

The Flora of
Lowell Park, Lee County, Illinois

Michael D. Jones
411 South Third Street
Rockford, Ill. 61104
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Inventory of the Flora of Lowell Park, Lee County, Illinois

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INTRODUCTION

This survey took place on about 160 acres of the park (map 1). The area was divided into three units. Unit 1 is made up of deep ravines and high steep river slopes. Units' 2 and 3 are made up of shallow ravines and a river slope with more gradual sloping. Unit 3 is the most degraded of the three units with a shrub layer of solid *Lonicera x bella*. There were 236 species located in the study area of these 37 or 16% were nonnative. A population of the State Threatened Species *Oryzopsis racemosa* was located on the crest and face of a cliff in unit 1 (map 2).

METHODS

VEGETATION SAMPLING OF WOODED AREAS

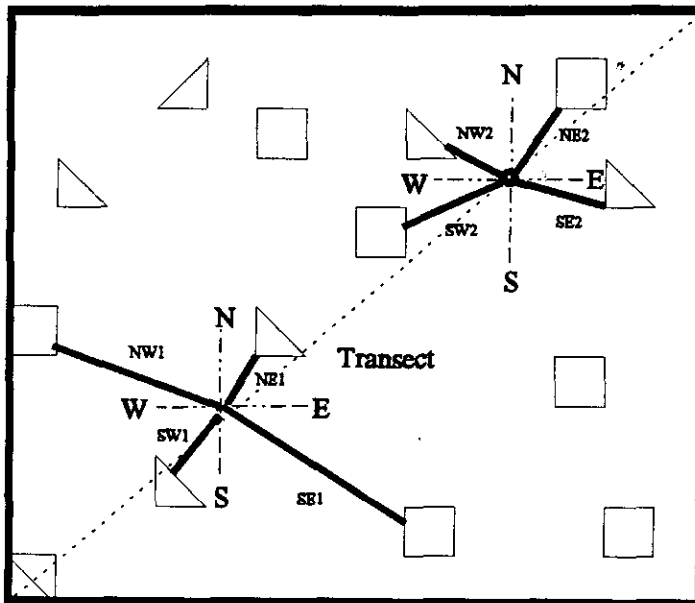


Figure 1. Point-center-quarter Method. The dotted line is the transect line, the meeting point of the dashed lines is the center of the plot. The plot is divided it into the four quarters, N,S,E,W are the directions of the compass, the bold solid lines represent the measured distances to the nearest tree in each quarter. The squares and triangles represent two different tree species.

The point-center-quarter method is a plotless method designed to quantify forest and savanna tree cover over large areas rapidly. This method was used for recording the tree species at the section corners for the Pubic Land Survey in the 1800's. The information obtained is used to find the species frequency.

With a compass, each point is divided into four quarters establishing a north-south line intersected by an east-west line (Figure 1). The identity of the nearest tree in each quarter was recorded (Figure 1).

In this study, the point-center-quarter method was modified to create a more complete model of the forest structure. Three size classes of trees were designated the dominant size class or canopy is trees with diameters of 22 centimeters or greater. While the understory trees have less than 22 centimeters in diameter and greater than 13 centimeters diameter. The sapling class

is less than 13 centimeters and taller than two meters. Only the diameters of the dominant size were

recorded and the identity of the trees in the understory and sapling size class were recorded in each quarter. These three size classes show the changes that are occurring over time. Dividing the trees into these three size classes, show how the forest canopy looks now and its make up in the future. The point-center-quarter method was also used for the shrub layer, while the herbaceous layer was sampled using 1m² quadrat at the center of each plot. The presence of each species found was noted in its designated 1m² quadrat.

FLORISTIC SURVEY

The floristic survey was conducted during multiple visits to the site throughout the 1997 growing season. To cover the changes that occur throughout the growing seasons, the area was visited one or two days in each of the following months: April, May, June, August and September. All vascular plants located were identified and grouped by vegetational unit. Identifications and nomenclature were designated based on Mohlenbrock R.H., 1986, *Guide to the Vascular Flora of Illinois*.

State Listed Species

Oryzopsis racemosa Black-seeded rice grass

This state threatened species was on a north facing cliff and its crest over looking the river (map ?). This is the species usual habitat thin soiled areas of mesic forest. The five plants on the cliff face were small with few flowering culms. These five plants were associated with the following five species: *Aquilegia canadensis* (Columbine), *Arabis laevigata* (Smooth rock cress), *Asarum canadense* var *reflexum* (Canada wild ginger), *Cystopteris protrusa* (Fragile fern), *Eupatorium rugosum* (White snakeroot), *Hepatica nobilis* var *acuta* (Sharp-lobed liverleaf), *Hydrophyllum virginianum* (Virginia waterleaf), and *Pilea pumila* (Clearweed).

Twenty plants or clumps were found growing on the crest of this cliff. These plants were very robust having as many as thirty flowering culms per plant. All plants were within three meters of the cliff. The following twelve species were found associated with the plant on the crest: *Asarum canadense* var *reflexum* (Canada wild ginger), *Aster lateriflorus* (Side-flowering aster), *Aster shortii* (Short's aster), *Elymus hystrix* (Bottlebrush grass), *Fraxinus quadrangulata* (Square-stemmed ash), *Hepatica nobilis* var *acuta* (Sharp-lobed liverleaf), *Hydrophyllum virginianum* (Virginia waterleaf), *Lonicera prolifera* (Rock honeysuckle), *Parthenocissus quinquefolia* (Virginia creeper), *Solidago flexicaulis* (Zigzag goldenrod), *Staphylea trifolia* (Bladdernut), and *Tilia americana* (Basswood)

Natural Communities

The study area contained three natural communities. The ravines, river slope, and river terrace were mesic upland forest, while the ridge tops were dry-mesic upland forest (map 3). The composition of the forest communities were determined by running four transects through them (map 4). The third was the dolomite cliff community a part of the Primary community group (map 5).

Mesic upland forest This community is found in the ravines, the north facing slopes and the river terrace. The mesic upland forest made up 60% of the study area and had 153 species in this community. The frequencies of the trees, shrubs, and herbaceous species sampled in the mesic forest

are in table 1. The canopy species are characteristic mesic forest. The canopy trees in the ravine were good sized averaging 53 centimeters in diameter. Without the *Tilia americana* whose small diameters suggest it is a recent addition to the canopy the average goes up to 57 centimeters in diameter. The river slope showed signs of recent cutting and averaged only 40 centimeters in diameter. There are two areas marked on map 6 with trees large enough to be old growth.

There are differences in the canopy trees and the smaller size classes that may show future changes in the mesic forest. There were no younger trees of *Quercus rubra* encountered that could replace it in the canopy. It looks like *Tilia americana* will become the dominant species in the canopy. With *Acer saccharum* having young trees to move into the canopy and *Celtis occidentalis* is on the increase. Seven species; *Ulmus rubra*, *Ulmus americana*, *Fraxinus americana*, *Fraxinus quadrangulata*, *Ostrya virginiana*, *Carya cordiformis*, and *Prunus serotina* not present in the canopy are found in the smaller size classes.

The area had a rich shrub layer with 10 species being encountered while sampling, with *Ribes missouriense* and *Staphylea trifolia* sharing most frequent status. With the ground layer having 24 species.

Table 1 Mesic upland forest	Point-center-quarter				1m ² Plot
*=exotic species	Centimeters in diameter				
Species	>=22	<22	< 13	Shrubs	Ground layer

Trees more than 22 centimeters in diameter:

<i>Quercus rubra</i>	64%				
<i>Tilia americana</i>	57%	100%	85%		
<i>Juglans nigra</i>	42%		7%		
<i>Acer saccharum</i>	21%	14%	14%		
<i>Quercus alba</i>	21%	7%			
<i>Celtis occidentalis</i>	7%	21%	21%		21%

Trees less than 22 centimeters and greater than 13 centimeters in diameter:

<i>Ulmus rubra</i>		28%	14%		
<i>Fraxinus americana</i>		28%	14%		
<i>Ostrya virginiana</i>		21%			
<i>Carya cordiformis</i>		7%	50%		
<i>Prunus serotina</i>		7%	14%		7%

Trees less than 13 centimeters and greater than 5 centimeters in diameter:

<i>Fraxinus quadrangulata</i>			21%		
<i>Ulmus americana</i>			14%		

Shrubs:

<i>Ribes missouriense</i>				42%	
<i>Staphylea trifolia</i>				42%	14%
<i>Prunus virginiana</i>				35%	
<i>Cornus alternifolia</i>				28%	
<i>Rubus occidentalis</i>				21%	

Table 1 Mesic upland forest	Point-center-quarter			1m ² Plot	
*=exotic species	Centimeters in diameter			Shrubs	Ground layer
Species	>=22	<22	< 13		

<i>Cornus racemosa</i>				14%	
<i>Viburnum opulus*</i>				14%	7%
<i>Viburnum prunifolium</i>				14%	
<i>Viburnum lentago</i>				7%	
<i>Viburnum rafinesquianum</i>				7%	

Ground layer species:

<i>Circaea lutetiana ssp canadensis</i>					57%
<i>Parthenocissus inserta</i>					57%
<i>Geranium maculatum</i>					50%
<i>Smilacina racemosa</i>					50%
<i>Hydrophyllum virginianum</i>					35%
<i>Arisaema triphyllum</i>					28%
<i>Carex grisea</i>					28%
<i>Geum canadense</i>					28%
<i>Asarum canadense var reflexum</i>					21%
<i>Carex hirtifolia</i>					21%
<i>Desmodium glutinosum</i>					21%
<i>Alliaria petiolata*</i>					14%
<i>Ranunculus abortivus</i>					14%
<i>Athyrium angustum</i>					7%
<i>Caulophyllum thalictroides</i>					7%
<i>Dicentra cucullaria</i>					7%
<i>Galium triflorum</i>					7%
<i>Hepatica nobilis var acuta</i>					7%
<i>Leersia virginica</i>					7%
<i>Parthenocissus quinquefolia</i>					7%
<i>Podophyllum peltatum</i>					7%
<i>Ranunculus septentrionalis</i>					7%
<i>Sanguinaria canadensis</i>					7%
<i>Solidago flexicaulis</i>					7%

Dry-mesic upland forest This community is found on the ridge tops and covered 40% of the study area. There were 107 species located in the dry-mesic upland forest. The frequencies of the trees, shrubs, and herbaceous species sampled in the dry-mesic upland forest are in table 2. The area sampled in this community was cut over in the past twenty years. The harvesting of this forest can be seen in the small average diameter of 36 centimeters and the high number of species encountered in the canopy.

The cutting of the forest shows up in its structure. Of the ten species found in the canopy there were no new species encountered in the understory, saplings, and seedlings. When the canopy was removed the understory species took their place. At this time there is no clear dominance in the canopy, but as the forest matures one species will become more frequent, while others become less frequent. The largest and best dry-mesic upland forest is north of the study area. With some good

stands at the north end of the study area though these were not sampled.

This community also had a rich flora of shrubs. With nine native shrub species encountered while sampling. The three nonnative shrub species were infrequent. The most frequent shrub was *Prunus virginiana* at 70%. The ground layer had 23 species with five species being nonnative.

Table 2 Dry-mesic upland forest	Point-center-quarter			1m ² Plot	
*=exotic species	Centimeters in diameter				
Species	>=22	<22	< 13	Shrubs	Ground layer

Trees more than 22 centimeters in diameter:

<i>Ulmus rubra</i>	60%	90%	40%		10%
<i>Prunus serotina</i>	40%	60%	50%		10%
<i>Fraxinus americana</i>	40%	50%	40%		10%
<i>Quercus alba</i>	40%	10%			
<i>Carya ovata</i>	30%		30%		
<i>Tilia americana</i>	20%	20%	20%		
<i>Juglans nigra</i>	20%	20%	10%		
<i>Quercus velutina</i>	20%				
<i>Carya cordiformis</i>	10%	20%	70%		
<i>Celtis occidentalis</i>	10%	10%	40%		10%

Trees less than 22 centimeters and greater than 13 centimeters in diameter:

Trees less than 13 centimeters and greater than 5 centimeters in diameter:

Shrubs:

<i>Prunus virginiana</i>	70%	10%
<i>Cornus racemosa</i>	30%	
<i>Zanthoxylum americanum</i>	30%	
<i>Corylus americana</i>	20%	
<i>Ribes missouriense</i>	20%	10%
<i>Viburnum prunifolium</i>	20%	
<i>Rubus occidentalis</i>	20%	
<i>Lonicera sp.*</i>	20%	
<i>Cornus alternifolia</i>	10%	
<i>Viburnum opulus*</i>	10%	7%
<i>Viburnum lentago</i>	10%	
<i>Rosa multiflora*</i>	10%	

Ground layer species:

<i>Circaea lutetiana ssp canadensis</i>	90%
<i>Geum canadense</i>	80%
<i>Parthenocissus inserta</i>	70%
<i>Geranium maculatum</i>	60%
<i>Alliaria petiolata*</i>	60%
<i>Polygonum virginianum</i>	50%
<i>Arisaema triphyllum</i>	50%
<i>Amphicarpa bracteata</i>	30%

Table 2 Dry-mesic upland forest	Point-center-quarter			1m ² Plot
*=exotic species	Centimeters in diameter			
Species	>=22	<22	< 13	Shrubs Ground layer

Viola sororia				30%
Desmodium glutinosum				20%
Festuca obtusa				20%
Osmorhiza longistylis				20%
Toxicodendron radicans				20%
Caulophyllum thalictroides				10%
Arctium minus*				10%
Galium aparine				10%
Hesperis matronalis*				10%
Laportea canadensis				10%
Oxalis stricta				10%
Plantago rugelii*				10%
Polygonum persicaria*				10%
Scutellaria ovata var versicolor				10%
Viola pubescens var eriocarpa				10%

Dolomite cliff This community is primarily found on the Rock River bluff, with a couple small outcrops in a ravine in area one (map 5). The community's cool moist northeast exposure gives it a rich flora of 84 species including habitat for the state threatened species *Oryzopsis racemosa*. These cliffs are all shaded by the surrounding forest. The cutting of the forest in front of them has given them a more open exposure from time to time.

Species List For
Lowell Park

Michael D. Jones
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July 14, 1998

LOWELL PARK PLANT INVENTORY

SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Acalypha rhomboidea</i>	Three-seeded mercury											X				X
<i>Acer saccharum</i>	Sugar maple	X	X		X	X	X	X	X		X					
<i>Acer negundo</i>	Box elder		X		X			X								
<i>Acer saccharinum</i>	Silver maple	X				X						X				
<i>Actaea pachypoda</i>	White baneberry	X	X	X	X	X	X	X								X
<i>Actaea rubra</i>	Red baneberry	X				X	X	X								
<i>Adiantum pedatum</i>	Maidenhair fern	X			X		X	X								X
<i>Agrimonia pubescens</i>	Soft agrimony	X	X		X		X	X								X
<i>Agrostis alba</i> var <i>palustris</i>	Creeping bent grass											X				X
<i>Alliaria petiolata</i> *	Garlic mustard	X	X	X	X	X	X	X	X	X		X				X
<i>Allium tricoccum</i>	Wild leek	X	X		X	X	X									X
<i>Allium burdickii</i>	Wild leek	X				X	X									X
<i>Ambrosia artemisiifolia</i>	Common ragweed											X				
<i>Ambrosia trifida</i>	Giant ragweed											X				
<i>Amorpha fruticosa</i>	Indigo bush											X				X
<i>Amphicarpa bracteata</i> var <i>comosa</i>	Lowland hog peanut	X	X			X	X		X							X
<i>Anemone quinquefolia</i>	Wood anemone	X	X		X	X	X	X			X					
<i>Anemone virginiana</i>	Tall anemone	X	X			X			X							X
<i>Aquilegia canadensis</i>	Columbine	X	X	X	X		X	X			X	X				X
<i>Arabis shortii</i>	Toothed cress	X	X			X	X	X			X	X				X
<i>Arabis glabra</i>	Tower mustard		X								X					
<i>Arabis laevigata</i>	Smooth rock cress	X	X	X	X		X		X	X	X					X

1, 2, & 3 = Areas marked on map 1; RG = Ridge top; RT = River terrace; RV = Ravine; RS = River slope; CRS = Crest;
 Q = Quarry; F = Field; M = Mowed areas; HSP = Collected as herbarium specimen; * = Non-native species; << = State threatened species.

SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Arctium minus</i> *	Common burdock			X	X							X				
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	X	X		X	X	X	X								X
<i>Asarum canadense</i>	Wild ginger	X	X		X	X										X
<i>Asarum canadense var reflexum</i>	Canada wild ginger	X			X	X	X	X		X	X		X			X
<i>Asclepias incarnata</i>	Swamp milkweed											X				
<i>Asplenium rhizophyllum</i>	Walking fern	X									X					X
<i>Aster lateriflorus</i>	Side-flowering aster	X	X			X	X		X							
<i>Aster pilosus</i>	Hairy aster	X				X										X
<i>Aster shortii</i>	Short's aster	X	X		X			X	X		X					
<i>Athyrium angustum</i>	Lady fern	X	X		X	X	X	X	X							X
<i>Berberis thunbergii</i> *	Japanese barberry	X	X		X		X									X
<i>Boehmeria cylindrica</i>	False nettle												X			
<i>Botrychium virginianum</i>	Rattlesnake fern		X	X	X											
<i>Brachyelytrum erectum</i>	Long-awned wood grass	X	X		X		X	X					X			X
<i>Bromus japonicus</i> *	Japanese chess											X				X
<i>Bromus pubescens</i>	Woodland brome	X						X	X							X
<i>Campanula americana</i>	Tall bellflower	X	X		X	X	X	X	X	X	X	X	X	X		X
<i>Carex hitchcockiana</i>	Hairy gray sedge	X					X									X
<i>Carex jamesii</i>	Grass sedge	X					X									X
<i>Carex pensylvanica</i>	Pennsylvania sedge	X	X		X			X	X							X
<i>Carex rosea</i>	Curly-styled wood sedge	X						X								
<i>Carex sparganioides</i>	Loose-headed bracted sedge	X					X	X								X

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Q = Quarry; F = Field; M = Mowed areas; HSP = Collected as herbarium specimen; * = Non-native species; << = State threatened species.

SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP	
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M		
<i>Carex sprengelii</i>	Sprengel sedge	X					X										X
<i>Carex hirtifolia</i>	Hairy wood sedge	X	X			X	X	X									X
<i>Carex grisea</i>	Wood gray sedge	X					X										X
<i>Carex granularis</i>	Pale sedge													X			
<i>Carex convoluta</i>	None	X	X	X	X	X	X	X									X
<i>Carex conjuncta</i>	Green-headed fox sedge	X				X											X
<i>Carex cephaloidea</i>	Rough clustered sedge	X	X				X	X									X
<i>Carex albursina</i>	Blunt-scaled wood sedge	X	X		X	X	X	X	X	X							X
<i>Carex blanda</i>	Common woodland sedge	X	X	X	X	X	X		X								X
<i>Carex annectens</i>	Large yellow fox sedge	X			X												X
<i>Carpinus caroliniana</i>	Blue beech	X					X										
<i>Carya cordiformis</i>	Yellowbud hickory	X	X		X		X										X
<i>Carya ovata</i>	Shagbark hickory	X	X	X	X				X					X			
<i>Caulophyllum thalictroides</i>	Blue cohosh	X	X		X	X	X	X		X							X
<i>Celastrus scandens</i>	Climbing bittersweet		X					X									
<i>Celtis occidentalis</i>	Hackberry	X	X	X			X	X									
<i>Chaerophyllum procumbens</i>	Wild chervil			X	X												X
<i>Circaea lutetiana</i> ssp. <i>canadensis</i>	Enchanter's nightshade	X	X		X	X	X	X	X								X
<i>Claytonia virginica</i>	Spring beauty	X	X		X	X	X	X		X	X				X		X
<i>Cornus racemosa</i>	Gray dogwood	X	X	X	X	X			X								X
<i>Cornus alternifolia</i>	Alternate-leaved dogwood	X	X		X	X	X	X									X
<i>Corylus americana</i>	Hazelnut	X			X			X									X

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Q = Quarry; F = Field; M = Mowed areas; HSP = Collected as herbarium specimen; * = Non-native species; << = State threatened species.

SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP	
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M		
<i>Cryptotaenia canadensis</i>	Honewort	X	X	X	X	X	X	X									X
<i>Cystopteris protrusa</i>	Fragile fern	X	X	X	X	X	X	X									X
<i>Cystopteris bulbifera</i>	Bladder fern		X	X			X	X		X	X						X
<i>Dactylis glomerata</i> *	Orchard grass																
<i>Dentaria laciniata</i>	Toothwort	X	X		X	X	X	X									X
<i>Desmodium glutinosum</i>	Pointed tick trefoil	X		X	X		X	X	X								X
<i>Desmodium canadense</i>	Showy tick trefoil		X						X								X
<i>Dicentra canadensis</i>	Squirrel-corn	X	X			X	X										X
<i>Dicentra cucullaria</i>	Dutchman's-breeches	X	X		X	X	X	X		X	X			X			X
<i>Dichanthelium acuminatum</i>	Old-field panic grass		X						X								X
<i>Digitaria sanguinalis</i> *	Hairy crab grass													X			
<i>Dioscorea villosa</i>	Wild yam	X	X				X	X									X
<i>Dodecatheon meadia</i>	Shooting star	X	X		X				X	X	X						X
<i>Ellisia nyctelea</i>	Annt lucy		X	X			X	X									X
<i>Elymus virginicus</i>	Virginia wild rye											X					X
<i>Elymus villosus</i>	Silky wild rye	X	X		X		X	X	X	X							X
<i>Elymus hystrix</i>	Bottlebrush grass	X	X				X	X	X					X			X
<i>Equisetum arvense</i>	Field horsetail			X								X					
<i>Erigeron pulchellus</i>	Robin's plantain	X							X						X		X
<i>Erigeron philadelphicus</i>	Philadelphia fleabane	X				X									X		
<i>Erythronium albidum</i>	White trout lily	X	X	X	X	X	X	X									X
<i>Euonymus europaeus</i> *	European spindle-tree	X	X			X	X	X									X

1, 2, & 3=Areas marked on map 1: RG = Ridge top: RT = River terrace: RV = Ravine: RS = River slope: CRS = Crest:
Q = Quarry: F = Field: M = Mowed areas: HSP = Collected as herbarium specimen: * = Non-native species: << = State threatened species.

SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Euonymus alatus</i> *	Winged euonymus	X					X									
<i>Eupatorium rugosum</i>	White snakeroot	X	X		X				X				X			
<i>Eupatorium purpureum</i>	Sweet joe-pye weed	X	X				X									X
<i>Festuca obtusa</i>	Nodding fescue		X		X											
<i>Fragaria americana</i>	Hillside strawberry	X									X					X
<i>Fraxinus quadrangulata</i>	Square-stemmed ash	X	X		X	X	X	X	X							X
<i>Fraxinus pennsylvanica</i>	Green ash		X	X	X			X								
<i>Galium triflorum</i>	Sweet-scented bedstraw	X	X		X			X								X
<i>Galium aparine</i>	Annual bedstraw	X	X	X	X	X	X	X		X	X					
<i>Galium concinnum</i>	Shining bedstraw	X	X	X	X	X		X	X							X
<i>Geranium maculatum</i>	Wild geranium	X	X	X	X	X	X	X		X	X					X
<i>Geum vernum</i>	Spring avens	X					X									X
<i>Geum canadense</i>	White avens	X	X		X		X	X	X							X
<i>Glechoma hederacea</i> var <i>micrantha</i> *	Ground ivy		X	X	X							X				
<i>Gleditsia triacanthos</i>	Honey locust			X	X											
<i>Glyceria striata</i>	Fowl manna grass	X					X	X								X
<i>Gymnocladus dioica</i>	Kentucky coffeetree	X				X		X								X
<i>Hackelia virginiana</i>	Virginia stickseed		X		X				X							
<i>Hepatica nobilis</i> var <i>acuta</i>	Sharp-lobed liverleaf	X	X		X	X	X	X	X	X	X		X			X
<i>Heracleum lanatum</i>	Cow parsnip	X					X									
<i>Hesperis matronalis</i> *	Dame's rocket	X		X			X							X		
<i>Hydrophyllum virginianum</i>	Virginia waterleaf	X	X	X	X	X	X	X		X	X		X			X

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SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP	
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M		
<i>Hydrophyllum appendiculatum</i>	Great waterleaf		X		X		X	X		X							X
<i>Impatiens capensis</i>	Spotted touch-me-not		X									X					X
<i>Impatiens pallida</i>	Pale touch-me-not	X	X			X		X				X					X
<i>Isopyrum biternatus</i>	False rue anemone	X	X			X	X	X			X						X
<i>Juglans nigra</i>	Black walnut	X	X			X	X	X									
<i>Juglans cinerea</i>	Butternut		X					X									
<i>Juncus tenuis</i>	Poverty rush	X	X		X			X						X			X
<i>Juniperus virginiana</i>	Eastern red cedar	X	X		X				X								
<i>Laportea canadensis</i>	Wood nettle	X	X	X	X		X	X			X	X					X
<i>Leonurus cardiaca</i> *	Motherwort	X						X					X				
<i>Lobelia siphilitica</i>	Great blue lobelia											X					X
<i>Lobelia inflata</i>	Indian tobacco		X		X							X					X
<i>Lonicera x bella</i> *	Showy fly honeysuckle	X	X	X	X		X		X								X
<i>Lonicera prolifera</i>	Rock honeysuckle	X			X			X	X								
<i>Lysimachia nummularia</i> *	Moneywort			X	X												
<i>Medicago lupulina</i> *	Black medic											X					
<i>Menispermum canadense</i>	Moonseed	X	X		X		X	X	X		X						X
<i>Mertensia virginica</i>	Virginia bluebells	X			X	X											X
<i>Morus alba</i> *	White mulberry	X				X											
<i>Myosoton aquaticum</i> *	Giant chickweed											X					X
<i>Nepeta cataria</i> *	Catnip	X											X				
<i>Oenothera biennis</i>	Evening primrose											X	X				

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SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP	
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M		
<i>Onoclea sensibilis</i>	Sensitive fern	X				X	X										X
<i>Oryzopsis racemosa</i> <<	Black-seeded ricegrass	X							X		X						
<i>Osmorhiza longistylis</i>	Smooth sweet cicely		X	X				X									
<i>Osmorhiza claytonii</i>	Hairy sweet cicely		X				X										X
<i>Osmunda claytoniana</i>	Interrupted fern	X					X										
<i>Ostrya virginiana</i>	Eastern Hop Hornbeam	X	X		X	X	X	X	X		X						
<i>Oxalis stricta</i>	Tall wood sorrel											X		X	X		X
<i>Panicum miliaceum</i> *	Broomcorn millet												X				X
<i>Parthenocissus quinquefolia</i>	Virginia creeper	X	X	X		X	X										
<i>Parthenocissus inserta</i>	Thicket creeper	X	X				X	X		X	X						
<i>Pellaea glabella</i>	Smooth cliffbrake	X									X						
<i>Phalaris arundinacea</i> *	Reed canary grass											X					
<i>Phlox divaricata</i>	Blue phlox	X	X	X	X	X	X	X									X
<i>Phytolacca leptostachya</i>	Lopseed	X	X				X	X		X							
<i>Phyla lanceolata</i>	Fog fruit											X					X
<i>Physalis subglabrata</i>	Smooth ground cherry											X					
<i>Pilea pumila</i>	Clearweed	X	X		X		X	X				X					X
<i>Plantago lanceolata</i> *	English plantain	X										X		X	X		X
<i>Plantago rugelii</i> *	Rugel's plantain			X	X							X			X		X
<i>Platanus occidentalis</i>	Sycamore		X			X											
<i>Poa compressa</i> *	Canadian bluegrass		X						X								X
<i>Poa pratensis</i> *	Kentucky blue grass	X					X										X

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SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Poa sylvestris</i>	Woodland blue grass	X			X											
<i>Podophyllum peltatum</i>	Mayapple	X	X	X	X	X	X	X								X
<i>Polemonium reptans</i>	Jacob's-ladder	X	X		X	X										X
<i>Polygonatum commutatum</i>	Great solomon seal		X	X			X			X						
<i>Polygonum virginianum</i>	Woodland knotweed	X	X		X		X	X								
<i>Polygonum persicaria</i> *	Spotted lady's thumb											X		X		X
<i>Polygonum punctatum</i>	Smartweed											X				X
<i>Polygonum buxiforme</i>	Boxwood knotweed											X				X
<i>Polygonum lapathifolium</i>	Pale smartweed											X				X
<i>Polygonumcespitiosum</i> var. <i>longisetum</i>	Creeping smartweed	X	X		X	X										X
<i>Polymnia canadensis</i>	Great solomon seal	X	X					X			X					X
<i>Populus grandidentata</i>	Large-toothed aspen		X		X									X		
<i>Potentilla simplex</i>	Common cinquefoil		X						X							
<i>Potentilla norvegica</i> *	Rough cinquefoil											X				
<i>Prenanthes alba</i>	White lettuce		X						X							
<i>Prunella vulgaris</i> var. <i>elongata</i>	Self-heal	X	X					X	X					X		X
<i>Prunus virginiana</i>	Common chokecherry	X	X	X	X		X	X	X		X					
<i>Prunus serotina</i>	Wild black cherry	X	X	X	X	X	X	X	X	X	X					X
<i>Ptelea trifoliata</i>	Wafer ash											X				
<i>Quercus velutina</i>	Black oak		X		X											
<i>Quercus alba</i>	White oak	X	X	X	X	X		X	X							
<i>Quercus macrocarpa</i>	Bur oak													X		

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SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP	
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M		
<i>Quercus prinoides</i> var <i>acuminata</i>	Chinquapin oak	X					X										X
<i>Quercus rubra</i>	Red oak	X	X	X	X	X	X	X									
<i>Ranunculus septentrionalis</i>	Swamp buttercup	X	X		X	X	X										X
<i>Ranunculus abortivus</i>	Small-flowered crowfoot	X	X	X	X	X	X	X		X	X				X		X
<i>Ranunculus fascicularis</i>	Early buttercup	X						X	X							X	X
<i>Ranunculus pensylvanicus</i>	Pennsylvania buttercup											X					X
<i>Ranunculus recurvatus</i>	Hooked crowfoot	X				X	X	X									X
<i>Ranunculus sceleratus</i>	Cursed crowfoot												X				
<i>Ribes missouriense</i>	Missouri gooseberry	X	X	X	X	X	X	X		X	X		X				
<i>Ribes cynosbati</i>	Prickly wild gooseberry	X									X						
<i>Robinia pseudoacacia</i> *	Black locust		X	X	X		X										
<i>Rosa multiflora</i> *	Multiflora rose	X	X	X	X		X							X			
<i>Rubus pensilvanicus</i>	Yankee Blackberry	X				X											X
<i>Rubus occidentalis</i>	Blackcap raspberry	X	X		X	X	X	X			X						X
<i>Rubus allegheniensis</i>	Common blackberry	X				X											X
<i>Rudbeckia laciniata</i>	Wild golden glow		X									X					X
<i>Sambucus canadensis</i>	Elderberry	X					X		X								X
<i>Sanguinaria canadensis</i>	Bloodroot	X	X		X	X		X			X		X				
<i>Sanicula gregaria</i>	Common snakeroot	X	X		X		X	X	X								
<i>Sanicula trifoliata</i>	Large-fruited black snakeroot	X						X									X
<i>Saponaria officinalis</i> *	Bouncing bet	X											X				
<i>Scirpus americanus</i>	Chairmaker's rush											X					X

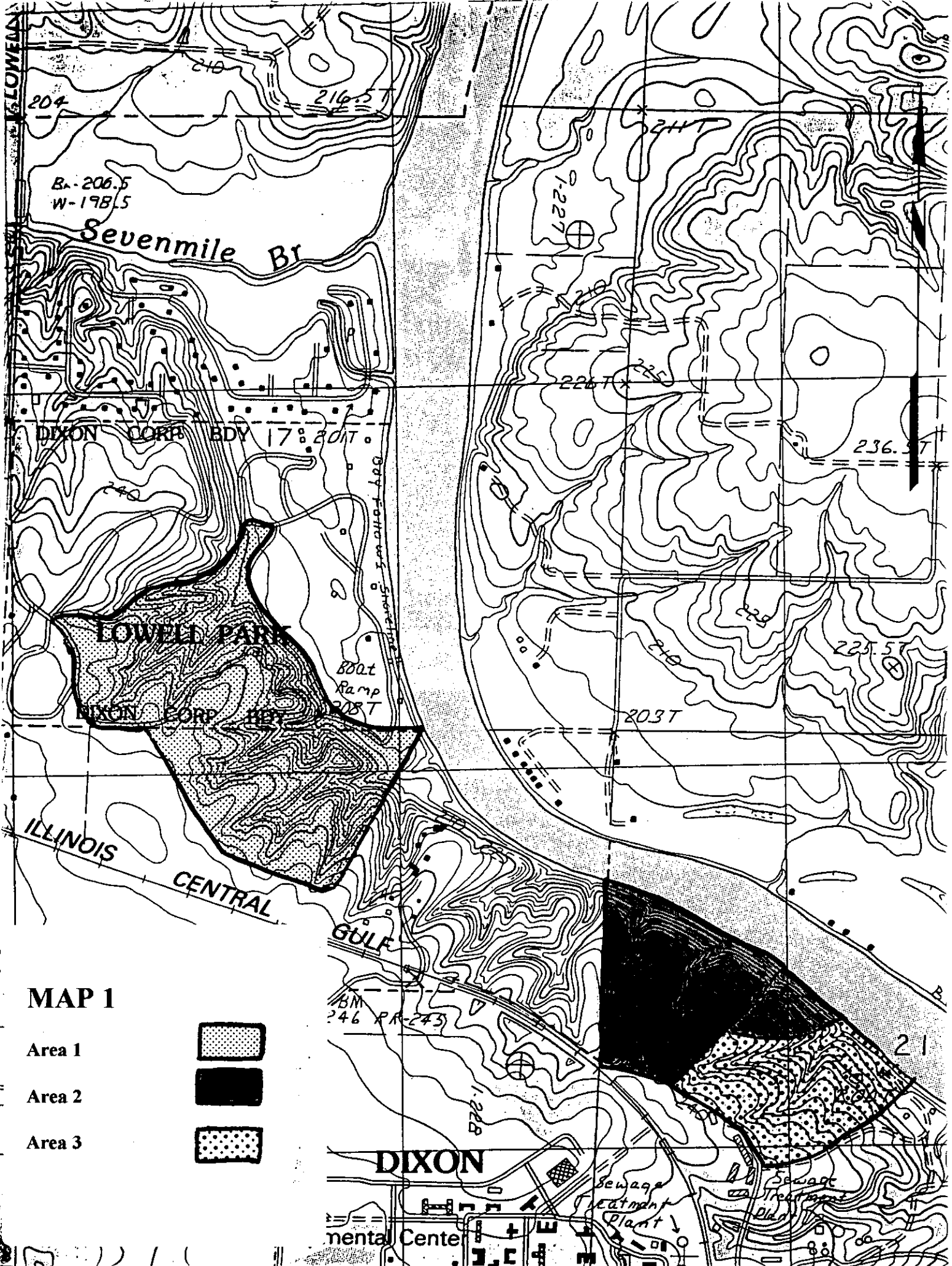
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SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Scrophularia marilandica</i>	Late figwort		X									X				X
<i>Scutellaria ovata</i> var <i>versicolor</i>	Heart-leaved skullcap	X			X			X								X
<i>Setaria glauca</i> *	Yellow foxtail												X			
<i>Setaria viridis</i> var <i>major</i> *	Giant green foxtail												X			X
<i>Sicyos angulatus</i>	Bur cucumber											X				X
<i>Sisymbrium loeselii</i> *	Tall hedge mustard											X				X
<i>Smilacina racemosa</i>	Wild spikenard	X	X	X	X	X	X	X			X					X
<i>Smilax ecirrhata</i>	Upright carrion flower	X					X	X								X
<i>Smilax hispida</i>	Bristly green brier	X	X				X	X	X							X
<i>Solanum carolinense</i>	Horse-nettle											X				
<i>Solanum ptycanthum</i>	Black nightshade												X			
<i>Solanum dulcamara</i> *	Bittersweet nightshade												X			
<i>Solidago canadensis</i>	Tall goldenrod	X	X		X	X										
<i>Solidago ulmifolia</i>	Elm-leaved goldenrod	X	X		X	X			X							X
<i>Solidago flexicaulis</i>	Zigzag goldenrod	X	X			X		X	X	X						
<i>Sphenopholis obtusata</i>	Shining wedge grass	X			X						X					
<i>Staphylea trifolia</i>	Bladdernut	X	X			X	X		X							X
<i>Taraxacum officinale</i> *	Common dandelion	X		X	X		X	X				X	X	X	X	
<i>Thalictrum dasycarpum</i> var <i>hypoglaucom</i>	Smooth meadow rue	X						X								
<i>Tilia americana</i>	Basswood	X	X		X	X	X	X			X					
<i>Toxicodendron radicans</i>	Poison ivy	X	X		X	X	X	X								
<i>Trifolium hybridum</i> *	Alsike clover											X				

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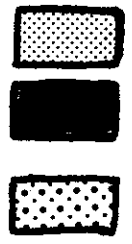
SCIENTIFIC NAME	COMMON NAME	AREA			FOREST				CLIFF			RIVER	DEVELOPED			HSP
		1	2	3	RG	RT	RV	RS	CRS	RV	RS	SHORE	Q	F	M	
<i>Trifolium pratense</i> *	Red clover	X										X		X	X	
<i>Trifolium repens</i> *	White clover	X										X		X	X	
<i>Trillium flexipes</i>	Nodding trillium	X	X			X	X	X		X	X					X
<i>Trillium recurvatum</i>	Red trillium	X	X	X	X	X	X	X								X
<i>Ulmus americana</i>	American elm	X	X	X	X		X									X
<i>Ulmus rubra</i>	Slippery elm	X	X	X	X	X	X									
<i>Urtica dioica</i>	Tall nettle	X	X	X	X		X						X			
<i>Uvularia grandiflora</i>	Yellow bellwort	X	X			X	X	X		X	X					X
<i>Verbascum thapsus</i> *	Woolly mullein	X											X			
<i>Verbena urticifolia</i>	White vervian	X												X		X
<i>Veronicastrum virginicum</i>	Culver's root	X	X		X	X			X							X
<i>Viburnum opulus</i> *	European high-bush cranberry	X	X	X	X	X	X	X				X				X
<i>Viburnum prunifolium</i>	Black haw	X	X		X	X	X									X
<i>Viola pubescens</i> var <i>eriocarpa</i>	Smooth yellow violet	X	X	X	X	X	X	X								X
<i>Viola sororia</i>	Woolly blue violet	X	X	X	X	X	X			X						X
<i>Zanthoxylum americanum</i>	Prickly ash		X		X											0

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MAP 1

- Area 1
- Area 2
- Area 3

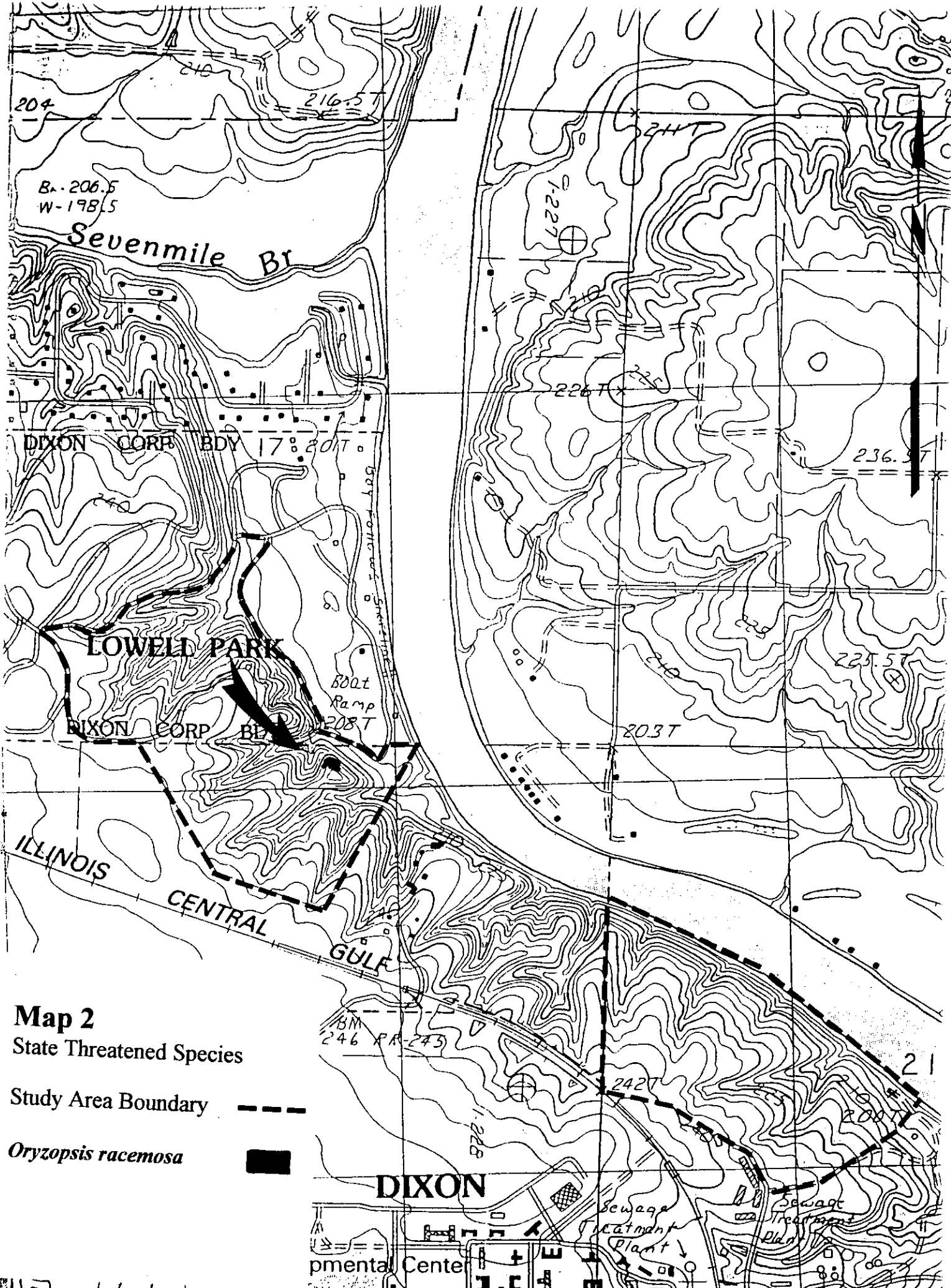


DIXON

Mental Center

Sewage Treatment Plant

Sewage Treatment Plant





Map 3

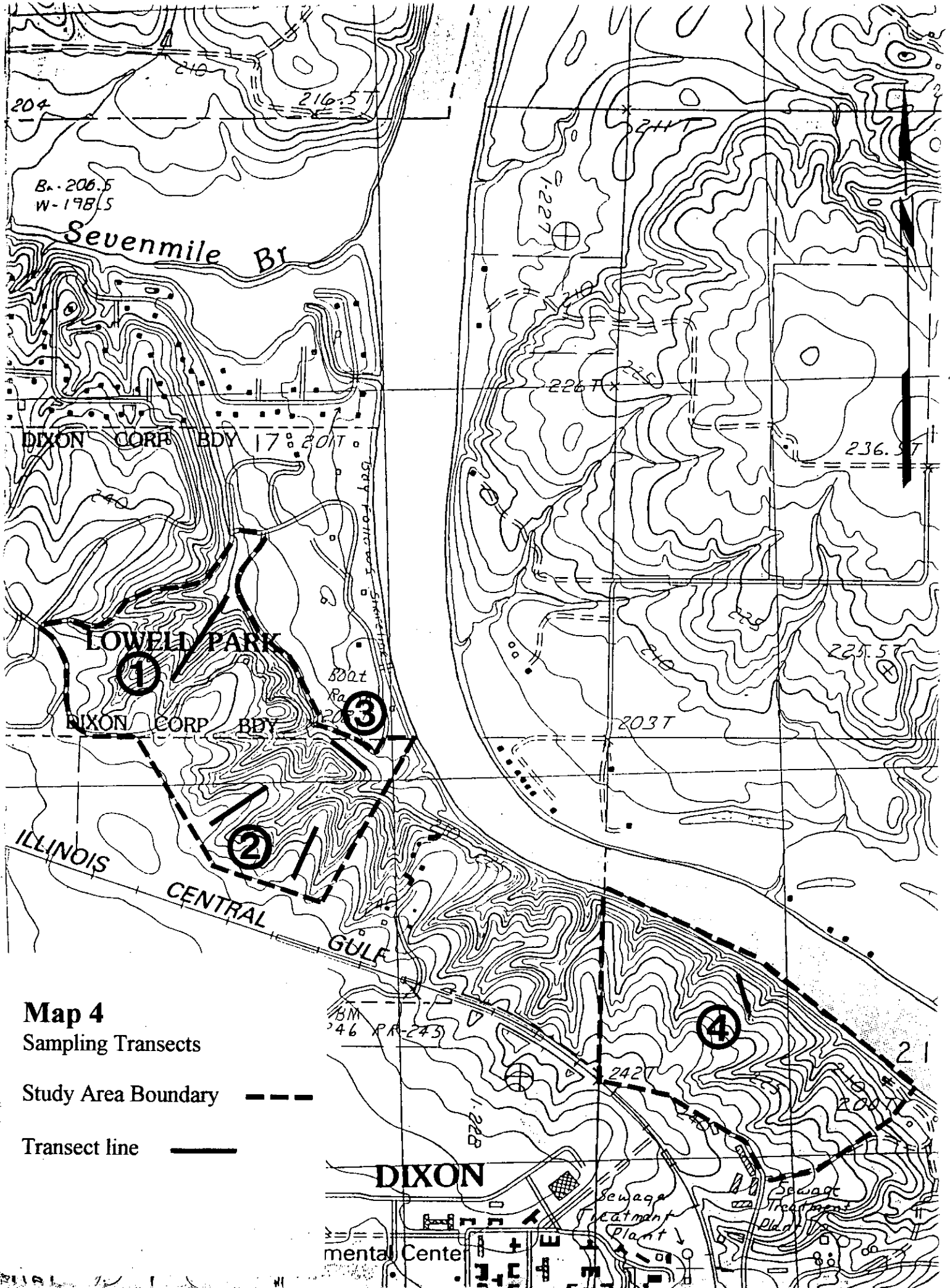
Forest Communities

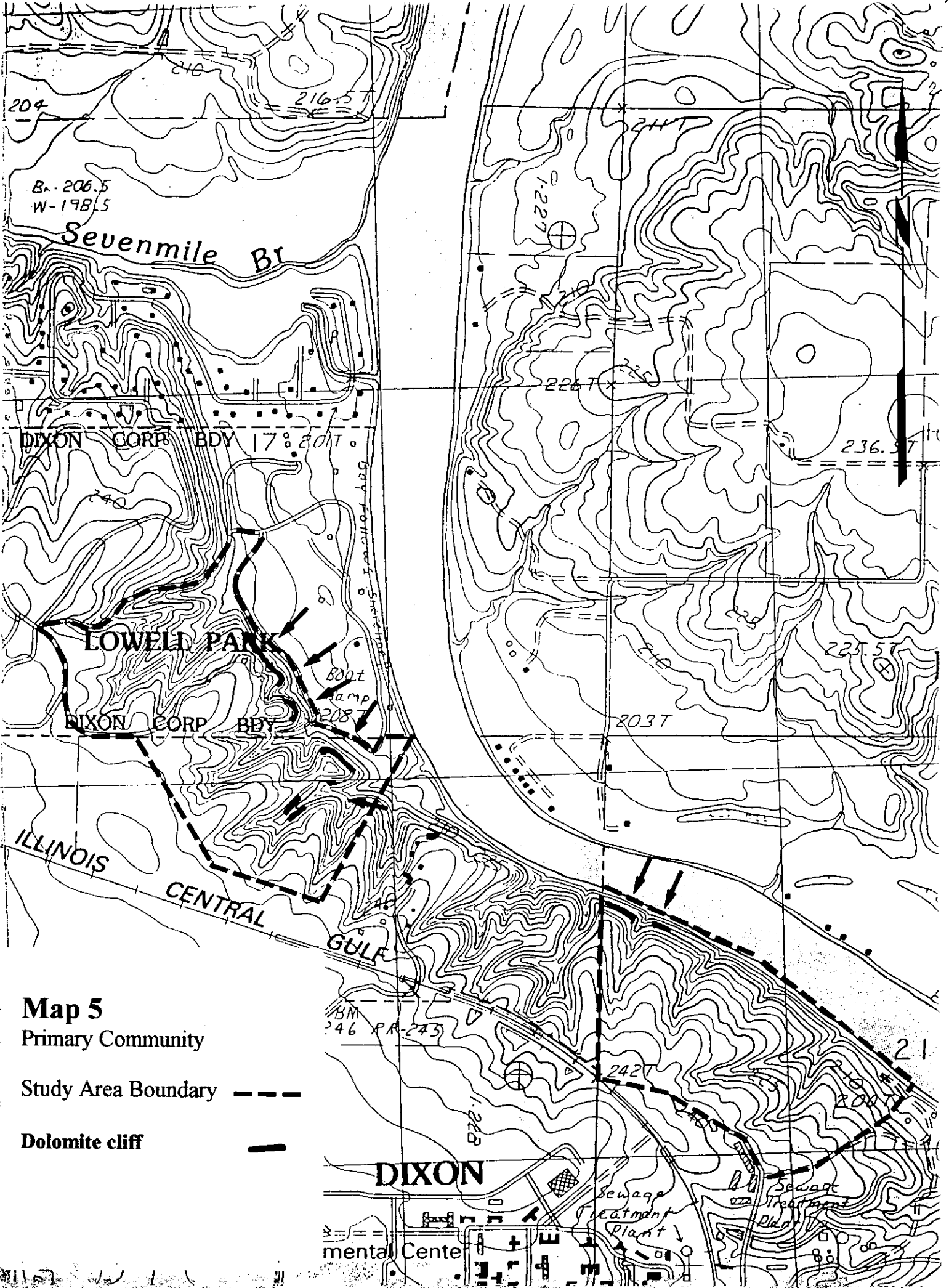
Study Area Boundary

Mesic upland forest

Dry-mesic upland forest



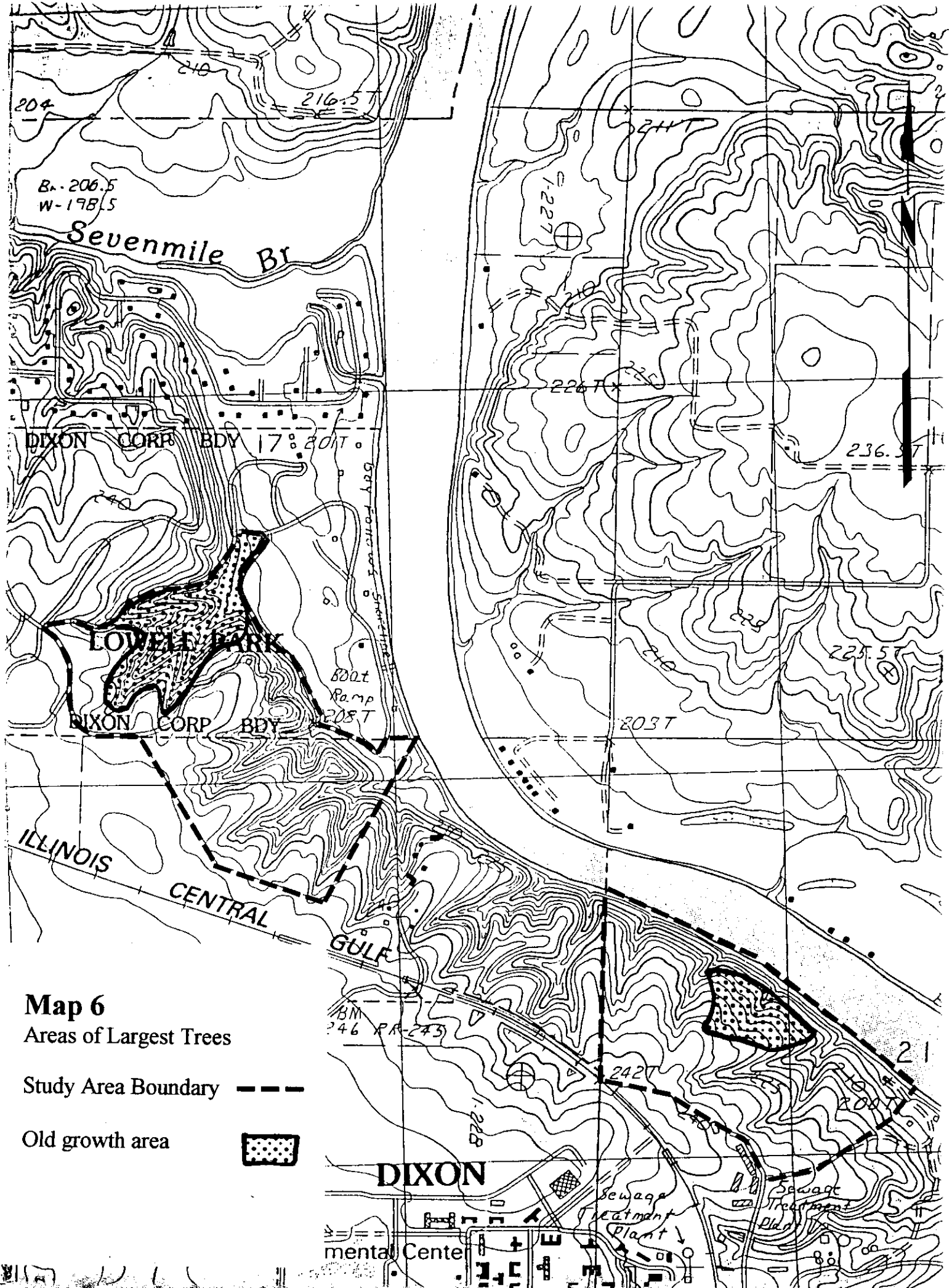




Map 5
Primary Community

Study Area Boundary - - -

Dolomite cliff —



Map 6

Areas of Largest Trees

Study Area Boundary

Old growth area

B.M. 206.5
W-198.5

Sevenmile Br

DIXON CORP BDY 17:20T

LOVELL PARK

DIXON CORP BDY

800t
Ramp

ILLINOIS
CENTRAL
GULF

B.M. 246 P.R. 243

DIXON

mental Center

Sewage
Treatment
Plant

Sewage
Treatment
Plant

210

216.5T

214T

1-227

226T

236.5T

223.5T

203T

21

242T

1-228