilon theophrasti	A. sylvaca
Acalypha rhomboides	A. cuneata
A. virginica	A. verticillata
*Achimille millefolium	A. herbata
Acrida alvissima	A. lanuginosa E
A. subnuda	A. viridiflora
A. bicarolina	*Asparagus officinalis
Accriss calarus	Aster triidarius T
Actaea alba	A. _____
A. rubra	Aster sp.
Actinomeris alternifolia	Astragalus canadensis
Agastache nepetoides	Atriplex hastata
A. scopulorum-aeifolia	A. parvula
Agoseris cuspidata	Aureolaria flava
Agrimonia gryposepala	A. grandiflora
A. parviflora	A. pedicularia
A. pubescens	Baptisia leucantha
A. trisellata	B. leucophaea
Alectris fatiosa	Barbarea vulgaris
Alysum subcordatum	Barbora virginica
A. triviale	*Bellamanda chinensis
*Alliaria officinalis	Berteroa incana
Allium canadense	Bidens
A. cernuum	B. _____
A. tricocum	B. _____
*Alyssum alyssoides	Bignonia ciliata
Anarrachis albus	B. hirsuta
Anemosa artemisiifolia	Boerhaavia cylindrica
A. canadensis	Bolonia asteroides
Anemose occidentalis	Brassica alba
A. occidentalis	Callitriche heterophylla
Anthracaris canadensis	C. palustris
A. occidentalis	Calogogon pulchellus
Antennaria salix	Caltha palustris
A. neglecta	Camassia scyllioides
A. neotoloca	*Camelina microcarpa
*Antennaria folia	Campanula americana
*Anthemis coccolia	C. rotundifolia
Aplos americana	C. uliginosa
*Apocynum androsaemifolium	*C. zanonuloides
Apocynum hypnale	*Cernalis saciva
*A. sibiricum	*Capsella bursa
Aquilegia canadensis	Cardamine bulbosa
*Arabis canadensis	C. denigralis
A. dentata	C. pernyiivarica
A. laevigata	*Cardaria craba
A. lyrata	*Cassia craba
A. pyracarpa	Cassia fasciculata
*Aralia nudicaulis	C. hebecarpa
A. racemosa	Castilleja coccinea
*Arctium minus	C. sessiliflora E
Arnica laciniiflora	Caulophyllum thalictroides
A. stricta	*C. racemulosa
*A. serpyllifolia	*C. maculosa
Arisaema triphyllum	Cerastium brachypodium
A. dracontium	C. rupestris
*Astragalus canadensis	C. vulgatum
Artemisia biennis	Ceratophyllum demersum
A. canadica	Chenopodium procumbens
A. dracunculoides E	Chenopodium glaucum
A. dracunculoides	*Chelicidium majus
A. ludoviciana	Chelone glabra
A. serrata	Chenopodium
*A. pontica	C. chinensis
Asterium canadense	*Chrysanthemum balsamita
Asclepias	*Ch. leucanthemum
A. amplexicaulis	*Ch. chlorium integrum
A. incarnata	Cicuta bulbifera
A. physalocoides	C. maculata
A. perfoliatus	Circaea quadrifida
A. quadrifidus	Christian alvissima
A. sulliverti	C. discolor
	C. hillii
	C. melican
	*C. arvensis
	*C. vulgare
	Claytonia virginica
	Clematis virginiana
	Collinsia verna
	Collinsia linearis
	Comandra umbellata
	*Comelia coccinea
	*Cortugia orientalis
	*Cornularia majalis
	Coronopus americanus
	C. sibiricus
	C. arvensis
	Corallorhiza maculata T
	Carex palmata
	*C. grandiflora
	Coryalis aurea E
	Cryptotaenia canadensis
	Cuscuta foeniculoides
	Cuscuta
	*Cyclotoma atriplicifolia
	*Cyclopentium officinale
	*C. pedicem calceolus
	C. candidum E
	*C. stramonium
	Cyperus carova
	Dantheria lacinata
	Descurainia brachycarpa
	D. sophia
	Desmodium canadense
	D. ciliatum
	D. dilleni
	D. glutinosum
	D. illinoense
	Dicentra cucullaria
	D. canadensis
	Dioscorea villosa
	*Diplopodus marialis
	Dipsacus sylvestris
	Dodecatheon meadia
	Draba repens
	Dracocephalum parviflorum
	Echinops tyris lobata
	*Echinum vulgare
	Elisia nycteleo
	Eriophorum
	E. sp.
	Eragrostis intermedia
	Eragrostis
	E. sp.
	Eryngium yuccifolium
	Erythraea chelidonioides
	E. inoplicum
	Erythronium albidum
	Eupatorium
	E. sp.
	Euphorbia
	E. sp.
	Euphorbia prostrata
	Euphorbia americana
	E. virginiana
	*Euphorbia gracilis
	Galinsoga ciliata
	Galium trifidum RARE
	G. sp.
	G. sp.
	Gaura biennis
	Gentiana
	Gentiana maculata
	*G. sibirica
	Gentiana
	G. sp.
	Genum canadense
	G. laciniatum
	G. strictum
	G. triflorum
	G. verna
	*Glaucina hederacea
	*G. heterophylla
	Goophalium obtusifolium
	Goodyera pubescens
	Gratiola neglecta
	Grindelia squarrosa
	Haberaria lacera
	H. leucophaea E
	H. psychodes E
	H. vtridus
	Hedera virginiana
	Hebeona hispida
	H. pullegruoides
	Helianthus autumnale
	Helianthemum canadense
	H. bicellidus
	Helianthus

FREQUENCY RATINGS: 1-5, with 1 denoting

rare and 5 denoting abundant

pubescens

Helleopsis bellanthoides
H. scabra
Hemerocallis flava
Hepatica acutiloba
H. americana
Hesperis matronalis
Heuchera richardsonii
Hibiscus tiliaceus
Hieracium canadense
H. Gronovii
H. longipilum
H. scabrum
Houstonia lanceolata
Hydrophyllum appendiculatum
H. virginianum
Hypericum
H.
Hypoxis nirsuta
Ipomoea biflora
I. pallida
Iodanthus pinnatifidus
Ipomoea purpurea
Iris strevelii
Ianthus brachiatus
Isopyrum bicoloratum
Iva ciliata
I. xanthifolia
Jeffersonia diphylla
Juglans arvensis
Krigia biflora
Kuhnia eupatorioides
Lacuna
L.
L.
Laportea canadensis
Lappula echinata
Lathyrus latifolius
L. atrolobatus
L. venosus
L.
Lecnea leggerii
L. stricta
L. tenuifolia
L. villosa
Lema minor
L. triscida
Leonurus cardiaca
Lepidium virginicum
L. caespitose
L. densiflorum
L. perfoliatum
Lespedeza capitata
Leucurus aspera
L. pycnostachya
L. cylindracea
L. spicata
Lilium superbum E
L. umbellatum
Lilaria canadensis
L. dalmatica
L. minor
L. vulgaris
Lindernia dubia
L. anagallidea
Lilium sulcatum
L. perenne
L. usitatum
Lilapsis lilifolia
Lithospermum angustifolium
L. canescens
L. croceum
L. arvense
Lobelia cardinalis
L. inflata
L. kalmii
Lepostachys sibirica
L. spicata
Ludwigia palustris
L. polycarpa
Lupinus perennis
Lycetis alba
L. dioica
Lycopus americanus
L. uniflorus
L. virginicus
Lysimachia
L.
L.
Lycium alatum
L. salicaria
Maianthemum canadense
Malicaria naticaroides
Medicago lupulina
M. sativa

**Mellilotus alba*
M. officinalis
Mencha canadensis
M. piperita
M. spicata
Mertensia virginica
Mimulus ringens
M.
Mirabilis nyctaginea
Mitella diphylla
Mollugo verticillata
Monarda fistulosa
Monotropa uniflora
Myosotis verna
Y. scorpioides
Myriophyllum spicatum
Nasturtium officinale
Nepeta cataria
Nuphar advena
Nymptoides peltata
Oenothera perennis E
O.
Oenotherium luspidiassimum
Orchis spectabilis
Oreithogalum umbellatum
Orobancha uniflora
Osmorhiza claytonii
O. longistylis
Oxalis europae
O. stricta
O. violacea
Oxypolis rigidior
Parax quinquefolius T
Parietaria pennsylvanica
Parnassia glauca
Paronychia canadensis
Pastinaca sativa
Pedicularis canadensis
P. lanceolata
Peristemon hispidus
Penthorum sedoides
Perideridia americana
Petalostemon candidum
P. purpureum
Pullox
P.
P.
Pharoma leptostachya
Physalis heterophylla
P. subglabrata
P. virginiana
Phytostegia speciosa
P. virginiana
Phytolacca americana
Pilea pumila
Plantago
P.
P.
Polygonatum peltatum
Polanisia trachysperma
P. graveolens
Polygonum reptans
Polygala
P.
P.
Polygonatum commutatum
P. pubescens E
Polygonella articulata
Polygonum
P.
P.
Polytaenia nuttallii
Pontederia cordata
Portulaca oleracea
Potamogeton
Potentilla
P.
P.
Pranthes alba
P. aspera
P. racemosa
Proserpinaca palustris
Prunella vulgaris
Pycnanthemum flexuosum
P. pilosum
P. virginianum
Pyrola americana E
P. elliptica
P. secunda E
Ranunculus
R.
R.
Rubida purpurea
R. columifera
Rorippa hispidula

R. islandica
R. sessiliflora
Rudbeckia hirta
R. serotina
R. laciniata
R. submontana
R. triloba
R. sullivancii
Ruellia humilis
Rumex
R.
R.
Sagittaria ovirostrata
S. cuneata
S. latifolia
**Salvia pestifer*
Salvia reflexa
S. sylvestris
Sanguinaria canadensis
Sanicula canadensis
S. gregaria
S. marilandica
**Saponaria officinalis*
**S. vaccaria*
Saxifraga pennsylvanica
**Scleranthus annuus*
Scrophularia lanceolata
S. marilandica
Scutellaria
S.
S.
**Sedum triphyllum*
Senecio
Sicyos angularis
Silene
S.
S.
Silphium integrifolium
S. laciniatum
S. perfoliatum
S. terrebichinaceum
**Sisymbrium altissimum*
**S. loeselii*
**S. officinale*
Sisyrinchium montanum E
Sium suave
S. stellata
Smilax herbacea E
Solanum
S.
S.
Solicago
S.
Sonchus
S.
S.
Spartanum eurycarpum
Spiranthes cernua
Spirodela polymiza
Stachys arenicola
S. aspera
S. hispida
S. tenuifolia
Stellaria
S.
S.
Stylopogon
Sullivantia renifolia T
Symplocarpus foetidus
Synthyris bullii
Taraxia integerrima
Taraxacum vulgare
Taraxacum vulgare
Teucrium virginiana
Teucrium canadense
T. occidentale
Thalictrum
T.
T.
Thaspium parviflorum
T. trifoliatum
Thlaspi arvense
Thlaspi bracteata
T. ohianensis
T. virginiana
**Tragopogon pratensis*
Triadenum Fraseri
Trianthema borealis T
Trifolium
T.
T.
Trillium giesonii
T. recurvatum
T. nivale

Tridax perfoliata
Triostema aemula
T. illinoense
T. perfoliatum
Triflora bianchophora
Urtica procera
Urticularia vulgaris
Valeriana grandiflora
Valeriana ciliata
Rhaphanistrum blattaria
V. thapsus
Verbera
V.
V.
Veronica fasciculata
V. alissima
Veronica
V.
V.
Veronicastrum virginicum
Viola
V.
V.
Vinca minor
Viola canadensis E
V.
V.
V.
Xanthoxylum commune
Xyris tortia
Zizia aurea
Z. aurea

* Introduced species

E - Endangered in Illinois

T - Threatened

ADDITIONAL SPECIES



















