

March 15, 1999

John Klein
Hamilton County Park District
10245 Winton Road
Cincinnati, OH 45231

Dear John,

Enclosed are the results of our 1999 winter bird census, now recorded for seven consecutive years. Note that the cold and snow of early January apparently reduced numbers of kinglets, wrens, and perhaps titmice. I am also requesting permission to carry out the Breeding Bird Census in the same Bowles Woods plot:

I enclose a copy of the plant list we have kept for our 40 acre plot within Bowles Woods, as well as a cover sheet describing conclusions and methodology. I welcome any comments on the list.

Dave Styer, Steve Pelikan, and I would like to carry out a plant list for another segment of Miami Whitewater. We are curious if you would find that beneficial and if you have any preferences for the site. In particular, we have wondered if a thorough plant survey of the Lake tract (if not already done) could help provide input as to how the parks would manage the land. I will call you within a few days to get your insight as to value of the plant survey and your preferences for location.

Unlike our work for the enclosed plant list, we would like permission, on a restricted basis, to collect plants for our next plant list. We would not collect any plant for which there are very few individuals or whose identity is clear without collection. However, for certain grasses and sedges, and perhaps others, we feel the plant list would be more meaningful if we collected a specimen. These specimens would be deposited at the University of Cincinnati herbarium, where Steve has permission to deposit plant specimens.

I hope you are doing well.

Sincerely,



Charlie Saunders

Plant List of a 40-acre Segment of Bowles Woods

Charlie Saunders, Steve Pelikan, and David Styer

We have kept a list of the vascular plants found in the 40 acre plot where we have been carrying out resident bird censuses. The plot is within the Bowles Woods section of Miami Whitewater Forest, on the east side of the road. The plot is entirely mature woods and is bordered by at least 50 feet of mature woods on every side. It roughly extends between the two outhouses and eastward to a line 50 feet from the park boundary. There is an ephemeral stream running through the plot.

We find the presence of twelve fern species to be the most impressive example of the botanical diversity of the plot. While many of the ferns are common within the plot, others such as New York Fern (*Thelypteris noveboracensis*), Evergreen Wood Fern (*Dryopteris intermedia*), Cut-leaved Grape Fern (*Botrychium dissectum*), and Sensitive Fern (*Onoclea sensibilis*) were known by only one to three plants. Near the center of the plot is an impressively large expanse of Glade Fern, otherwise known as Narrow-leaved Spleenwort (*Diplazium pycnocarpon*). Other points of interest include three sites for Putty Root Orchid, *Aplectrum hyemale*, the only orchid we found. We also found Ginseng (*Panax quinquefolius*) in three spots, although we have not seen it in the last few years. It is curious that Black Snakeroot (*Cimicifuga racemosa*) was a prolific bloomer the first year (1991) of the breeding bird census, but we have not seen it bloom since.

We have been monitoring the breeding bird populations in the plot, beginning in 1991 and the winter birds, beginning in 1993 (plus a partial winter bird inventory in 1992). These censuses have been published in the annual supplement to the Journal of Field Ornithology. We published a quantitative habitat description (J. Field Ornithology Vol. 65 supplement, p. 59 (1994)).

We notice two threats to the plant community in the census plot. One is the abundance of deer. I am sure you are aware of the deer population and not surprised that we see deer nearly every trip into the plot. The understory is largely denuded to the height of the deer. **We are concerned that birds which depend on the understory may not long survive in Bowles Woods unless the deer population is reduced.** Hooded Warblers, Kentucky Warblers, and Ovenbirds are regular breeding birds now but are cause for special concern. These birds are among the neotropical migrants that are of concern throughout the country. In addition to their difficulties with habitat destruction in Latin America, we are concerned about deer-inflicted habitat destruction in Bowles Woods.

The other threat is the overwhelming abundance of Garlic Mustard (*Alliaria officinalis*), a Eurasian plant that has out-competed many native plants in the United States. During May, this is the most abundant flower in the plot, often choking out other plants.

Within the larger expanse of Bowles Woods, there are plants which are not found within this plot. For example, False Solomon's Seal (*Smilacina racemosa*) was

found within the 50 foot border but not within the bird census plot itself. Other plants, such as *Mertensia virginica* and *Jeffersonia diphylla* are abundant and common, respectively, westward across the road, but we have not found them within the plot. It is clear that the plant diversity of Bowles Woods exceeds that of the census plot, even when only the mature forest is considered.

We have used a number of books for the identification of plants. In all cases, a key was used to identify a plant to species. The nomenclature for the ferns is from The Flora of North America, Vol. 2, 1993. The Vascular Flora of Ohio volumes were used for most of the rest. Other sources were Vascular Plants of Ohio, by Clara Weishaupt, and Manual of Vascular Plants, by Gleason and Cronquist.

We have made many trips into the plot throughout the growing season, although our best coverage is certainly from the end of May to mid-July when we make ten visits as part of our breeding bird census. We continue to add about ten plants per year. However, these are largely weeds that have grown in either the creekbed or the disturbed soil of a recent tree fall. Many of these weeds have only been observed one to four times within the plot. We are only adding about two woodland plants per year. This plant list should be considered a draft, as we will continue to add plants as they are discovered. It should be noted that none of us is a professional botanist, and we have not collected any plants for this survey. If there are mistakes, they are most likely within the sedge group (*Carex*) where one of us (CS) has made most of the (tentative) identifications.

Plant List for Bowles Woods Bird Survey Plot, 40 acres

Family	Scientific Name	Common Name	Earliest Flowering
Aspleniaceae	<i>Asplenium platyneuron</i>	Ebony Spleenwort	
Dryopteridaceae	<i>Athyrium filix-femina</i>	Lady Fern	
	<i>Athyrium pycnocarpum</i>	Narrow-leaved Spleenwort	
	<i>Cystopteris protrusa</i>	Southern Fragile Fern	March
	<i>Dryopteris intermedia</i>	Evergreen Wood Fern	
	<i>Onoclea sensibilis</i>	Sensitive Fern	
	<i>Polystichum acrostichoides</i>	Christmas Fern	
Ophioglossaceae	<i>Botrychium dissectum</i>	Common Grape Fern	
	<i>Botrychium virginianum</i>	Rattlesnake Fern	
Pteridaceae	<i>Adiantum pedatum</i>	Common Maidenhair Fern	
Thelypteridaceae	<i>Phegopteris hexagonoptera</i>	Beech Fern	
	<i>Thelypteris noveboracensis</i>	New York Fern	
Aceraceae	<i>Acer negundo</i>	Box Elder	
	<i>Acer saccharum</i>	Sugar Maple	
Anacardiaceae	<i>Rhus radicans</i>	Poison Ivy	
Annonaceae	<i>Asimina triloba</i>	Pawpaw	May
Apiaceae	<i>Cryptotaenia canadensis</i>	Honewort	June
	<i>Erigenia bulbosa</i>	Salt and Pepper	February
	<i>Osmorhiza claytonia</i>	Sweet Cicely	May
	<i>Osmorhiza longistylis</i>	Aniseroot	May
	<i>Sanicula gregaria</i>	Clustered Snakeroot	June
	<i>Sanicula trifoliata</i>	Long-fruited Snakeroot	June
Aristolochiaceae	<i>Asarum canadense</i>	Wild Ginger	
Asteraceae	<i>Aster cordifolius</i>	Blue Wood Aster	September
	<i>Aster lateriflorus</i>	Starved Aster	October
	<i>Bidens frondosa</i>	Beggar Ticks	September
	<i>Eupatorium rugosum</i>	White Snakeroot	
	<i>Senecio glabellus</i>	Butterweed	May
	<i>Senecio obovatus</i>	Round-leaved Ragwort	May
	<i>Solidago flexicaulis</i>	Zigzag Goldenrod	September
	<i>Taraxacum officinale</i>	Dandelion	May
Balsaminaceae	<i>Impatiens capensis</i>	Spotted Touch-me-not	July
	<i>Impatiens pallida</i>	Pale Touch-me-not	July
Berberidaceae	<i>Caulophyllum thalictroides</i>	Blue Cohosh	April
	<i>Podophyllum peltatum</i>	Mayapple	April
Boraginaceae	<i>Hackelia virginiana</i>	Common Stickseed	July
Campanulaceae	<i>Campanula americana</i>	Tall Bellflower	
	<i>Lobelia inflata</i>	Indian Tobacco	August
	<i>Lobelia siphilitica</i>	Great Lobelia	September
	<i>Lobelia spicata</i>	Pale-spike Lobelia	August
Caprifoliaceae	<i>Lonicera maackii</i>	Bush Honeysuckle	
	<i>Lonicera japonica</i>	Japanese Honeysuckle	
	<i>Viburnum acerifolium</i>	Maple-leaved Viburnum	
Caryophyllaceae	<i>Stellaria media</i>	Common Chickweed	May
	<i>Stellaria pubera</i>	Great Chickweed	April
Celastraceae	<i>Euonymus fortunei</i>	Chinese Wintercreeper	
Commelinaceae	<i>Tradescantia virginiana</i>	Spiderwort	May
Cornaceae	<i>Cornus florida</i>	Flowering Dogwood	April
Corylaceae	<i>Carpinus carolinana</i>	Ironwood	
	<i>Ostrya virginiana</i>	Hop Hornbeam	
Cruciferae	<i>Alliaria officinalis</i>	Garlic Mustard	April
	<i>Arabis laevigata</i>	Smooth Rock Cress	April
	<i>Cardamine douglassi</i>	Purple Cress	March

	<i>Cardamine pensylvanica</i>	Pennsylvania Bitter Cress	May
	<i>Dentaria laciniata</i>	Cut-leaved Toothwort	March
Fagaceae	<i>Fagus grandifolia</i>	Beech	
	<i>Quercus alba</i>	White Oak	
	<i>Quercus borealis</i>	Red Oak	
	<i>Quercus muehlenbergii</i>	Chinquapin Oak	
	<i>Quercus velutina</i>	Black Oak	
Fumariaceae	<i>Corydalis flavula</i>	Yellow Corydalis	April
	<i>Dicentra cucullaria</i>	Dutchman's Breeches	April
Geraniaceae	<i>Geranium maculatum</i>	Wild Geranium	May
Hydrophyllaceae	<i>Hydrophyllum appendiculatum</i>	Appendaged Waterleaf	May
	<i>Hydrophyllum macrophyllum</i>	Large-leaved Waterleaf	May
Juglandaceae	<i>Carya cordiformis</i>	Bitternut Hickory	
	<i>Carya ovata</i>	Shagbark Hickory	
	<i>Carya pignutus</i>	Pignut Hickory	
	<i>Carya tomentosa</i>	Mockernut Hickory	
	<i>Juglans nigra</i>	Black Walnut	
Lamiaceae	<i>Blephilia hirsuta</i>	Hairy Wood Mint	July
	<i>Collinsonia canadensis</i>	Horse Balm	August
	<i>Glechoma hederacea</i>	Ground Ivy	June
	<i>Lamium purpureum</i>	Purple Dead Nettle	April
	<i>Scutellaria ovata</i>	Heart-leaved Skullcap	June
	<i>Stachys nuttallii</i>	Heart-leaved Hedge-Nettle	August
Lauraceae	<i>Lindera benzoin</i>	Spicebush	April
	<i>Sassafras albidum</i>	Sassafras	
Leguminosae	<i>Cercis canadensis</i>	Redbud	April
	<i>Desmodium nudiflorum</i>	Naked-flowered Tick Trefoil	
Magnoliaceae	<i>Liriodendron tulipifera</i>	Tulip Poplar	
Menispermaceae	<i>Menispermum candense</i>	Moonseed	
Monotropaceae	<i>Monotropa uniflora</i>	Indian Pipe	September
Moraceae	<i>Morus alba</i>	White Mulberry	
Nyssaceae	<i>Nyssa sylvatica</i>	Black Gum	
Oleaceae	<i>Fraxinus americana</i>	White Ash	
	<i>Fraxinus quadrangulata</i>	Blue Ash	April
Onagraceae	<i>Circaea lutetiana</i>	Enchanter's Nightshade	
Orobanchaceae	<i>Conopholis americana</i>	Squawroot	
Oxalidaecae	<i>Oxalis stricta</i>	Common Yellow Wood-sorrel	June
	<i>Oxalis violacea</i>	Violet Wood-sorrel	May
Papaveraceae	<i>Stylophorum diphyllum</i>	Celandine Poppy	May
Phytolaccaceae	<i>Phytolacca americana</i>	Pokeweed	July
Phrymaceae	<i>Phryma leptostachya</i>	Lopseed	July
Plantaginaceae	<i>Plantago rugelii</i>	Rugel's Plantain	
Polemoniaceae	<i>Phlox divaricata</i>	Wild Blue Phlox	April
	<i>Polemonium reptans</i>	Jacob's Ladder	
Polygonaceae	<i>Polygonum caespitosum</i>	Lady's Thumb	July
	<i>Polygonum punctatum</i>	Water-Smartweed	September
	<i>Rumex obtusifolius</i>	Broad-leaf Dock	July
	<i>Tovara virginianum</i>	Jumpseed	July
Portulacaceae	<i>Claytonia virginica</i>	Spring Beauty	March
Ranunculaceae	<i>Anemonella thalictroides</i>	Rue Anemone	March
	<i>Cimicifuga racemosa</i>	Black Snakeroot	July
	<i>Delphinium tricorne</i>	Dwarf Larkspur	May
	<i>Hydrastis canadensis</i>	Goldenseal	
	<i>Ranunculus abortivus</i>	Small-flowered Crowfoot	May
	<i>Ranunculus recurvatus</i>	Hooked Crowfoot	May

Rosaceae	Agrimonia sp.		July	
	Geum canadense	White Avens	June	
	Rosa multiflora	Multiflora Rose		
Rubiaceae	Rubus sp.		June	
	Galium aparine	Cleavers	April	
	Galium circaezans	Wild Licorice	June	
	Galium concinnum	Shining Bedstraw	July	
Saxifragaceae	Galium triflorum	Sweet-scented Bedstraw		
	Hydrangea arborescens	Wild Hydrangea	June	
	Ribes cynosbati	Prickly Gooseberry		
Scrophulariaceae	Mimulus alatus	Winged Monkey Flower	July	
Simaroubaceae	Ailanthus altissima	Ailanthus		
Solanaceae	Solanum nigrum	Black Nightshade	August	
Staphyleaceae	Staphylea trifolia	Bladdernut		
Tiliaceae	Tilia americana	Basswood		
Ulmaceae	Celtis occidentalis	Hackberry		
	Ulmus americana	American Elm		
	Ulmus rubra	Slippery Elm		
Urticaceae	Pilea pumila	Clearweed	August	
Violaceae	Viola pubescens	Downy Yellow Violet	April	
	Viola sororia	Woolly Blue Violet	April	
Vitaceae	Parthenocissus sp.	Virginia Creeper		
	Vitis riparia	Riverbank Grape		
Araceae	Arisaema atrorubens	Jack-in-the-pulpit		
Cyperaceae	Carex albursina		April	
	Carex laxiflora			
	Carex artitecta		April	
	Carex blanda		June	
	Carex careyana		April	
	Carex frankii		July	
	Carex jamesii		May	
	Carex pensylvanica		April	
	Carex rosea		June	
	Graminae	Brachyelytrum erectum		
Elymus riparius		Wild-Rye	June	
Festuca obtusa		Nodding Fescue	May	
Poa sylvestris			June	
Juncaceae	Luzula echinata	Woodrush	April	
Liliaceae	Alium tricoccum	Ramps	June	
	Erythronium americanum	Trout Lily	April	
	Polygonatum biflorum	Smooth Solomon's Seal	May	
	Polygonatum commutatum	Large Solomon's Seal	June	
	Smilax hispida	Bristly Greenbrier		
	Trillium flexipes	Drooping Trillium	April	
	Trillium sessile	Toad Trillium	April	
	Uvularia grandiflora	Large-flowered Bellwort	April	
	Orchidaceae	Aplectrum hyemale	Puttyroot	May

Access #: _____

WINTER BIRD POPULATION STUDY

Publ. #: _____

Cornell Laboratory of Ornithology
159 Sapsucker Woods Road
Ithaca, New York 14850-1999

Date Rec'd: _____

Deadline: 1 July. Please type or print clearly in ink.

Year: 1999

Plot Name (e.g. Mature Longleaf Pine Forest): Mature Broadleaf Forest

Compiler Name: Charles Saunders, David Styer, Steve Pelikan, and Lauren Saunders
Address: 5561 Carlsbad Ct, Fairfield, OH 45014

Telephone #: (513) 829-6981

Location: USA State or Province: OH County: Hamilton

Nearest community: Harrison, OH

Site name (e.g. Wade Tract): Miami Whitewater Forest

Lat: 39°14'43" N Long: 81°45'38" W Map quad. name: Hoover

Continuity: First year of study: 1993 Number of years of study: 7

Plot Size: (w/units) 16 ha Elevation: (w/units) low: 260 m high: 230 m

Habitat Description: (See Instructions)

The plot consists entirely of mature broadleaf forest.

Previous name of the study plot: _____

Major habitat (CIRCLE ONE):

- | | | |
|---|-----------------------|------------------------|
| A. Broadleaf Forest | E. Shrubland | I. Disturbed Habitat |
| B. Broadleaf/Coniferous | F. Grassland | J. Fields & Cultivated |
| C. Coniferous Forest | G. Desert & Dry Scrub | K. Residential/Urban |
| D. Mixed Habitat
(Forest/Non-forest) | H. Wetlands | L. Other |

Dominant plants (scientific names if possible)
(OFFICE USE ONLY) Canopy (>5m)

- | | |
|-------|------------------------------|
| _____ | 1. <u>Acer saccharum</u> |
| _____ | 2. <u>Quercus alba</u> |
| _____ | 3. <u>Fraxinus americana</u> |

Shrub layer (1-5m)

- | | |
|-------|--------------------------|
| _____ | 1. <u>Acer saccharum</u> |
| _____ | 2. <u>Cornus florida</u> |

Ground cover (<1m)

- | | |
|-------|---|
| _____ | 1. <u>Alliaria officinalis officinalis</u> |
| _____ | 2. <u>Impatiens sp (two present)</u> |

Year of last quantitative vegetation survey: 1992 Stand age (yrs): 7 100 yrs

ACRES TO HECTARES - DIVIDE BY 2.47
FEET TO METERS - DIVIDE BY 3.28

Water:

Stream (circle one):

0=No

1=<1m wide

2=1-3m

3=>3m

4=yes, size unknown

Standing water (circle yes or no for each):

lake Y (N)

pond Y (N)

swamp Y (N)

marsh Y (N)

bog Y (N)

Diameter of largest circle that fits w/in water area: 1 m **Max. depth of water:** <0.2 m

Water: (Additional written description if needed)

Edge: Briefly describe the habitat on all edges of the census plot.

Our plot is bounded by \approx 15 meters of broadleaf woods on all sides and is part of a larger forest known locally as Bowler Woods.

Topography: A brief statement about the general terrain.

The plot slopes to an ephemeral stream.

Food:

feeders in study plot 0 **Distance to nearest feeder outside plot** 0.3 Km

Remarks: (See instructions)

Golden-crowned Kinglets and Carolina Wrens were only observed on the first visit, before the cold spell. At the other end of the season, fifteen of the year's eighteen robins were recorded during the last two visits. Tufted Titmice were in record low numbers, with 42 this year versus a six-year mean of 78. Perhaps the titmice were also affected by the cold and/or snow cover, as we observed our 1999 high of ten individuals on the first visit.

Other Observers: Patti Niehoff

Acknowledgments:

We thank John Klein and the Hamilton County Park District for the use of the site.

Count

SPECIES CODE (OFFICE USE ONLY)	SPECIES	TOTAL # IND.	FREQUENCY (* VISITS OBSERVED)
	1. Carolina Chickadee	518	110
	2. White-breasted Nuthatch	146	110
	3. Tufted Titmouse	42	19
	4. Red-bellied Woodpecker	31	10
	5. Hairy Woodpecker	22	10
	6. American Robin	18	3
	7. Downy Woodpecker	13	8
	8. American Crow	13	2
	9. Pileated Woodpecker	11	9
	10. Brown Creeper	11	7
	11. Northern Cardinal	6	4
	12. Golden-crowned Kinglet	5	11
	13. Yellow-rumped Warbler	5	1
	14. Northern Flicker	3	3
	15. Carolina Wren	3	1
	16. Great Horned Owl	2	2
	17. Blue Jay	2	2
	18. Dark-eyed Junco	1	1
	19.		
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	33.		
	34.		
	35.		

(Use separate sheet for additional species)

Coverage and Weather Summary Sheet

Visit #	Date	Start Time	End Time	Duration (hrs.)	Start Temp. C°	Wind	Sky	Precipitation & Snow (describe)
1	1/1/99	8 ¹⁵	9 ³³	1 ¹⁸	-2	0	clear	—
2	1/16/99	8 ¹⁰	9 ⁴⁴	1 ³⁴	-6	3	cloudy	5" snow cover
3	1/17/99	8 ⁴⁰	10 ¹⁰	1 ³⁰	-5	0	cloudy	4" snow cover
4	1/18/99	8 ²⁵	10 ⁰¹	1 ³⁶	-2	2	cloudy	scattered snow cover
5	1/23/99	8 ¹³	9 ³⁰	1 ¹⁷	14	3	cloudy	—
6	1/24/99	8 ¹⁵	9 ²²	1 ⁰⁷	-6	0	cloudy	—
7	1/31/99	8 ⁰⁵	9 ⁰⁸	1 ⁰³	-8	1	cloudy	—
8	2/6/99	8 ¹⁵	10 ⁰⁰	1 ⁴⁵	6	1	cloudy	—
9	2/9/99	8 ⁰⁵	9 ¹⁵	1 ¹⁰	7	1	cloudy	—
10	2/14/99	8 ²⁰	9 ³³	1 ¹³	-6	1	50/50	scattered snow cover
								1

Weather: (Summarize the weather data for the study period from above.)

The first two weeks of January were unseasonably cold, with snow cover the entire time. The remainder of the census period was warmer than average.

Coverage: Total number of visits: 10 Morning: 10 Afternoon: 0 Evening: 0

Total # hours: _____ Average # hours/trip: _____ Visit Dates: First: 1/1/99 Last: 2/14/99