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

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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 occurrances under 1% are lady fern (*Athyrium felix-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 (*Zanthoxylem 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.

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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

Species	Basal Area	Relative Dominance
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

Species	Density	Relative Density
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

Species	Density	Relative Density
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 m^2 square plot, 20 plots total

Species	Absolute Frequency	Relative Frequency
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
Zanthoxylem americanum	5	0.70
TOTAL	715	99.99

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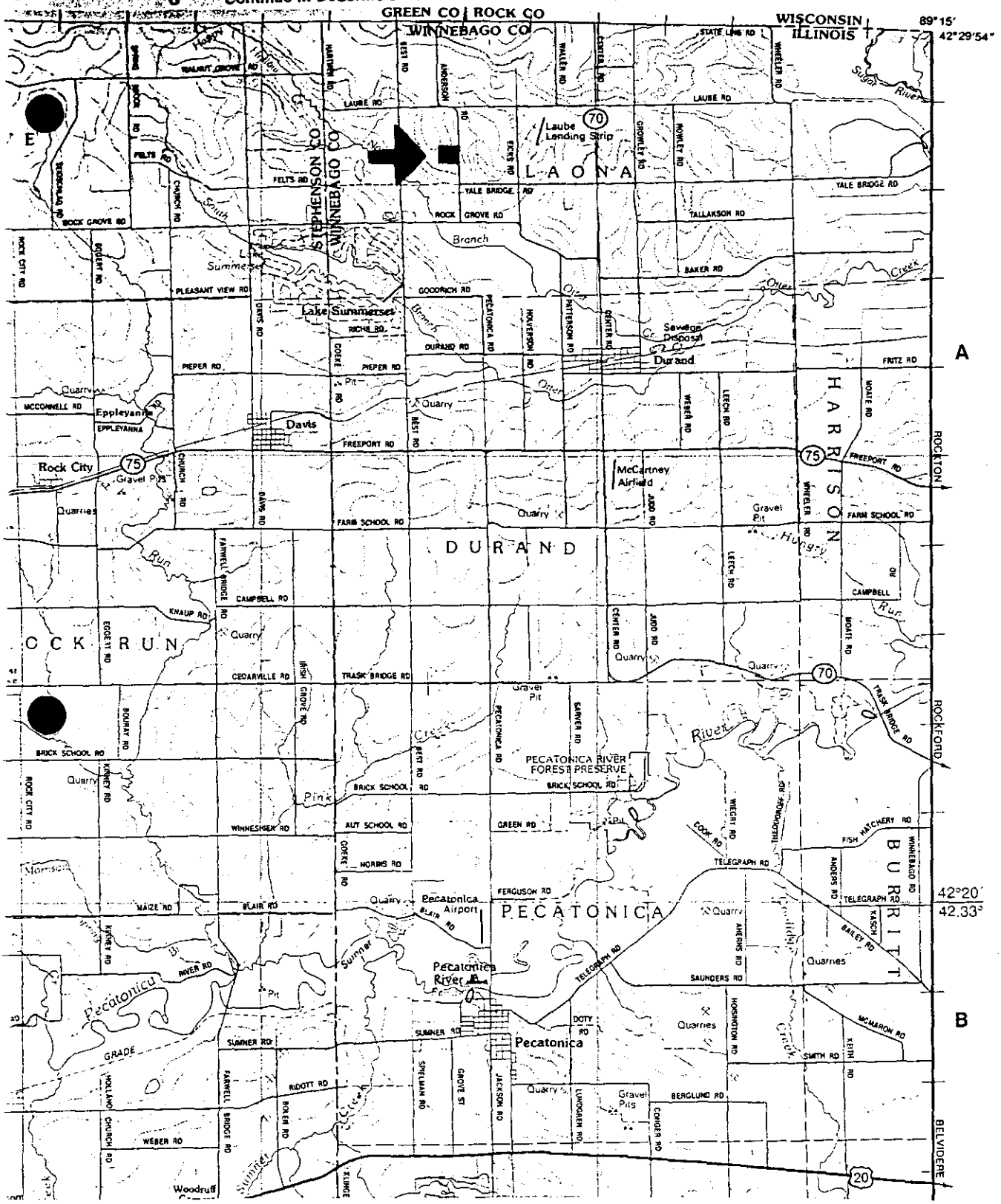

ILLINOIS ATLAS & GAZETTEER

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

SECOND EDITION
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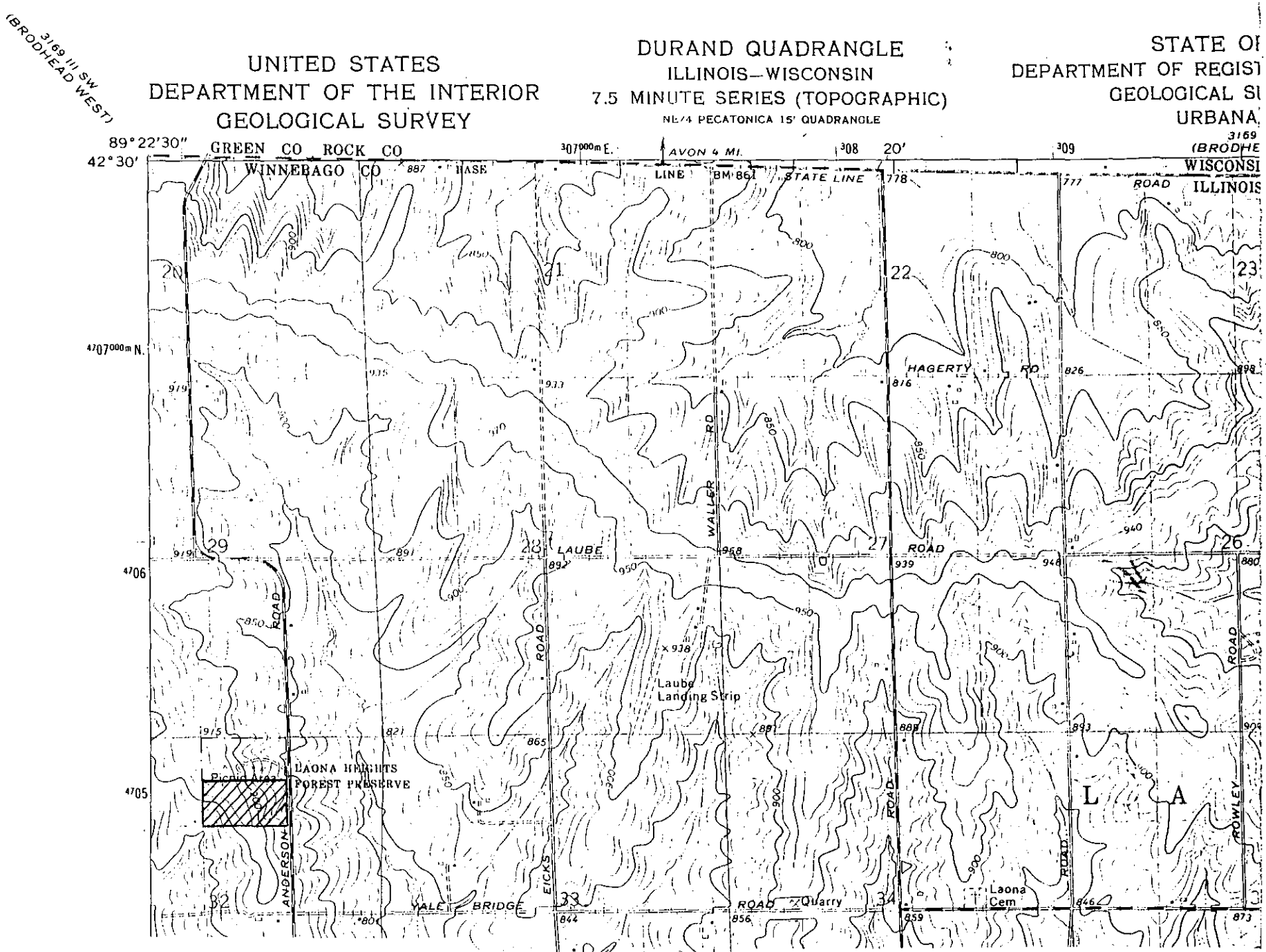

Laona Heights Nature Preserve

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

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Laona Heights Forest Preserve,
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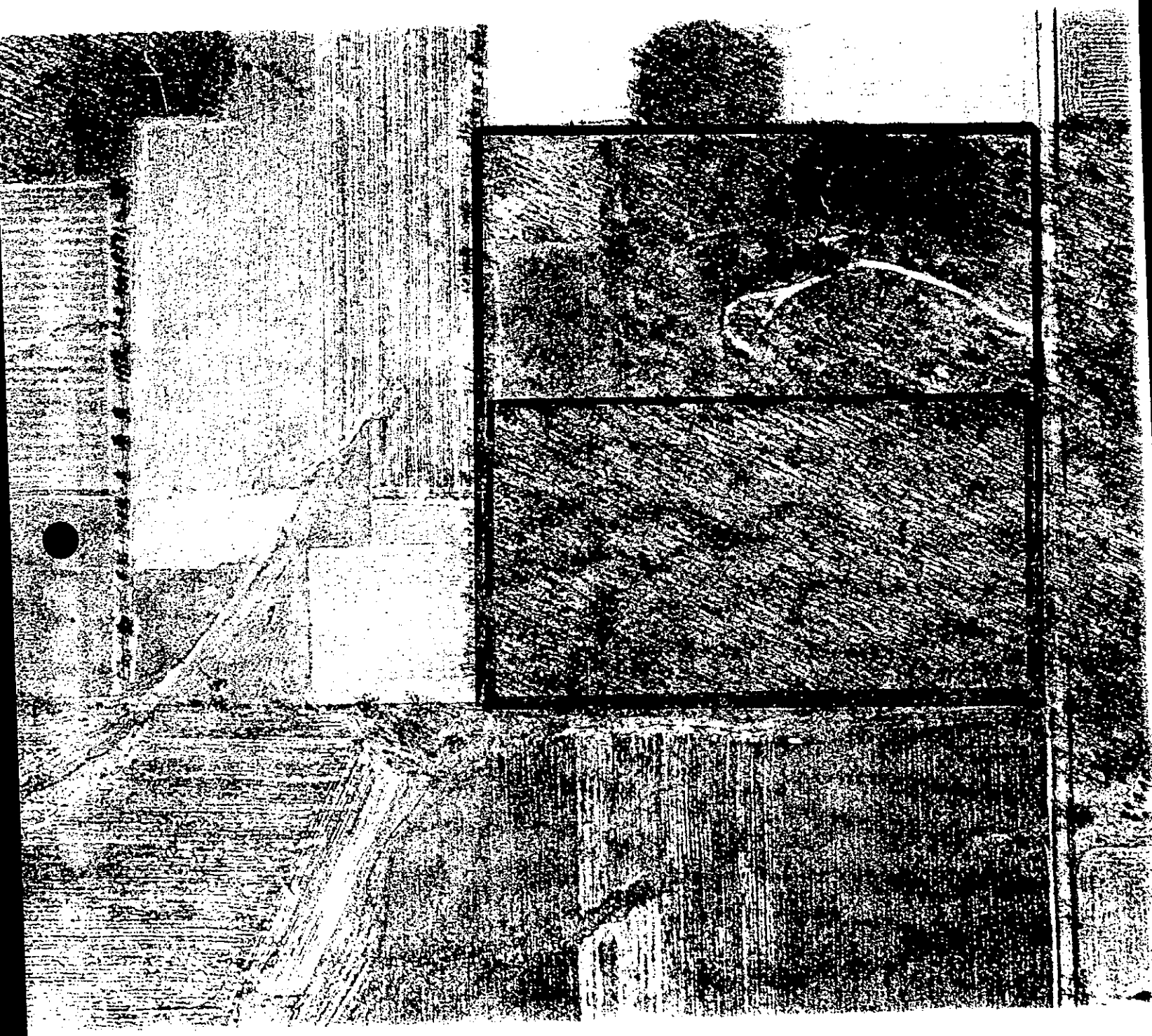


N

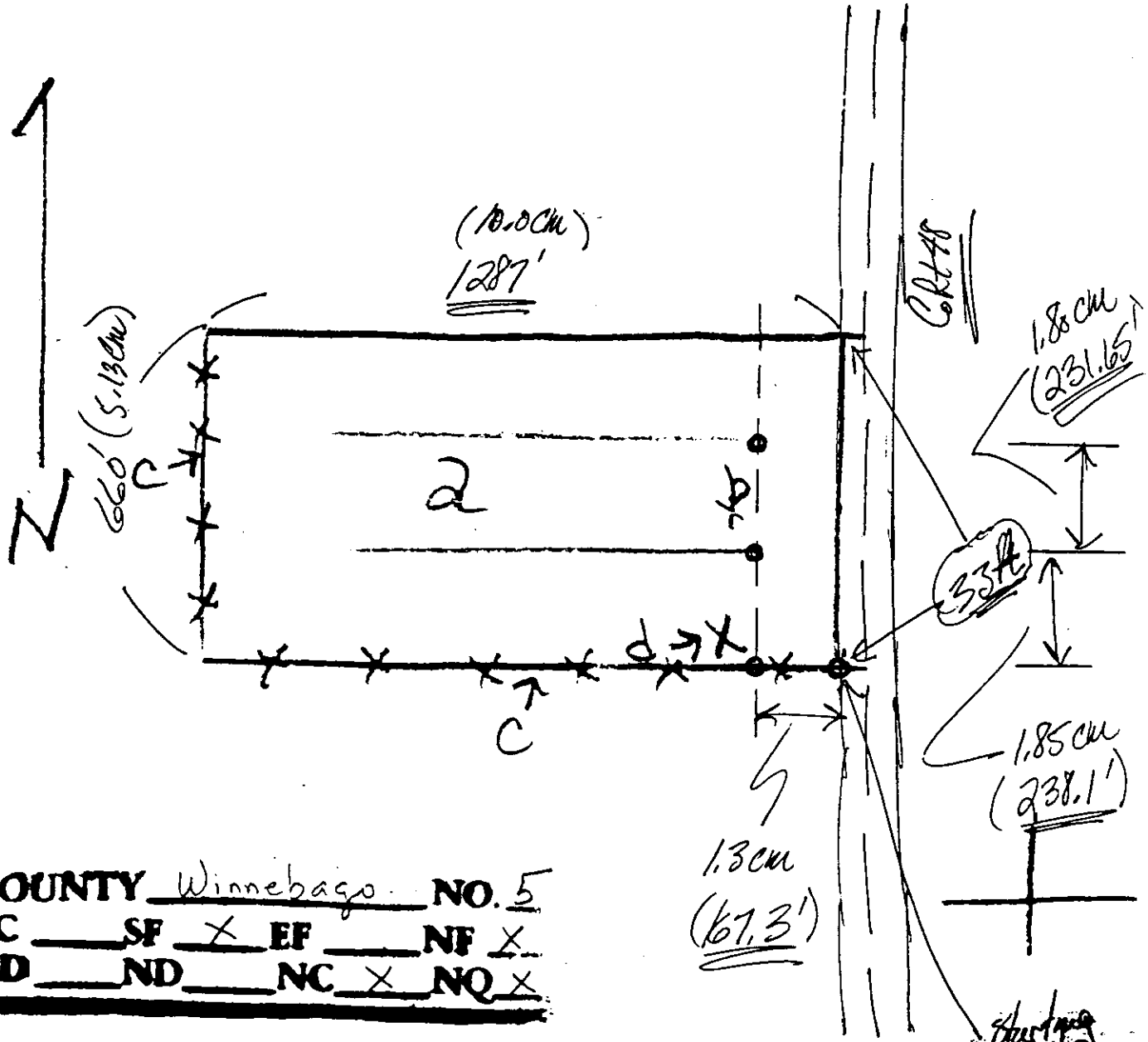
Key:
Laona Heights Forest Preserve
Laona Heights Nature Preserve

10/79... cc: @ 200% for fieldwork
(as per 7/80 Wildlefestival project) Jaa

Laona Heights

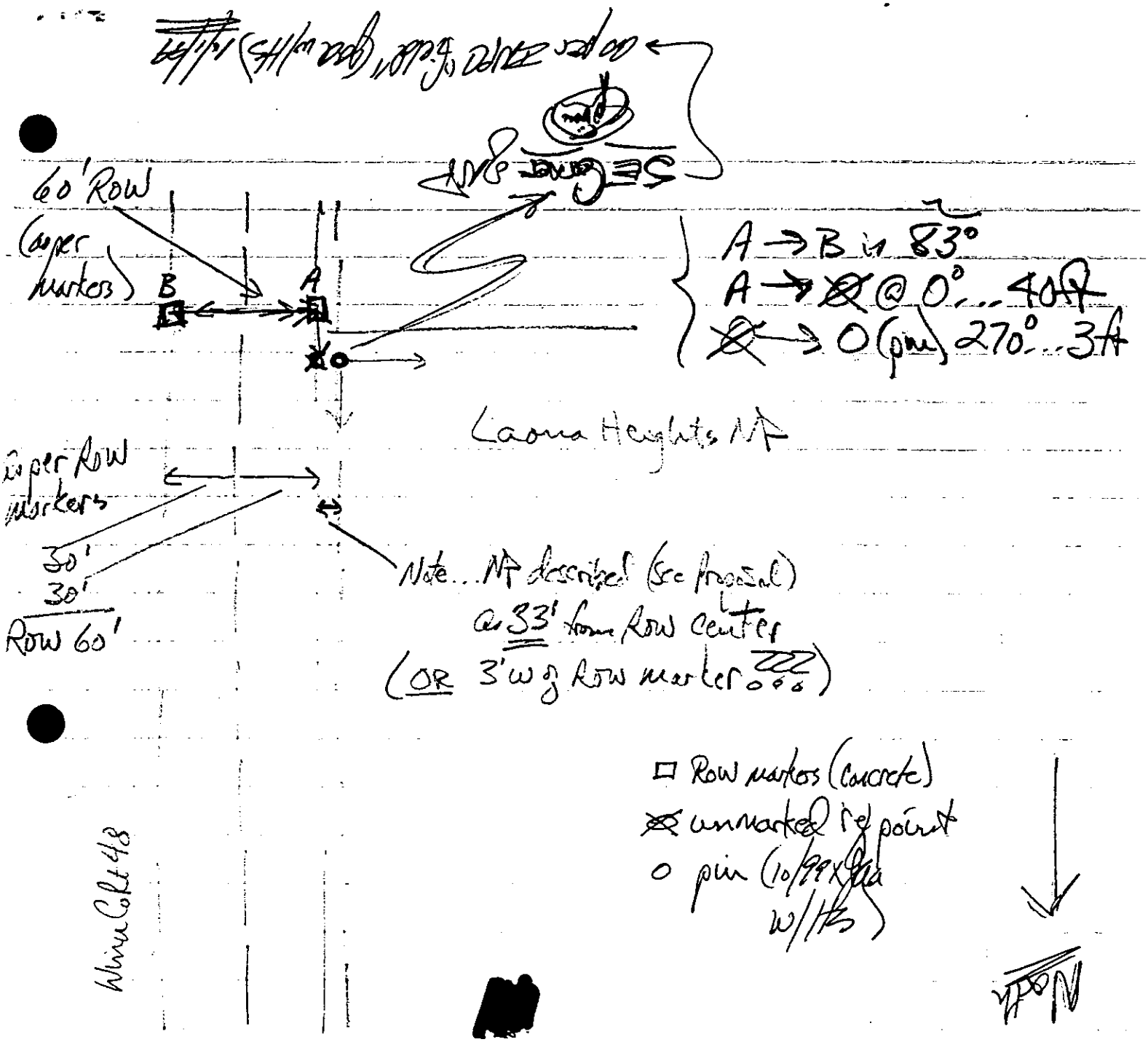
NPC/AI/Jaa
6/79
for Tara G
as per request!
cc: of "Mylar"

T29N R10E 4th
S½ of NW¼ of NE¼ of Sec 32

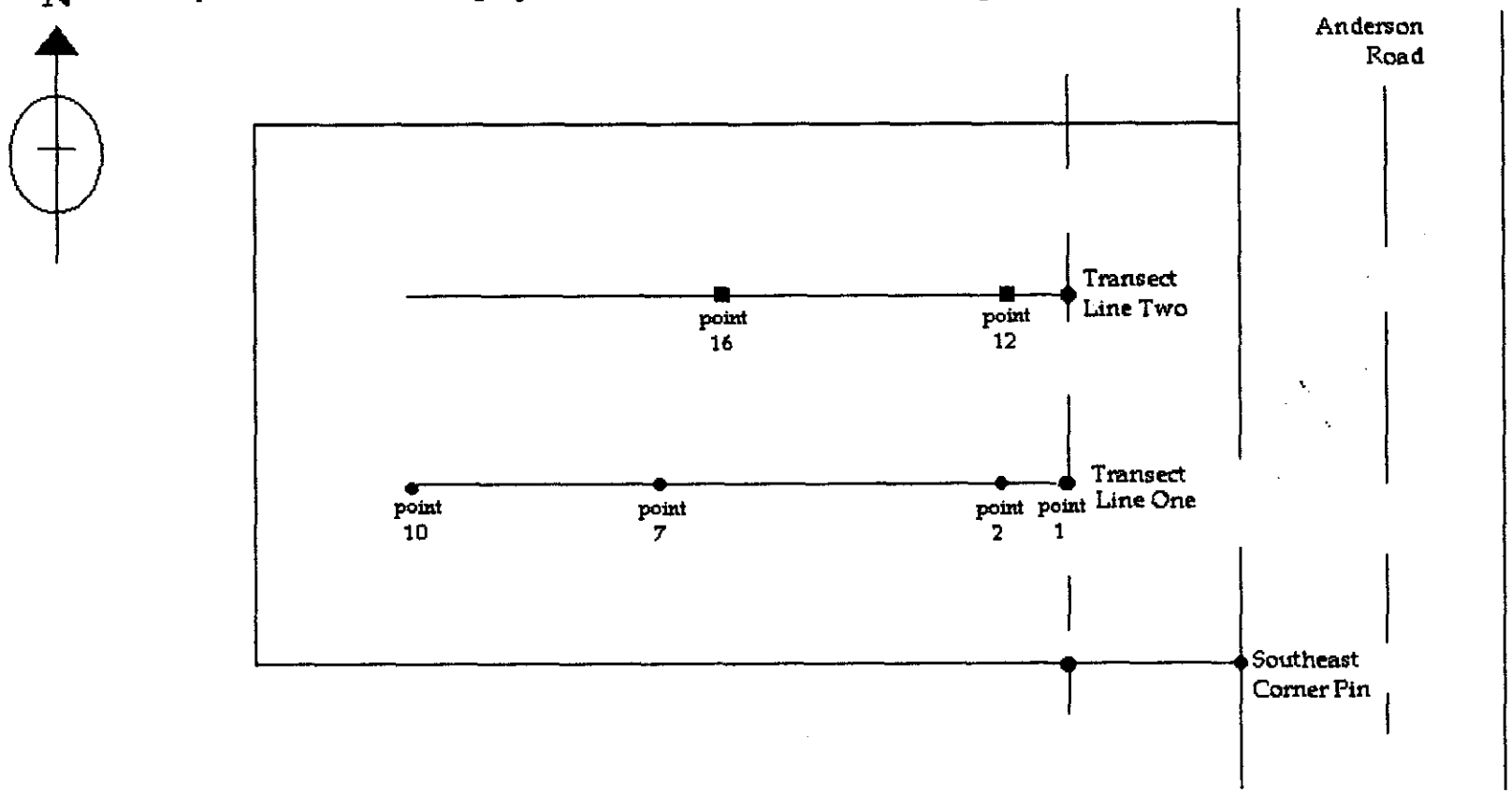


COUNTY Winnebago NO. 5
C ____ SF X EF ____ NF X
AD ____ ND ____ NC X NQ X

Start here


60' Row
(copper markers)
B
A
A → B is 83°
A → ⊗ @ 0°...40ft
⊗ → O (pin) 270°...3ft
Laona Heights Mt
Copper Row markers
30'
30'
Row 60'
Note...Mt described (see proposal)
@ 33' from Row center
(OR 3' w/g Row marker)
Row markers (concrete)
unmarked ref point
pin (10/99 x 9/a w/HS)
Wine Colt 48
N

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.

H. Hasenyager 2000

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

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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 brough 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.

ACQUISITON AND HISTORY OF LAONA HEIGHTS FOREST PRESERVE

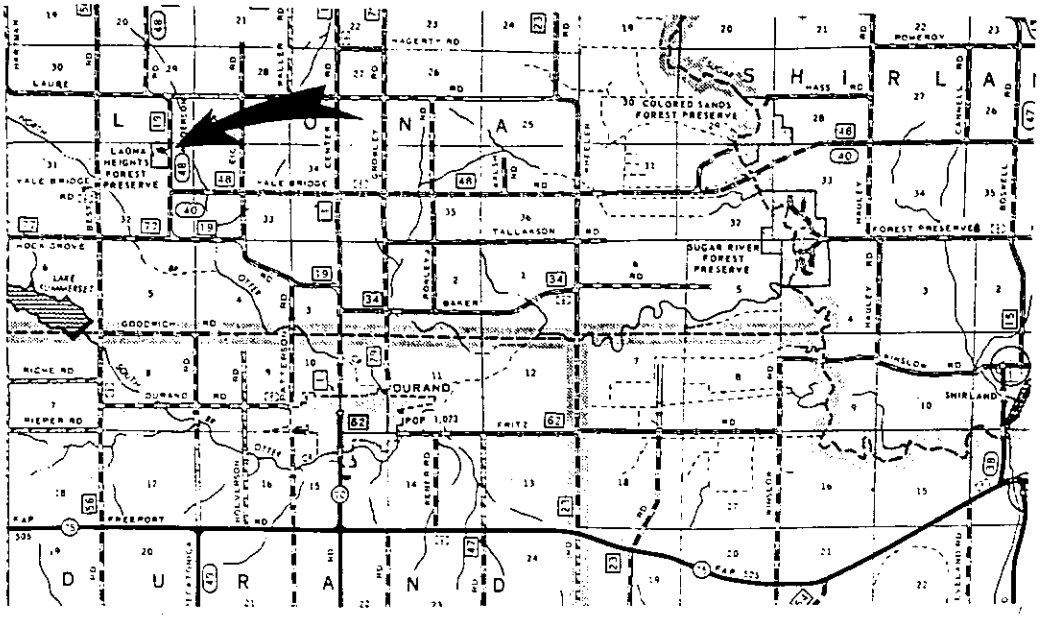
The original owner of the land that comprises the Laona Heights Forest Preserve was John Lockwood who acquired the 40 acre tract on December 12, 1845. An atlas published in 1871 indicates that the north twenty acres of the tract belonged to E. (Let) Norton and the south 20 belonged to A. McDonald. The 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.

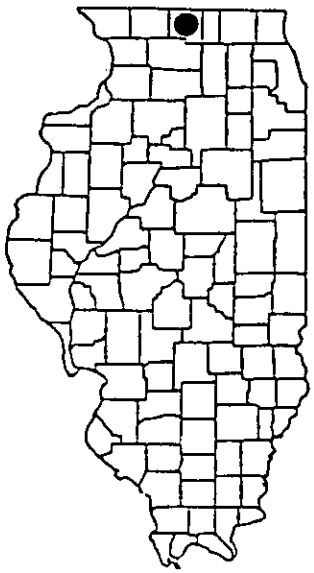
Shortly prior to its purchase by the Forest Preserve District the north twenty was acquired by two Durand men, Millard Mann and William "Billy" Walsh. These men cut off some of the timber.

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

Winnebago County

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 understory 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

LAONA FOREST PRESERVE

prepared by
George C. Poe
1975

8th in series of 12

LOCATION: NW¼ of NE¼, 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

3) Reproduction

Bitternut hickory
Red elm
Ash

B. Volume (mature trees only)

This timber contains about 5000 board feet per acre. 13% of the volume is contained in dead trees still standing. 13% of the volume is in trees of declining health or near death.

C. Condition and Size Distribution

[illegible] trees are [illegible] of the most [illegible] in declining health, [illegible] trees have good form. [illegible] there are several very large ash and black walnut trees.

The diameter class distribution is quite poor, showing a concentration of large 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.

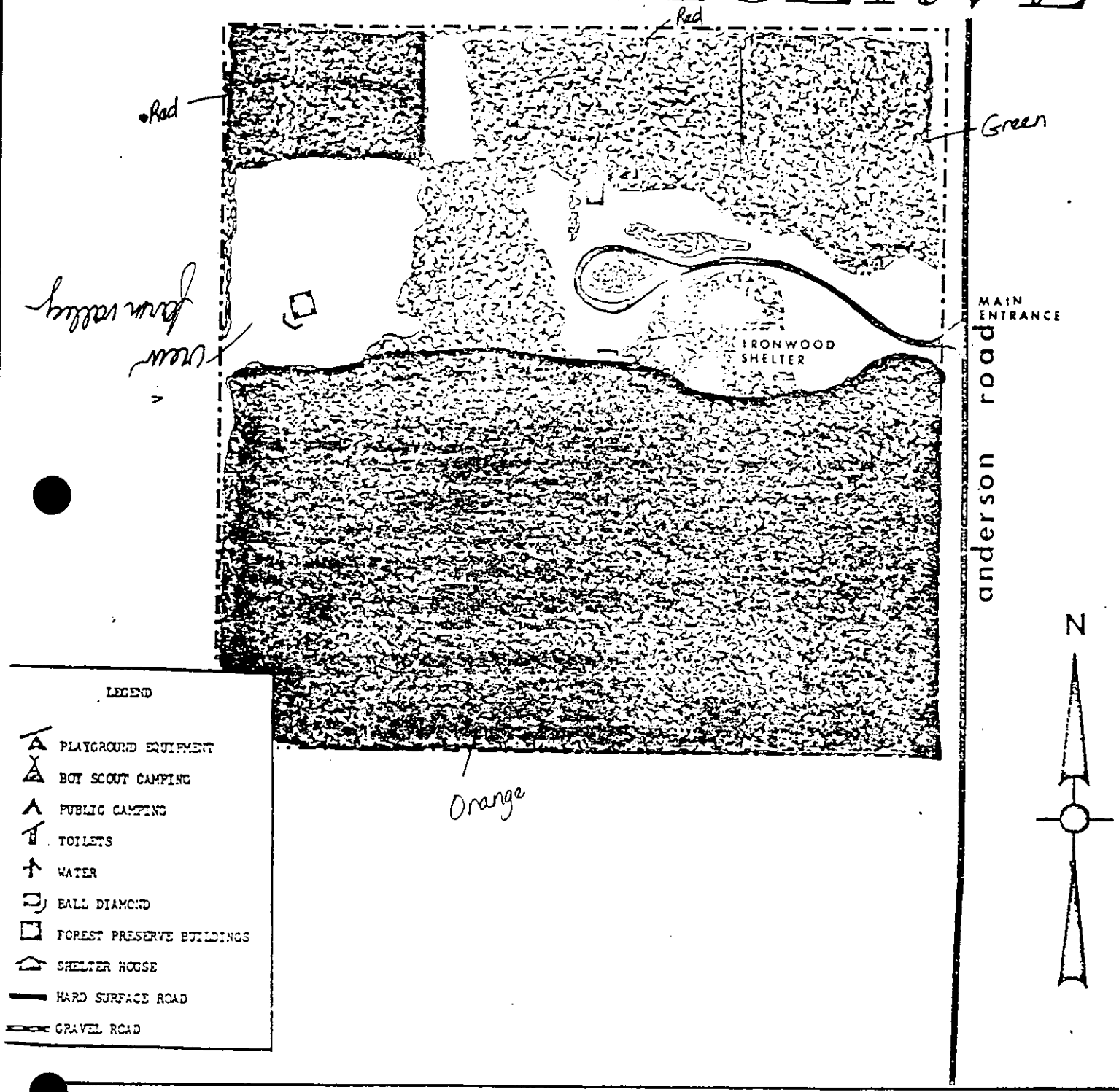
MAP COLOR: GREEN

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.

LAONA HEIGHTS FOREST PRESERVE



Laona 40 acres

ILLINOIS NATURAL AREAS INVENTORY
MAIN DATA FORM

BASIC INFORMATION (1) Index no. 9[illegible]

(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
I	a	Grade B dry-mesic upland forest

(6) Exceptional features and notable features

a. Cat	*Lgd	*E/N	b. Description of feature
II	b	N	Aplectrum hyemale (mesic Forest)

(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 (13 a)

(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	22	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 alba[195] - Fraxinus americana[101] - Tilia americana[267]

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 1	Impact 2	Impact 3	Effort 1	Effort 2	Effort 3	Effort 4
Walnut thieves			X			X	
Mowing of trails			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"

Loona 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')

SUPPLEMENTAL MATERIALS

(40) Species lists:

1. X Woody plants
2. X Ferns and fern allies
3. X Summer birds
4. X Amphibians, reptiles, and mammals
5. ___ Other species list

(41) Sampling forms:

1. X Tree basal area
2. X Tree density
3. X Sapling and shrub density
4. ___ Prairie frequency
5. ___ Other sampling form

(41') Other materials:

1. ___ Topographic map copy
2. X Site map ASCS 1970
3. X Significant feature forms: (I) II III IV V VI VII
4. X Other materials INPC dedication proposal

(42) Literature citations: 62

Curtis, J.T. Vegetation of Wisconsin, Madison

*Items continued from preceding pages:

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

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 trials 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

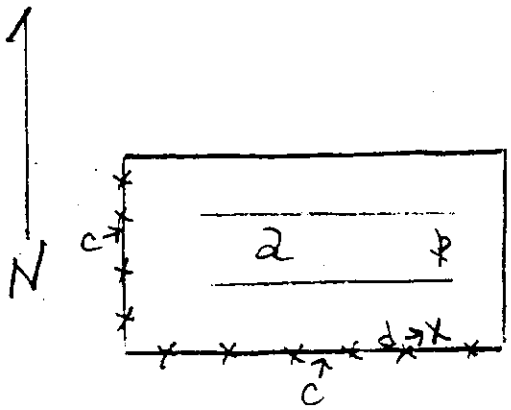
DISTURBANCE FEATURES

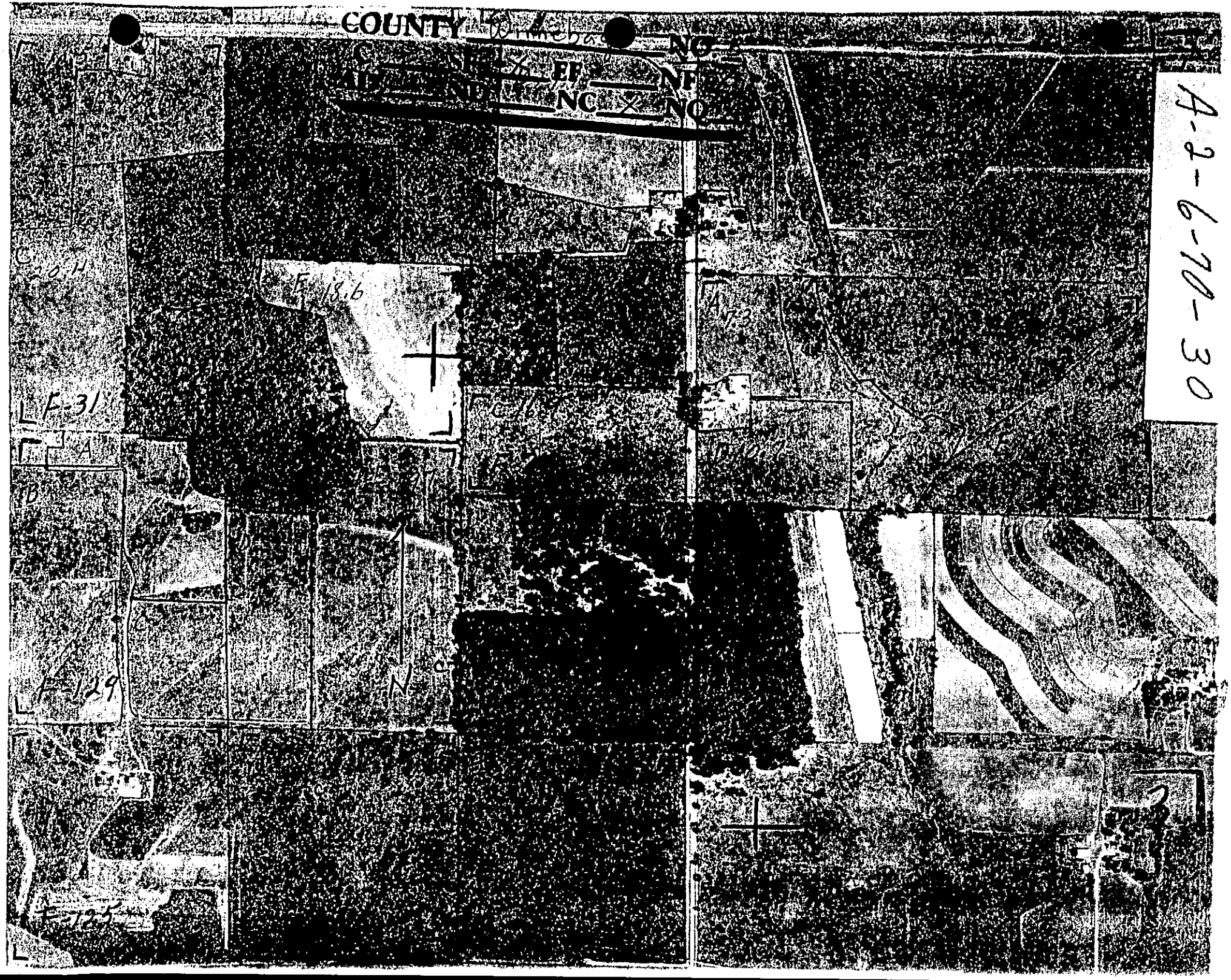
Lgd	A/N	Description of disturbance feature
c	A	Fences.
d	N	blow-down area from tornado in 1950's

ADDITIONAL NOTES:

Laona Heights

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




COUNTY
NC
EF
NF
NC
NO
F-18.6
F-31
A
B
F-129
F-125
N
A-2-6-70-30

ILLINOIS NATURAL AREAS INVENTORY
FOREST SAMPLING
TREE BASAL AREA (m^2/ha)

3 BAF Metric Wedge Prism
Number of points: 20

Investigator Hanty and Paulson
Date 16 August 1977

County Winnebago No. 5 a
Stand No. ____

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

Tally by Sampling Point

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOT stems	BA m^2/ha	REL DOM %
Quercus rubra																					12	1.8	6.3
Quercus alba																					40	6.0	21.2
Fraxinus americana																					40	6.0	21.2
Juglans nigra																					22	3.3	11.6
Celtis occidentalis																					2	0.3	1.0
Ulmus rubra																					22	3.3	11.6
Carya ovata																					1	0.15	0.5
Carya cordiformis																					1	0.15	0.6
Tilia americana																					46	6.9	24.3
Prunus serotina																					2	0.3	1.0
Ostrya virginiana																					1	0.15	0.5
																							99.7
TOTAL	15	11	6	5	12	15	12	[illegible]	11	10	4	9	9	10	8	9	12	7	12	5	[illegible]9	25.05	

ILLINOIS NATURAL AREAS INVENTORY
FOREST SAMPLING
TREE DENSITY (stems/ha)

0.025 hectare circular plot
Number of plots: 20

Investigator Harty and Paulson County Winnebago No. 5 b
Date 16 August 1977 Stand No. ____
Conversion factor: 2
(Total stems → Stems/ha)

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	%
Quercus rubra	I	I	I	~~IIII~~		I			I			9	18	8.9
Quercus alba	II		~~IIII~~	IIII	IIII	I						16	32	15.8
Fraxinus americana	I	I	II	IIII	I	II	III					14	28	13.9
Tilia americana	IIII	~~IIII~~ II	~~IIII~~ ~~IIII~~ I	~~IIII~~ ~~IIII~~ III	III	II	I					36	72	35.6
Ulmus rubra	~~IIII~~ II	IIII	~~IIII~~	II								18	32	17.8
Juglans nigra		I		III	II	I	I					8	16	7.9
														99.9
TOTAL	15	13	24	26	10	7	5	0	1			101	202	

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

0.00~~1~~ 2 hectare circular plot
Number of plots: ~~10~~ 20

Investigator Harty and Paulson
Date 16 August 1977
Conversion factor: ~~100~~ 25
(Total stems → Stems/ha)

County Winnebago No. 5 c
Stand No. 1 Sheet 1 of 2

Species	Tally by Sampling Plot 1 ~~1~~	2 ~~2~~	3 ~~3~~	4 ~~4~~	5 ~~5~~	6 ~~6~~	7 ~~7~~	8 ~~8~~	9 ~~9~~	10 ~~10~~	TOTAL stems	DEN st/ha	REL DEN %
Xanthoxylum americanum	II		III							II	5		
Cornus racemosa	I										1		
Ulmus rubra	I	II				II	I	I			7		
Fraxinus americana	II		I							~~IIII~~	8		
Prunus serotina	IIII					III					7		
Carya cordiformis	I	II		II	I		I			I	5		
Prunus virginiana	I				~~IIII~~						6		
Ribes missouriensis	I										1		
Celtis occidentalis			I		I						2		
Tilia americana				II							2		
Corylus americana						II					2		
TOTAL	13	4	5	4	7	7	2	1	0	6			

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

0.00~~1~~ 2 hectare circular plot
Number of plots: ~~10~~ 20

Investigator Fahrig and Paulson
Date August 16, 1977
Conversion factor: ~~100~~ 25
(Total stems → Stems/ha)

County Winnebago No. 5 c
Stand No. 1 Sheet No. 2 of 2

Species	Tally by Sampling Plot 11~~8~~	12~~4~~	13~~8~~	14~~8~~	15~~20~~	16~~12~~	17~~14~~	18~~16~~	19~~18~~	20	TOTAL stems	DEN st/ha	REL DEN %
Xanthoxylum americanum											5	125	5.3
Cornus racemosa	~~IIII~~ ~~IIII~~ III										14	350	14.9
Ulmus rubra		I			I	I		II	SEE		12	300	12.8
Fraxinus americana											8	200	8.5
Prunus serotina											7	175	7.4
Carya cordiformis	II	II				III		II	SHRUBS	III	20	500	21.3
Prunus virginiana											6	150	6.4
Ribes missouriensis											1	25	1.1
Corylus americana											2	50	2.1
Celtis occidendalis							I				3	175	3.2
Tilia americana				II							4	100	4.2
Rubus allegheniensis	I				I						2	50	2.1
Rubus occidentalis		I	~~IIII~~ I				I				7	175	7.4
Juglans nigra					I						1	25	1.1
Quercus rubra						I					1	25	1.1
Viburnum prunifolium							I				1	25	1.1
													100.00
TOTAL	16	3	6	2	3	5	3	4	0	31	94	2350	

ILLINOIS NATURAL AREAS INVENTORY
WOODY PLANT LIST

Area Name Laurel Heights Forest Preserve
County Winnebago No. 15
Section 32 T. 29N R. 10E
Investigator Harty and Poulson
Date 16 August 1977

Annotations

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

L. Local
A. Adventive
N. Naturalized

2 Acer negundo
___ Acer nigrum
___ Acer saccharinum
2 Acer saccharum
___ Acer rubrum
___ Aesculus glabra
___ Ailanthus altissima
___ Amelanchier arborea
___ Amorpha fruticosa
___ Ampelopsis cordata
___ Asimina triloba
___ Betula nigra
___ Campsis radicans
___ Carpinus caroliniana
3 Carya cordiformis
___ Carya glabra
___ Carya illinoensis
___ Carya laciniosa
___ Carya ovalis
3 Carya ovata
___ Carya tomentosa
___ Carya ___
___ Ceanothus americanus
___ Celastrus scandens
___ Celtis laevigata
1 Celtis occidentalis
___ Cephalanthus occidentalis
___ Cercis canadensis
___ Cornus alternifolia
___ Cornus drummondii
___ Cornus florida
___ Cornus obliqua
___ Cornus racemosa
___ Cornus ___
2 Corylus americana
___ Crataegus crus-galli
___ Crataegus mollis
___ Crataegus ___
___ Crataegus ___
___ Diospyros virginiana
___ Euonymus atropurpureus
___ Fagus grandifolia
3 Fraxinus americana
___ Fraxinus lanceolata
___ Fraxinus pennsylvanica
___ Fraxinus quadrangulata
___ Gleditsia triacanthos
___ Gymnocladus dioicus
___ Hamamelis virginiana

___ Hypericum ___
___ Ilex decidua
___ Juglans cinerea
2 Juglans nigra
___ Juniperus virginiana
___ Liquidambar styraciflua
___ Lindera benzoin
___ Liriodendron tulipifera
___ Lonicera prolifera
___ Maclura pomifera
___ Malus ioensis
___ Morus alba
___ Morus rubra
___ Nyssa sylvatica
2 Ostrya virginiana
4 Parthenocissus quinquefolia
___ Platanus occidentalis
___ Populus deltoides
4 Populus grandidentata
___ Populus tremuloides
___ Prunus americana
___ Prunus hortulana
3 Prunus serotina
4 Prunus virginiana
___ Prunus ___
___ Ptelea trifoliata
3 Quercus alba
___ Quercus bicolor
___ Quercus imbricaria
___ Quercus macrocarpa
___ Quercus marilandica
___ Quercus muhlenbergii
___ Quercus palustris
3 Quercus rubra
___ Quercus stellata
___ Quercus velutina
___ Quercus ___
___ Quercus ___
___ Rhus aromatica
___ Rhus copallina
___ Rhus glabra
4 Rhus radicans
___ Ribes americanum
___ Ribes cynosbati
3 Ribes missouriense
___ Robinia pseudoacacia
___ Rosa carolina
___ Rosa ___
___ Rubus allegheniensis

___ Rubus argutus
3 Rubus occidentalis
___ Rubus pensylvanicus
___ Rubus ___
___ Salix amygdaloides
___ Salix interior
___ Salix nigra
___ Salix rigida
___ Salix ___
2 Sambucus canadensis
___ Sassafras albidum
___ Smilax hispida
___ Staphylea trifolia
___ Symphoricarpos orbiculatus
2 Tilia americana
___ Ulmus americana
3 Ulmus rubra
___ Vaccinium ___
1 Viburnum prunifolium
2 Viburnum rafinesquianum ?
___ Vitis aestivalis
___ Vitis cinerea
___ Vitis riparia
___ Vitis vulpina
3 Xanthoxylum americanum
1 Panax quinquefolius
2 Menispermum canadense
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___
___ ___

Remarks: ___

ILLINOIS NATURAL AREAS INVENTORY

FERNS AND FERN ALLIES

Area Name Laona Heights F.P.

County Winnebago No. 5

Section 32 T. 29N R. 10E

Investigator Harty and Paulson

Date 16 August 1977

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 thelypterioides

____ 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

____ Pellea _____

____ Polypodium _____

____ Polystichum acrostichoides

____ Pteridium aquilinum

____ Selaginella _____

____ Thelypteris hexagonoptera

____ Thelypteris palustris

____ Woodsia obtusa

Remarks:

ILLINOIS NATURAL AREAS INVENTORY
SUMMER BIRD LIST

Area Name Loaves-Heights F.P.
County Winnebago No. 5
Section 32 T. 29N R. 10E
Investigator Harty + Paulsen
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
X 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
X 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
X 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
X Red-headed WOODPECKER
___ Carolina WREN
___ House WREN
___ Long-billed Marsh WREN
___ Common YELLOW-THROAT

ILLINOIS NATURAL AREAS INVENTORY
REPTILES, AMPHIBIANS, AND MAMMALS

Area Name Lanna 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

____ Oppossum
____ 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
X Woodchuck
____ Thirteen-Lined Ground Squirrel
____ Franklin's Ground Squirrel
X 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 (m^2/ha)

3 BAF Metric Wedge Prism (total stems X 0.15 = m^2/ha)
Number of plots: 20

COUNTY Winnebago AREA NO. _____
NATURAL AREA NAME Yaana Heights
INVESTIGATOR Heather Swenson DATE 29 Oct. 99
NATURAL COMMUNITY Dry Mesic Woodland

Tally by Sampling Point

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

FOREST SAMPLING
TREE DENSITY (stems/ha)

0.025 hectare circular plot (total stems x 2 = st/ha
Number of plots: 20

COUNTY Winnebago AREA NO.
NATURAL AREA NAME Loave Height
INVESTIGATOR Heather Swenson 29 Oct 99
NATURAL COMMUNITY Dry Mesic Woodland

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

ILLINOIS NATURAL AREAS INVENTORY
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 Lauma Heights
INVESTIGATOR Heather Swanson DATE 29 Oct. 99
NATURAL COMMUNITY Dry Mesic Woodland

Species	Tally by Sampling Plot 1	3	5	7	9	11	13	15	17	19	TOTAL stems	DEN st/ha	REL. DEN %
Carya cordiformis (yellow bud hickory)		•	• •					•			4	400	28.57
Prunus serotina (black cherry)	•			None	None	•			None		2	200	14.28
Cornus racemosa (grey dogwood)	• •						• •			•	6	600	42.86
Viburnum								• •			2	200	14.28
TOTAL	3	1	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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

NATURAL COMMUNITY Dry Mesic Woodland

NUMBER OF PLOTS 20 STAND NO. _____ SHEET 1 OF 1

COUNTY Winnebago AREA NO. _____

NATURAL AREA NAME Loves Heights Nature Preserve

INVESTIGATOR H. Hasenyager DATE 20 May 2000

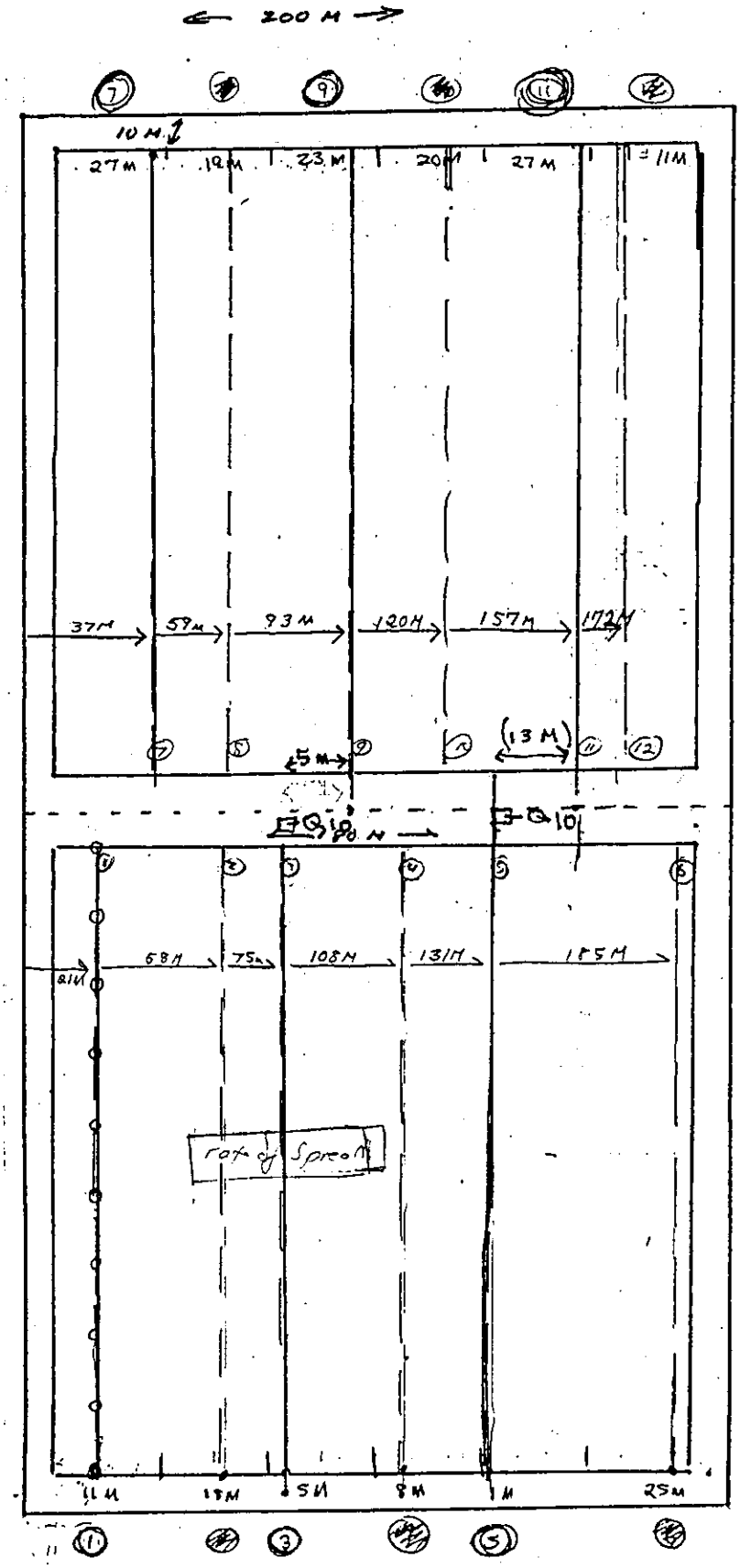
Presence by Sample Plot

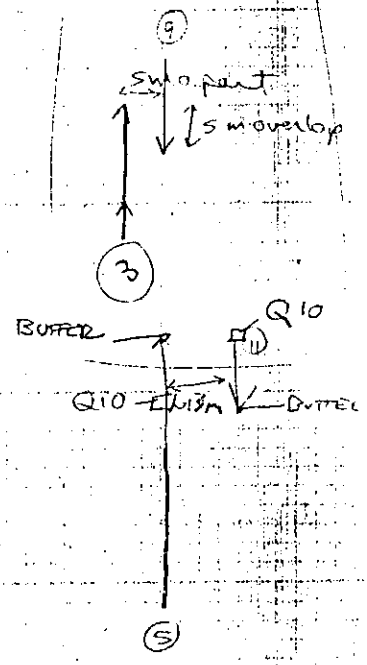
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOT plots	A/FQ %	R/FQ %	
Garlic mustard	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X											19	95	13.3	13.28
Enchanters Nightshade	X			X		X	X		X	X	X	X			X		X														10	50	7.0	6.99
Jack In-The-Pulpit	X	X	X	X	X	X	X	X			X	X	X	X			X	X	X	X											16	80	11.2	11.18
Galiumaparine	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												14	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											18	90	12.6	12.58
White Arems		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																					1	5	0.7	0.70
Ash										X																					1	5	0.7	0.70
Mayapple											X																				1	5	0.7	0.70
Downy wood Brome											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
TOTAL																															[illegible]	[illegible]	[illegible]	[illegible]

LAONA

½ m² Q @ 20 m intervals
∴ 10 Q / transect
6 transects / burn

1989





SOUTH	NORTH
TR 1 (11M)	TR 7 (27M)
2 (18M)	TR 8 (19M)
3 (5M)	TR 9 (23M)
TR 4 (8M)	TR 10 (20M)
TR 5 (1M)	TR 11 (27M)
TR 6 (25M)	TR 12 (11M)

LOCATION LAONIA HTS DATE 8-22-89

INVESTIGATORS Mutto Hensley

TRANSECT 1 5

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

	10 Q1	20 Q2	40 Q3	50+10 Q4	50+30 Q5	100+20 Q6	120 Q7	140 Q8	160 Q9	180 Q10	0 Q11	20 Q12	40 Q13	60 Q14	80 Q15	100 Q16	Q17	Q18	Q19	Q20
			(1)										(5)							
Acer negundo																				
Acer saccharum											2									
Adiantum pedatum																				
Agrimonia																				
Alliaria officinalis			4	3	4		3			6							2			
flower stalks			a	a	b		b			b							a			
Allium tricoccum																				
Amphicarpa bracteata					2															
Apocynum androsaem.																				
Arisaema triphyllum								1												
Aster sagittifolius	1	1			1		1	2	1		1						1			
Aster shortii																				
Aster																				
Athyrium felix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans																				
Campanula americana																				
Carex pensylvanica																				
Carex hirsu	2			2									4							
Carex																				
Carex shortiana													1							
Carya cordiformis																				4
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis			3				3				1									
Circaea quadrisulcata	1		2	1	2	2	2	3	3	3	3	3	3	3	6	2	3			3
Cornus racemosa						3														
Corylus americana																				
Crataegus mollis																				
Cryptotaenia canaden.																				
Desmodium glutinosum								2		2			2			2			2	
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Festuca obtusa																				
Fraxinus 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	
Hydrophllum virginianum																				
Hystrix patula													2							
Impatiens capensis																				
Laportea canadensis																				
Menispermum canadense	2	2										2		4						
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus				3		3	3			2	2	3	4					2	3	
Phyrma 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												

seedling

b. produce flowers

LOCATION Laona Height DATE 8/22/89

INVESTIGATORS Nuzzo, Keaney

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

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	1 4	2	2	4		3	3	3	3	3	3	3	3
Smilax echirata	3	3							2				2							
Solidago																				
Tovara virginianum								2	1		2					3		1		
Trillium recurvatum																				
Ulmus americana																				
Ulmus ~~rubra~~ sp. (rubra)				1					1						(4)	1	1			
Urtica procera																				
Uvularia grandiflora							2			1										
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia						1		1												
Xanthoxylem 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						1						3								
Chen. bose.																1				

T1 started @ fencepost Y "hob"

QT1 @ 20m, Q2 @ 25m

(b/c initial location "atypical")

LOCATION Laona Heights DATE 8·22·89

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

INVESTIGATORS AB/JAA

TRANSECT 3 (8) -10 — Flag X2

	Q1 (0)	Q2 (20)	Q3 (40)	Q4 (60)	Q5 (80)	Q6 (100)	Q7 (120)	Q8 (140)	Q9 (160)	Q10 (180)	Q11 (190)	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Acer negundo																				
Acer saccharum																				
Adiantum pedatum																				
Agrimonia																				
Alliaria officinalis *					2 a															
Allium tricoccum																				
Amphicarpa bracteata																				
Apocynum androsaem.																				
Arisaema triphyllum																				
Aster sagittifolius					1															
Aster shortii																				
Aster																				
Athyrium felix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans																				
Campanula americana																				
Carex pensylvanica																				
Carex hairy				1	3															
Carex																				
Carex																				
Carya cordiformis							4													
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis																				
Circaea quadrisulcata	3	3	4	1	2	1	3	1	3	3										
Cornus racemosa																				
Corylus americana																				
Crataegus mollis																				
Cryptotaenia canaden.																				
Desmodium glutinosum							2		2											
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Festuca obtusa																				
Fraxinus americana				1	2	1	1	1	1	2										
Galium aparine																				
Galium																				
Geranium maculatum																				
Geum canadense				3	3	1			2											
Hydrophllum virginianum																				
Hystrix patula																				
Impatiens capensis																				
Laportea canadensis (wood nettle)		2	3																	
Menispernum canadense						4	3													
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus	3	1						3	3	3										
Phyrma leptostachya																				
Pilea punila									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 rosettes
b seed plants

LOCATION Laney DATE 8-22-89 COVER CLASS 1 0-1% 2 1-7% 3 7-25% 4 25-50% 5 50-75% 6 75-93% 7 93-100%

INVESTIGATORS AB / JAA

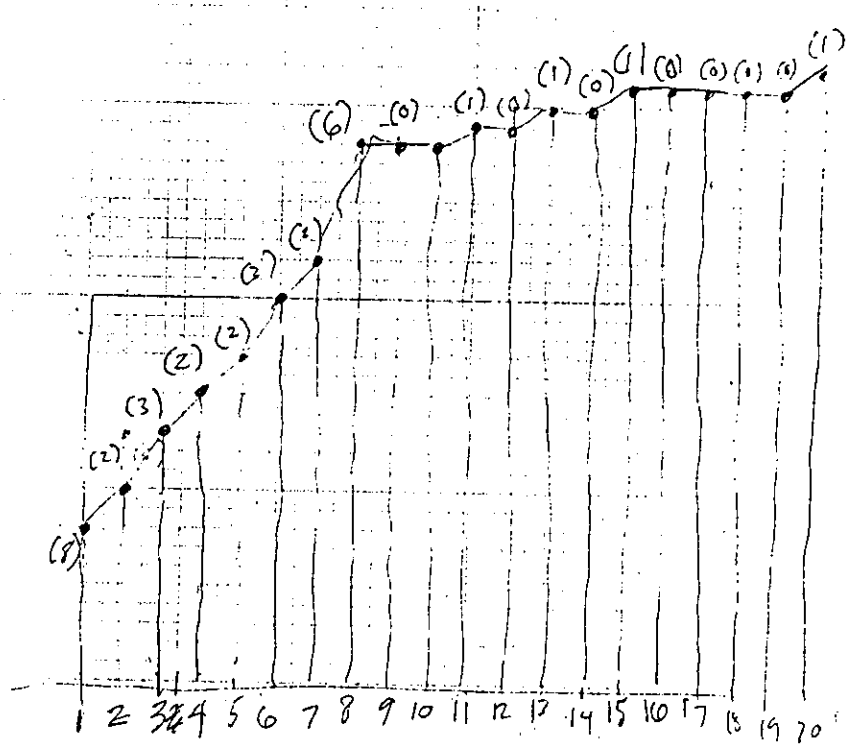
TRANSECT 3 p.2

	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 echirata																				
Solidago																				
Tovara virginianum									1											
Trillium recurvatum																				
Ulmus americana																				
Ulmus rubra spp.					1	1														
Urtica procera																				
Uvularia grandiflora																				
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia																				
Xanthoxylem americanum																				
Bare Earth	1	3	2	6	2	2	2	2	5	4										
Litter (leaf)	5	5	6	2	6	6	6	2	3	4										
Fuel (wood)	4	4	3	1	3	2	2	5	3	3										
Dioscorea villosa					2															

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

/

LAONA
1989



1) new.

1 added w/ us (Poeloplyllum

SPECIES RICHNESS CURVE E 1/2 LAONA

8/22/89 (Tr. 1, 3, 5)

LOCATION Laona DATE 8/22/89

INVESTIGATORS AB/JAA

TRANSECT 7 B

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

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
	0	20	40	60	80	100	120	140	160	180	200									
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 felix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans																				
Campanula americana																				
Carex pensylvanica																				
Carex hairy																				
Carex																				
Carex																				
Carya cordiformis																				
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis		2																		
Circaea quadrisulcata		1	2	3	3	3	2	2	3	2										
Cornus racemosa																				
Corylus americana																				
Crataegus ~~collis~~ 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										
Geum canadense			3				3	4	2	3										
Hydrophllum virginianum	3		2																	
Hystrix patula																				
Impatiens capensis																				
Laportea canadensis																				
Menispernum canadense				3	3			2												
Muhlenbergia tenuiflora																				
Osmorhiza longistylis																				
Ostrya virginiana																				
Parietaria																				
Parthenocissus					3		3	3	4	2										
Phyrma leptostachya																				
Pilea pumila																				
Poa pratensis																				
Podophyllum peltatum																				
Polygonatum can.																				
Prunus serotina					2		2		3											
Prunus virginiana			4			3														
Quercus alba																				
Quercus rubra																				
Ranunculus abortivus																				
Ranunculus septen.																				
Rhus radicans																				
Ribes missouriense																				
Ribes																				
Rubus allegheniensis																				
Rubus occidentalis			5					4		3										

* a rosettes
b seedplants

LOCATION Laura DATE 8/22/89

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

INVESTIGATORS AB / JAA

TRANSECT 7 p.2 B

	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	2		3	4	3	1	4	2		2										
Smilax echirata																				
Solidago																				
Toxara virginianum																				
Trillium recurvatum																				
Ulmus americana																				
Ulmus rubra spp.	1							2		1										
Urtica procera																				
Uvularia grandiflora				2					2											
Viburnum prunifolium																				
Viburnum																				
Viola pubescens																				
Viola																				
Vitis riparia																				
Xanthoxylen 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																		
Dioscora villosa										3										

Q4 at 6 1/m. (+1m to avoid base of med. Prunus serotina)

LOCATION Lagna HTS DATE 8/22/89

INVESTIGATORS Nuzzo, Kennedy

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

TRANSECT 9, 11

	0 Q1	20 Q2	40 Q3	60 Q4	80 Q5	100/20 Q6	Q7	40 Q8	60 Q9	80 Q10	0 Q11	20 Q12	40 Q13	80 Q14	100 Q15	120 Q16	140 Q17	160 Q18	180 Q19	200 Q20
	← T9									→	← T11									→
Acer negundo																				1
Acer saccharum																				
Adiantum pedatum																				
Agrimonia																				
Alliaria officinalis																				
Allium tricoccum																				
Amphicarpa bracteata																				
Apocynum androsaem.																				
Arisaema triphyllum									1											
Aster sagittifolius				1																
Aster shortii																				
Aster																				
Athyrium felix-femina																				
Botrychium virginianum																				
Brachyelytrum erectum																				
Bromus purgans											1									
Campanula americana																				
Carex pensylvanica																				
Carex Hirty											2									
Carex																				
Carex																				
Carya cordiformis	3																			
Caulophyllum thal.																				
Celastrus scandens																				
Celtis occidentalis											2							4		
Circaea quadrisulcata	1	3	2	3				2	2		2	2	3	3		3			3	
Cornus racemosa	3	3		3															3	
Corylus americana																				
Crataegus mollis																				
Cryptotaenia canaden.																				
Desmodium glutinosum														4		2			2	
Dryopteris spinulosa																				
Erythronium albidum																				
Eupatorium purpureum																				
Eupatorium rugosum																				
Festuca obtusa																				
Fraxinus americana (sp)	3	3	(1)	1	2	2	2	3	1		4	1	1				1			2
Galium aparine														2	2					
Galium																2				
Geranium maculatum	2		2		2							2								
Geum canadense			3		2	3		2												2
Hydrophllum 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
Phyrma leptostachya																				
Pilea pumila																				
Poa pratensis																				
Podophyllum peltatum																				
Polygonatum can.																				
Prunus serotina											1									
Prunus virginiana									5											
Quercus alba																				
Quercus rubra																				
Ranunculus abortivus																				
Ranunculus septen.																				
Rhus radicans										3										
Ribes missouriense				4		2				3			3					5	4	
Ribes																				
Rubus allegheniensis								5												
Rubus occidentalis				2		3						2		7		5				

10 more woody understory

# of sp are dominant / Lined up L to Sampling

LOCATION Laura Hts DATE 8/22/12

INVESTIGATORS Nuiza et al

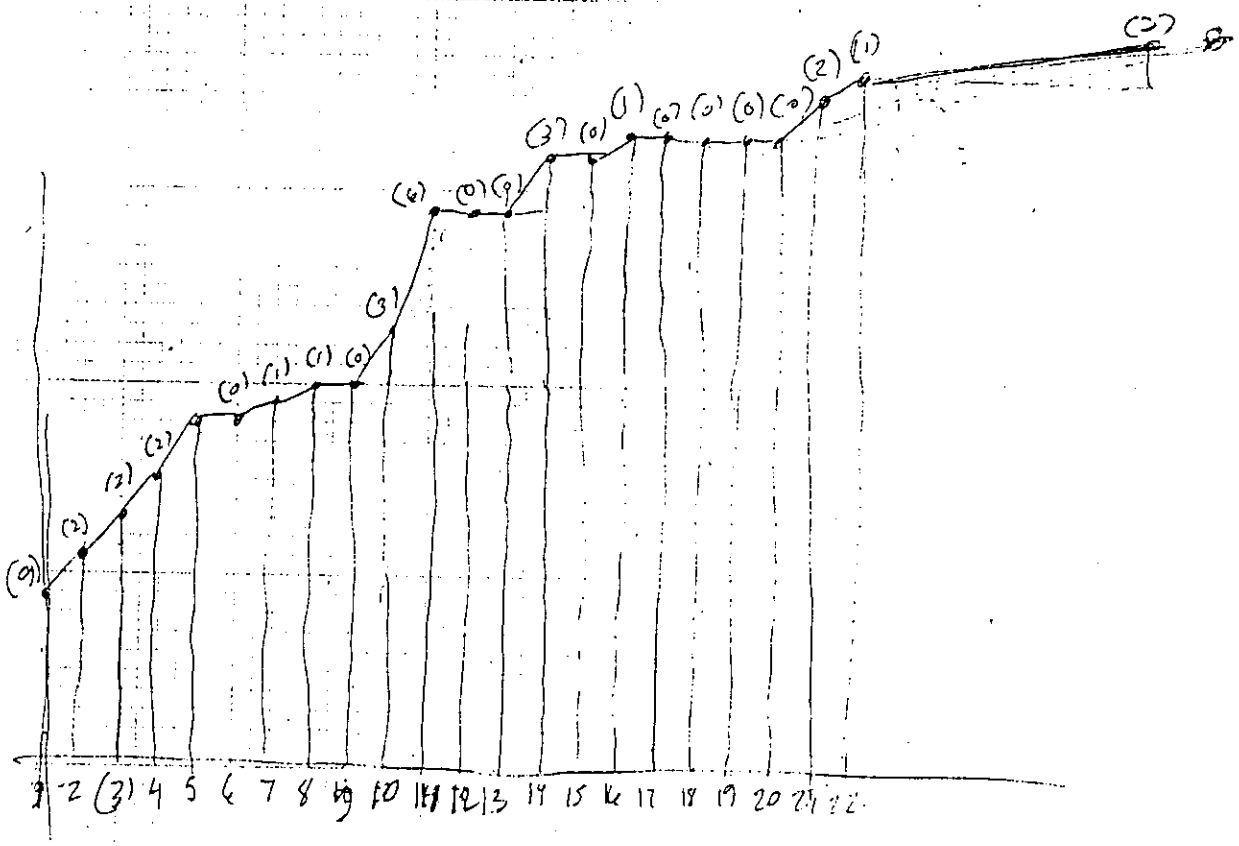
TRANSECT 9

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

(11)

	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		3	4	2		3		3	2		1	2	3	3		2	3	3		4
Smilax echirata										2										
Solidago																				
Tovara virginianum				3	3										4					
Trillium recurvatum																				
Ulmus americana																				
Ulmus ~~rubra~~ sp (rubra)		1			1						1	1								
Urtica procera																				
Uvularia grandiflora																				
Viburnum prunifolium										3										
Viburnum																				
Viola pubescens																				
Viola																				
Vitis ~~riparia~~ sp.			2																	
Xanthoxylem americanum	2			3																
Bare soil	1	2	3	3	5	5	3	3	6	1	6	2	1	5	3	6	4	2	6	2
Wood litter	3	3	3	2	3	3	2	3	3	7	3	3	7	2	5	3	4	2	3	2
Fuel load (leaves)	6	6	3	2	3	2	5	5	1	1	3	6	2	2	2	1	2	5	2	6
Linicea dioicha	2													1						
Hydrophyllum spp.					2															
Taraxacum (dandelion)											1									
Oxalis											1									

LAONA 1989



SPECIES RICHNESS CURVE w/ 1/2 LAONA
8/22/89

(T 7, 9, 11)

WINNEBAGO COUNTY - LAONA HEIGHTS - Woody plant list, 1971

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

Fern species

Adiantum pedatum.....Maidenhair fern
Athyrium felix-femina.....Lady fern
Botrychium virginianum.....Rattlesnake fern
Dryopteris spinulosa.....Wood fern

Herbaceous plant list

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

Herbaceous plant list - continued

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

PRESERVE Laona Heights
AREA WEST
DATE

FREQUENCY RATING: 1-5, with 1 denoting rare and 5 denoting abundant

TREES, SHRUBS, VINES

_____ Acer negundo
_____ A. nigrum
_____ A. saccharinum
_____ A. saccharum
_____ *A. platanoides
_____ *Ailanthus altissima
_____ Alnus rugosa E
_____ Amelanchier interior E
_____ A. _____
_____ A. _____
_____ Amorpha canescens
_____ A. fruticosa
_____ Arctostaphylos uva-ursi E
_____ Aronia melanocarpa
_____ A. prunifolia
_____ *Berberis thunbergii
_____ *B. vulgaris
_____ Betula glandulifera
_____ B. lutea E
_____ B. pumila
_____ Campsis radicans
_____ Carpinus caroliniana
_____ Carya cordiformis
_____ C. ovata
_____ Catalpa bignonioides
_____ Ceanothus americanus
_____ Celastrus scandens
_____ Celtis occidentalis
_____ Cephalanthus occidentalis
_____ Comptonia peregrina
_____ Cornus alternifolia
_____ C. obliqua
_____ C. racemosa
_____ C. rugosa
_____ C. stolonifera
_____ Corylus americana
_____ Crataegus
_____ Dirca palustris
_____ Euonymus atropurpureas
_____ Fraxinus americana SEEDLINGS
_____ F. lanceolata
_____ Gaylussacia baccata
_____ Gleditsia triacanthos
_____ Gymnocladus dioica
_____ Hamamelis virginiana
_____ Ilex verticillata
_____ Juglans cinerea
_____ J. nigra
_____ Juniperus virginiana
_____ Lonicera dioica
_____ L. prolifera
_____ L. tatarica
_____ *Lycium halimifolium
_____ Maclura pomifera
_____ Menispermum canadense
_____ Mitchella repens
_____ Morus rubra
_____ M. tatarica
_____ Ostrya virginiana
_____ Parthenocissus quinquefolia
_____ P. vitacea
_____ Physocarpus opulifolius
_____ Platanus occidentalis
_____ Populus deltoides
_____ P. grandidentata
_____ P. tremuloides
_____ *P. alba
_____ *P. italica
_____ Prunus americana
_____ P. lanata
_____ P. nigra
_____ P. pumila
_____ P. pensylvanica
_____ P. serotina
_____ P. virginiana
_____ Ptelea trifoliata
_____ *Pyrus communis
_____ Quercus alba
_____ Q. bicolor
_____ Q. borealis
_____ Q. ellipsoidalis
_____ Q. macrocarpa
_____ Q. muhlenbergii
_____ Q. palustris
_____ Q. velutina
_____ Rhamnus lanceolata
_____ R. cathartica
_____ R. frangula
_____ Rhus arenaria
_____ R. glabra
_____ R. radicans
_____ R. typhina
_____ Ribes americanum
_____ R. cynosbati
_____ R. hirtellum
_____ R. missouriense
_____ R. odoratum
_____ Robinia pseudoacacia
_____ Rosa blanda
_____ R. carolina
_____ R. palustris
_____ R. setigera
_____ R. suffulta
_____ *R. eglanteria
_____ *R. multiflora
_____ Rubus allegheniensis
_____ R. flagellaris
_____ R. hispidus
_____ R. occidentalis
_____ R. pubescens
_____ R. strigosus
_____ Salix amygdaloides
_____ S. bebbiana
_____ S. candida
_____ S. cordata
_____ S. discolor
_____ S. glaucophylloides
_____ S. humulis
_____ S. interior
_____ S. lucida
_____ S. nigra
_____ S. petiolaris
_____ *S. alba
_____ *S. babylonica
_____ *S. fragilis
_____ *S. pentandra
_____ Sambucus canadensis
_____ S. pubens T
_____ Sarothra gentianoides
_____ Sorbus americana E
_____ *S. aucuparia
_____ Spiraea alba
_____ Staphylea trifolia
_____ Symphoricarpos occidentalis
_____ S. orbiculatus
_____ S. rivularis
_____ *Syringia vulgaris
_____ Taxus canadensis
_____ Tilia americana
_____ Ulmus americana
_____ U. rubra
_____ Vaccinum angustifolium
_____ V. canadense
_____ V. corymbosum E
_____ Viburnum acerifolium
_____ V. lentago
_____ V. prunifolium
_____ V. rafinesquianum
_____ V. trilobum
_____ Vitis aestivalis
_____ V. riparia
_____ Zanthoxylum americanum

FERNS

_____ Adiantum pedatum
_____ Asplenium platyneuron
_____ Athyrium filix-femina
_____ Botrychium dissectum
_____ B. multifidum T
_____ B. obliquum
_____ B. virginianum
_____ Camptosorus rhizophyllus
_____ Cryptogramma stelleri
_____ Cystopteris bulbifera
_____ C. fragilis
_____ Dryopteris cristata
_____ Onoclea sensibilis
_____ Osmunda cinnamomea
_____ O. claytoniana
_____ O. regalis
_____ Polypodium virginianum
_____ Pteridium aquilinum
_____ Woodsia obtusa

GRASSES, RUSHES, SEDGES

_____ Agropyron
_____ Agrostis
_____ Alopecurus
_____ Andropogon
_____ A. geradi
_____ A. scoparius
_____ Aristida
_____ Arrhenatherum
_____ Bouteloua
_____ Brachyelytrum
_____ Bromus
_____ Bulbostylis
_____ Calamogrostis
_____ Carex
_____ Cenchrus
_____ Cinna
_____ Cyperus
_____ Dactylis
_____ Danthonia
_____ Echinochloa
_____ Eleocharis
_____ Eleusin
_____ Elymus
_____ Equisetum
_____ Eragrostis
_____ Eriophorum
_____ Festuca
_____ Glyceria
_____ Hemicarpha
_____ Hierochloe
_____ Hordeum
_____ Hystrix
_____ Juncus
_____ Koeleria
_____ Leersia
_____ Leptoloma
_____ Lolium
_____ Luzula
_____ Melica
_____ Muhlenbergia
_____ Oryzopsis
_____ Panicum
_____ Paspalum
_____ Phalaris
_____ Phleum
_____ Phragmites
_____ Poa
_____ Scirpus
_____ Scleria
_____ Setaria
_____ Sorghastrum
_____ Spartina
_____ Sphenopholis
_____ Sporobolus
_____ Stipa
_____ Triplasis
_____ Typha
_____ Vallisneria
_____ Zannichellia
_____ Zizania

* Introduced species

E - Endangered in Illinois

T - Threatened in Illinois

ADDITIONAL SPECIES

_____
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PRESERVE _____
AREA _____
DATE _____

FREQUENCY RATING: 1-5, with 1 denoting rare and 5 denoting abundant

HERBACEOUS PLANTS

____*Abutilon theophrasti
____Acalypha rhomboidea
____A. virginica
____*Achillea millefolium
____Acnida altissima
____A. submuda
____A. tamariscina
____Acorus calamus
____Actaea alba
____A. rubra
____Actinomeris alternifolia
____Agastache nepetoides
____A. scrophulariaefolia
____Agoseris cuspidata
____Agrimonia gryposepala
____A. parviflora
____A. pubescens
____A. rostellata
____Aletris farinosa
____Alisma subcordatum
____A. triviale
____*Alliaria officinalis
____Allium canadense
____A. cernuum
____A. tricoccum
____*Alyssum alyssoides
____Amaranthus albus
____Ambrosia artemesiifolia
____A. coronopifolia -
____A. elatior
____A. trifida
____Amphicarpa bracteata
____A. comosa
____Anacharis canadensis
____A. occidentalis
____Androsace occidentalis
____Anemone canadensis
____A. caroliniana
____A. cylindrica
____A. patens
____A. quinquefolia
____A. virginiana
____Anemonella thalictroides
____Angelica atropurpurea
____Antennaria fallax
____A. neglecta
____A. neodioca
____A. plantaginifolia
____*Anthemis cotula
____Apios americana
____Aplectrum hyemale
____Apocynum androsaemifolium
____A. cannabinum
____A. pubescens
____A. sibericum
____Aquilegia canadensis
____*Arabidopsis thaliana
____Arabis canadensis
____A. dentata
____A. laevigata
____A. lyrata
____A. pycnocarpa
____*A. glabra
____Aralia nudicaulis
____A. racemosa
____*Arctium minus
____Arenaria lateriflora
____A. stricta
____*A. serpyllifolia
____Arisaema triphyllum
____A. dracontium
____*Armoracia rusticana
____Artemesia biennis
____A. caudata
____A. dracunculus E
____A. gnaphaloides
____A. ludoviciana
____A. serrata
____*A. pontica
____Asarum canadense
____Asclepias
____A. amplexicaulis
____A. incarnata
____A. phytolaccoides
____A. purpurascens
____A. quadrifolia
____A. sullivantii

____A. syriaca
____A. tuberosa
____A. verticillata
____A. hirtella
____A. lanuginosa E
____A. viridiflora
____*Asparagus officinalis
____Aster undulatus T
____A. _____
____A. _____
____Astragalus canadensis
____Atriplex hastata
____A. patula
____Aureolaria flava
____A. grandiflora
____A. pedicularia
____Baptisia leucantha
____B. leucophaea
____Barbarea vulgaris
____Bartonia virginica
____*Belamanda chinensis
____*Berteroa incana
____Bidens
____B. _____
____B. _____
____Blephilia ciliata
____B. hirsuta
____Boehmeria cylindrica
____Boltonia asteroides
____*Brassica alba
____Callitriche heterophylla
____C. palustris
____Calopogon pulchellus
____Caltha palustris
____Camassia scillioides
____*Camelina microcarpa
____Campanula americana
____C. aparinoides
____C. rotundifolia
____C. uliginosa
____*C. rapunculoides
____*Cannabis sativa
____*Capsella bursa
____Cardamine bulbosa
____C. douglassii
____C. pensylvanica
____*Cardaria draba
____*Carum carvi
____Cassia fasciculata
____C. hebecarpa
____Castilleja coccinea
____C. sessiliflora E
____Caulophyllum thalictroides
____*Centaurea cyanus
____*C. maculosa
____*C. vochinensis
____Cerastium brachypodum
____C. nutans
____C. vulgatum
____Ceratophyllum demersum
____Chaerophyllum procumbens
____Chamaesyce glytosperma
____*Chelidonium majus
____Chelone glabra
____Chenopodium
____C. _____
____Chimaphila umbellata E
____*Chrysanthemum balsamita
____*C. leucanthemum
____*Cichorium intybus
____Cicuta bulbifera
____C. maculata
____Circaea quadrisulcata
____Cirsium altissimum
____C. discolor
____C. hillii
____C. muticum
____*C. arvense
____*C. vulgare
____Claytonia virginica
____Clematis virginiana
____Collinsia verna
____Collomia linearis
____Commdra umbellata
____*Commelina communis
____*Conringia orientalis
____*Convallaria majalis
____Convovulus americanus
____C. spithamaeus

____*C. arvensis
____Corallorhiza maculata T
____Coreopsis palmata
____*C. grandiflora
____Corydalis aurea E
____Cryptotaenia canadensis
____Cucurbita foetidissima
____Cuscuta
____Cycloloma atriplicifolium
____*Cynoglossum officinale
____Cypripedium calceolus pubescens
____C. candidum E
____*Datura stramonium
____*Daucus carota
____Dentaria laciniata
____Descurainia brachycarpa
____D. sophia
____Desmodium canadense
____D. canescens
____D. dillenii
____D. glutinosum
____D. illinoense
____Dicentra cucullaria
____D. canadensis
____Dioscorea villosa
____*Diplotaxis muralis
____*Dipsacus sylvestris
____Dodecatheon meadia
____Draba reptans
____Dracocephalum parviflorum
____Echinocystis lobata
____*Echium vulgare
____Ellisia nyctaleo
____Epilobium
____E. _____
____E. _____
____Erechtites hieracifolia
____Erigeron
____E. _____
____E. _____
____Eryngium yuccifolium
____Erysimum cheiranthoides
____E. inconspicum
____Erythronium albidum
____Eupatorium
____E. _____
____E. _____
____Euphorbia
____E. _____
____E. _____
____Floerkea proserpinacoides
____Fragaria americana
____F. virginiana
____Froelichia gracilis
____*Galinsoga ciliata
____Galium trifidum RARE
____G. _____
____G. _____
____Gaura biennis
____Gentiana
____G. _____
____G. _____
____Geranium maculatum
____*G. sibericum
____Gerardia
____G. _____
____G. _____
____Geum canadense
____G. laciniatum
____G. strictum
____G. triflorum
____G. vernum
____*Glecoma hederacea
____*G. heterophylla
____Gnaphalium obtusifolium
____Goodyera pubescens
____Gratiola neglecta
____Grindelia squarrosa
____Habenaria lacera
____H. leucophaea E
____H. psycodes E
____H. viridis
____Hackelia virginiana
____Hedeoma hispida
____H. pulegioides
____Helenium autumnale
____Helianthemum canadense
____H. bicknellii
____Helianthus

____ Heliopsis helianthoides
____ H. scabra
____ *Hemerocallis flava
____ Hepatica acuciloba
____ H. americana
____ *Hesperis matronalis
____ Heuchera richardsonii
____ *Hibiscus trionum
____ Hieracium canadense
____ H. gronovii
____ H. longipilum
____ H. scabrum
____ Houstonia lanceolata
____ Hydrophyllum appendiculatum
____ H. virginianum
____ Hypericum
____ H. _____
____ H. _____
____ Hypoxis hirsuta
____ Impatiens biflora
____ I. pallida
____ Iodanthus pinnatifidus
____ *Ipomoea purpurea
____ Iris shrevei
____ Isanthus brachiatus
____ Isopyrum biternatum
____ Iva ciliata
____ I. xanthifolia
____ Jeffersonia diphylla
____ *Knautia arvensis
____ Krigia biflora
____ Kuhnia eupatorioides
____ Lactuca
____ L. _____
____ L. _____
____ Laportea canadensis
____ *Lappula echinata
____ *Lathyrus latifolius
____ L. achroleucus
____ L. venosus
____ L. _____
____ L. _____
____ Lechea leggettii
____ L. stricta
____ L. tenuifolia
____ L. villosa
____ Lemna minor
____ L. trisculca
____ *Leonurus cardiaca
____ Lepidium virginicum
____ *L. campestre
____ *L. densiflorum
____ *L. perfoliatum
____ Lespedeza capitata
____ Liatrus aspera
____ L. pycnostachya
____ L. cylindracea
____ L. spicata
____ Lilium superbum E
____ L. umbellatum
____ Linaria canadensis
____ *L. dalmatica
____ *L. minor
____ *L. vulgaris
____ Lindernia dubia
____ L. anagallidea
____ Linum sulcatum
____ *L. perenne
____ *L. usitatissimum
____ Liparis lilifolia
____ Lithospermum angustifolium
____ L. canescens
____ L. croceum
____ *L. arvense
____ Lobelia cardinalis
____ L. inflata
____ L. kalmii
____ L. leptostachys
____ L. siphilitica
____ L. spicata
____ Ludwigia palustris
____ L. polycarpa
____ Lupinus perennis
____ *Lychnis alba
____ *L. dioica
____ Lycopus americanus
____ L. uniflorus
____ L. virginicus
____ Lysimachia
____ L. _____
____ L. _____
____ Lythrum alatum
____ *L. salicaria
____ Maianthemum canadense
____ Matricaria matricarioides
____ *Medicago lupulina
____ *M. sativa
____ *Melilotus alba
____ *M. officinalis
____ Mentha canadensis
____ *M. piperita
____ *M. spicata
____ Mertensia virginica
____ Mimulus ringens
____ M. _____
____ Mirabilis nyctaginea
____ Mitella diphylla
____ Mollugo verticillata
____ Monarda fistulosa
____ Monotropa uniflora
____ Myosotis verna
____ M. scorpioides
____ Myriophyllum spicatum
____ *Nasturtium officinale
____ *Nepeta cataria
____ Nuphar advena
____ *Nymphoides peltata
____ Oenothera perennis E
____ O. _____
____ Onosmodium hispidissimum
____ Orchis spectabilis
____ *Ornithogalum umbellatum
____ Orobanche uniflora
____ Osmorhiza claytoni
____ O. longistylis
____ Oxalis europae
____ O. stricta
____ O. violacea
____ Oxypolis rigidor
____ Panax quinquefolius T
____ Parietaria pensylvanica
____ Parnassia glauca
____ Paronychia canadensis
____ *Pastinaca sativa
____ Pedicularis canadensis
____ P. lanceolata
____ Penstemon hirsutus
____ Penthorum sedoides
____ Periderdidia americana
____ Petalostemum candidum
____ P. purpureum
____ Phlox
____ P. _____
____ P. _____
____ Phryma leptostachya
____ Physalis heterophylla
____ P. subglabrata
____ P. virginiana
____ Physostegia speciosa
____ P. virginiana
____ Phytolacca americana
____ Pilea pumila
____ Plantago
____ P. _____
____ P. _____
____ Podophyllum peltatum
____ Polanisia trachysperma
____ P. graveolens
____ Polemonium reptans
____ Polygala
____ P. _____
____ P. _____
____ Polygonatum commutatum
____ P. pubescens E
____ Polygonella articulata
____ Polygonum
____ P. _____
____ P. _____
____ P. _____
____ Polytaenia nuttallii
____ Pontederia cordata
____ *Portulaca oleracea
____ Potamogeton
____ Potentilla
____ P. _____
____ P. _____
____ Prenanthes 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. _____
____ Ratibida pinnata
____ R. columnifera
____ Rorippa hispida
____ R. islandica
____ R. sessiliflora
____ Rudbeckia hirta
____ R. serotina
____ R. laciniata
____ R. subtomentosa
____ R. triloba
____ R. sullivantii
____ Ruellia humilis
____ Rumex
____ R. _____
____ R. _____
____ Sagittaria brevirostra
____ S. cuneata
____ S. latifolia
____ *Salsola pestifer
____ Salvia reflexa
____ *S. sylvestris
____ Sanguinaria canadensis
____ Sanicula canadensis
____ S. gregaria
____ S. marilandica
____ *Saponaria officinalis
____ *S. vaccaria
____ Saxifraga pensylvanica
____ *Scleranthus annuus
____ Scrophularia lanceolata
____ S. marilandica
____ Scutellaria
____ S. _____
____ S. _____
____ *Sedum triphyllum
____ Senecio
____ Sicyos angulatus
____ Silene
____ S. _____
____ S. _____
____ Silphium integrifolium
____ S. laciniatum
____ S. perfoliatum
____ S. terebinthinaceum
____ *Sisyubrium altissimum
____ *S. loeselii
____ *S. officinale
____ Sisyrinchium montanum E
____ Sium suave
____ Smilacena racemosa
____ S. stellata
____ Smilax herbacea E
____ Solanum
____ S. _____
____ S. _____
____ Solidago
____ S. _____
____ S. _____
____ Sonchus
____ S. _____
____ S. _____
____ Sparganium eurycarpum
____ Spiranthes cernua
____ Spirodela polyrhiza
____ Stachys arenicola
____ S. aspera
____ S. hispida
____ S. tenuifolia
____ Stellaria
____ S. _____
____ S. _____
____ Stylophorum
____ Sullivantia renifolia T
____ Symplocarpus foetidus
____ Synthyris bullii
____ Taenidia integerrima
____ *Tanacetum vulgare
____ Taraxacum vulgare
____ Tephrosia virginiana
____ Teucrium canadense
____ T. occidentale
____ Thalictrum
____ T. _____
____ T. _____
____ Thaspium barbinode
____ T. trifoliatum
____ *Thlaspi arvense
____ Tradescantia bracteata
____ T. ohiensis
____ T. virginiana
____ *Tragopogon pratensis
____ Triadenum fraseri
____ Trientalis borealis T
____ Trifolium
____ T. _____
____ T. _____
____ Trillium gleasoni
____ T. recurvatum
____ T. nivale

Triodanis perfoliata
Triosteum aurantiacum
T. illinoense
T. perfoliatum
Triphora trianthophora
Urtica procera
Utricularia vulgaris
Uvularia grandiflora
Valeriana ciliata
*Verbascum blattaria
*V. thapsus
Verbena
V. _____
V. _____
Veronia fasciculata
V. altissima
Veronica
V. _____
V. _____
Veronicastrum virginicum
Vicia
V. _____
V. _____
*Vinca minor
Viola canadensis E
V. _____
V. _____
V. _____
Xanthium commune
Xyris torta
Zizia aptera
Z. aurea

* Introduced species

E - Endangered in Illinois

T - Threatened

ADDITIONAL SPECIES