

Biotic Inventory of the Herbert & Patricia Wagers Devil's Backbone Park

Report to Preble County Park District

20 October 2023

Jon & Amy Costanzo

Purpose and Scope

Our primary aim in this project was to catalogue familiar flora and fauna occurring within the Herbert & Patricia Wagers Devil's Backbone Park. We intended to establish a partial baseline inventory that might assist Preble County Park District in developing a sound plan for conserving and managing this unique property. The resultant database may also benefit a broader audience, including administrators, conservation groups, researchers, land managers, and others who desire to document and conserve the biological diversity of the local landscape.

Methodology

From August 2022 through early October 2023, we conducted a series of surveys which allowed us to identify and catalogue some of the Park's key biota. Coverage was biased toward areas nearest the trails, but we also searched creek beds, hillsides, and other areas. We made a total of 16 visits to the Park and spent a cumulative 64 field hours conducting the surveys. Two of our colleagues aided our efforts on a few occasions.

Much of our work was devoted to cataloguing the Park's diverse plant life. However, we also marked a single specimen representing many of the trees and a few notable shrubs by affixing a serially-numbered tag with an aluminum nail or wire. In selecting these specimens, we sought mature individuals that exhibited the species' particular characteristics and could be easily observed from an existing trail. A key at the end of this report provides each marked specimen's identity, tag ID number, diameter at breast height, and GPS coordinates; the accompanying map indicates their approximate locations. If desired, Park staff or volunteers could relocate these specimens, mount interpretive signage, affix identification plaques, etc.

We spent relatively little time searching for animals; however, we recorded the amphibians and reptiles that we opportunistically encountered, and we intensively surveyed the avifauna by sight and sound. Birds were inventoried in all seasons to ensure that we detected migrants as well as breeding residents. Our records, and those of four other birders, were entered into

eBird, a citizen-science platform that organizes occurrence and abundance information by location. We petitioned eBird officials for the Park (as well as Garber Forest) to become an “eBird Hotspot” so that, over time, the efforts of visiting birders will build out this database. An up-to-date Field Checklist for this location is here:

<https://ebird.org/printableList?regionCode=L20470456&yr=all&m=>

The following tables present the biota that we identified with reasonable certainty during the project period. We elected to use common names that are most familiar to us or that have been used locally, and Latin epithets that have general acceptance and/or historical usage.

FLORA

We identified at least 178 different taxa of plants. These we categorized as ferns and mosses; grasses and other graminoids; forbs; vines; brambles; small trees and shrubs; trees; and invasive plants.

Ferns and Mosses (5)

| | | | |
|-----------------------------|-----------------------------|----------------------|---------------------------|
| <i>Maidenhair fern</i> | <i>Adiantum pedatum</i> | <i>Scouring rush</i> | <i>Equisetum hyemale</i> |
| <i>Rattlesnake fern</i> | <i>Botrypus virginianus</i> | <i>Star moss</i> | <i>Syntrichia ruralis</i> |
| <i>Lowland brittle fern</i> | <i>Cystopteris protrusa</i> | | |

Grasses and other Graminoids (9)

| | | | |
|-------------------------------|-----------------------------------|-----------------------|--------------------------|
| <i>Eastern woodland sedge</i> | <i>Carex blanda</i> | <i>Silky wild rye</i> | <i>Elymus villosus</i> |
| <i>Fragrant flatsedge</i> | <i>Cyperus odoratus</i> | <i>Whitegrass</i> | <i>Leersia virginica</i> |
| | <i>Dichanthelium clandestinum</i> | <i>Foxtail</i> | <i>Setaria sp.</i> |
| <i>Deer-tongue</i> | <i>Echinochloa crus-galli</i> | <i>Purpletop</i> | <i>Tridens flavus</i> |
| <i>Barnyardgrass</i> | <i>Elymus hystrix</i> | | |

Forbs (100)

| | | | |
|--------------------------|-----------------------------|-------------------------------------|------------------------------|
| <i>Black cohosh</i> | <i>Actaea racemosa</i> | <i>Sweet cicely</i> | <i>Myrrhis odorata</i> |
| <i>White snakeroot</i> | <i>Ageratina altissima</i> | <i>Tall rattlesnakeroot</i> | <i>Nabalus altissimus</i> |
| | | <i>Three-leaved rattlesnakeroot</i> | <i>Nabalus trifoliolatus</i> |
| <i>Woodland agrimony</i> | <i>Agrimonia rostellata</i> | <i>Daffodil</i> | <i>Narcissus sp.</i> |
| <i>Carpet bugle</i> | <i>Ajuga reptans</i> | | |

| | | | |
|---------------------|----------------------------------|--------------------------|-------------------------------|
| Garlic mustard | <i>Alliaria petiolata</i> | Common evening-primrose | <i>Oenothera biennis</i> |
| Meadow garlic | <i>Allium canadense</i> | Common Yellow woodsorrel | <i>Oxalis stricta</i> |
| Small white leek | <i>Allium tricoccum</i> | Golden ragwort | <i>Packera aurea</i> |
| Pigweed | <i>Amaranthus sp.</i> | Butterweed | <i>Packera glabella</i> |
| Giant ragweed | <i>Ambrosia trifida</i> | Roundleaf ragwort | <i>Packera obovata</i> |
| Thimbleweed | <i>Anemone cylindrica</i> | Woodland phlox | <i>Phlox divaricata</i> |
| Pussytoes | <i>Antennaria sp.</i> | Ground cherry | <i>Physalis sp.</i> |
| Jack-in-the-pulpit | <i>Arisaema triphyllum</i> | Pokeweed | <i>Phytolacca americana</i> |
| Mugwort | <i>Artemisia vulgaris</i> | Clearweed | <i>Pilea pumila</i> |
| Wild ginger | <i>Asarum canadense</i> | Lance-leaved plantain | <i>Plantago lanceolata</i> |
| Large-leaved aster | <i>Aster macrophyllum</i> | Mayapple | <i>Podophyllum peltatum</i> |
| Smooth rock cress | <i>Boechera laevigata</i> | Solomon's seal | <i>Polygonatum biflorum</i> |
| False nettle | <i>Boehmeria cylindrica</i> | Smartweed | <i>Polygonum sp.</i> |
| Cutleaf toothwort | <i>Cardamine concatenata</i> | Whiteflower leafcup | <i>Polymnia canadensis</i> |
| Southern chervil | <i>Chaerophyllum tainturieri</i> | White rattlesnakeroot | <i>Prenanthes alba</i> |
| Lambsquarter | <i>Chenopodium album</i> | Small-flowered buttercup | <i>Ranunculus abortivus</i> |
| Common chickory | <i>Cichorium intybus</i> | Brown-eyed susan | <i>Rudbeckia triloba</i> |
| Spring beauty | <i>Claytonia virginica</i> | Bitter dock | <i>Rumex obtusifolius</i> |
| Mullein foxglove | <i>Dasistoma macrophylla</i> | Bloodroot | <i>Sanguinaria canadensis</i> |
| Wild carrot | <i>Daucus carota</i> | Common soapwort | <i>Saponaria officinalis</i> |
| Squirrel corn | <i>Dicentra canadensis</i> | Stringy stonecrop | <i>Sedum sarmentosum</i> |
| Dutchman's breeches | <i>Dicentra cucullaria</i> | Woodland stonecrop | <i>Sedum ternatum</i> |
| False rue-anoneme | <i>Enemion biternatum</i> | Leafcup | <i>Smallanthus uvedalius</i> |
| Cutleaf burnweed | <i>Erechtites glomeratus</i> | Blue-stemmed goldenrod | <i>Solidago caesia</i> |
| Harbinger of Spring | <i>Erigenia bulbosa</i> | Canada goldenrod | <i>Solidago canadensis</i> |
| Robin's plantain | <i>Erigeron pulchellus</i> | Zigzag goldenrod | <i>Solidago flexicaulis</i> |
| Yellow trout-lily | <i>Erythronium americanum</i> | Common chickweed | <i>Stellaria media</i> |
| Boneset | <i>Eupatorium perfoliatum</i> | Star chickweed | <i>Stellaria pubera</i> |

| | | | |
|----------------------------|-------------------------------|------------------------------|------------------------------------|
| Joe pye weed | <i>Eutrochium sp.</i> | New England aster | <i>Symphotrichum novae-angliae</i> |
| Catchweed | | | <i>Symphotrichum pilosum</i> |
| bedstraw | <i>Galium aparine</i> | Frost aster | <i>Symphotrichum shortii</i> |
| Fragrant bedstraw | <i>Galium triflorum</i> | Short's aster | |
| Wild geranium | <i>Geranium maculatum</i> | Early meadow rue | <i>Thalictrum dioicum</i> |
| | | | <i>Thalictrum thalictroides</i> |
| Ground ivy | <i>Glechoma hederacea</i> | Rue anemone | |
| Stickseed | <i>Hackelia virginiana</i> | Nodding trillium | <i>Trillium cernuum</i> |
| Common sneeze weed | <i>Helenium autumnale</i> | Large-flowered trillium | <i>Trillium grandiflorum</i> |
| Prairie alum root | <i>Heuchera richardsonii</i> | Sessile trillium | <i>Trillium sessile</i> |
| | | Orange fruited horse gentian | <i>Triosteum aurantiacum</i> |
| Wild hydrangea | <i>Hydrangea arborescens</i> | | |
| | <i>Hydrophyllum canadense</i> | Moth mullein | <i>Verbascum blattaria</i> |
| Broadleaf waterleaf | | Mullein | <i>Verbascum thapsus</i> |
| Jewelweed | <i>Impatiens capensis</i> | Wingstem | <i>Verbesina alternifolia</i> |
| Yellow jewelweed | <i>Impatiens pallida</i> | | |
| Two-flower dwarf dandelion | <i>Krigia biflora</i> | American Speedwell | <i>Veronica americana</i> |
| Wild lettuce | <i>Lactuca virosa</i> | Downy yellow violet | <i>Viola pubescens</i> |
| Purple deadnettle | <i>Lamium purpureum</i> | Common blue violet | <i>Viola sororia</i> |
| Great blue lobelia | <i>Lobelia siphilitica</i> | Striped cream violet | <i>Viola striata</i> |
| Heath wood-rush | <i>Luzula multiflora</i> | Barren strawberry | <i>Waldsteinia ternata</i> |
| Water mint | <i>Mentha aquatica</i> | Cocklebur | <i>Xanthium strumarium</i> |

Vines (6)

| | | | |
|-------------------|------------------------------------|-----------------|-------------------------------|
| | <i>Menispermum canadense</i> | Poison ivy | <i>Toxicodendron radicans</i> |
| Common moonseed | <i>Parthenocissus quinquefolia</i> | Riverbank grape | <i>Vitis riparia</i> |
| Virginia creeper | <i>Smilax rotundifolia</i> | Frost grape | <i>Vitis vulpina</i> |
| Common greenbrier | | | |

Brambles (4)

| | | | |
|--------------------|------------------------|------------|-----------------------------|
| Prickly gooseberry | <i>Ribes cynosbati</i> | Blackberry | <i>Rubus allegheniensis</i> |
|--------------------|------------------------|------------|-----------------------------|

| | | | |
|------------------------|------------------------|------------------------|---------------------------|
| <i>Multiflora rose</i> | <i>Rosa multiflora</i> | <i>Black raspberry</i> | <i>Rubus occidentalis</i> |
|------------------------|------------------------|------------------------|---------------------------|

Small Trees and Shrubs (9)

| | | | |
|--------------------------|--------------------------|---------------------------|-------------------------------|
| <i>Pawpaw</i> | <i>Asimina triloba</i> | <i>Eastern wahoo</i> | <i>Euonymus atropurpureus</i> |
| <i>Eastern redbud</i> | <i>Cercis canadensis</i> | <i>Hop-hornbeam</i> | <i>Ostrya virginiana</i> |
| <i>Roughleaf Dogwood</i> | <i>Cornus drummondii</i> | <i>Arrowwood</i> | |
| <i>Flowering dogwood</i> | <i>Cornus florida</i> | <i>viburnum</i> | <i>Viburnum dentatum</i> |
| <i>Hawthorn</i> | <i>Crataegus sp.</i> | <i>Black-haw viburnum</i> | <i>Viburnum prunifolium</i> |

Trees (32)

| | | | |
|--------------------------|-----------------------------|--------------------------|------------------------------|
| <i>Box elder</i> | <i>Acer negundo</i> | <i>White mulberry</i> | <i>Morus alba</i> |
| <i>Black maple</i> | <i>Acer nigrum</i> | <i>Red mulberry</i> | <i>Morus rubra</i> |
| <i>Red maple</i> | <i>Acer rubrum</i> | <i>Black gum</i> | <i>Nyssa sylvatica</i> |
| <i>Sugar maple</i> | <i>Acer saccharum</i> | <i>American sycamore</i> | <i>Platanus occidentalis</i> |
| <i>Ohio buckeye</i> | <i>Aesculus glabra</i> | <i>Cottonwood</i> | <i>Populus deltoides</i> |
| <i>Bitternut hickory</i> | <i>Carya cordiformis</i> | <i>Osage orange</i> | <i>Maclura pomifera</i> |
| <i>Pignut hickory</i> | <i>Carya glabra</i> | <i>Black cherry</i> | <i>Prunus serotina</i> |
| <i>Shagbark hickory</i> | <i>Carya ovata</i> | <i>White oak</i> | <i>Quercus alba</i> |
| <i>Southern catalpa</i> | <i>Catalpa bignonioides</i> | <i>Bur oak</i> | <i>Quercus macrocarpa</i> |
| <i>White ash</i> | <i>Fraxinus americana</i> | <i>Chinquapin oak</i> | <i>Quercus muehlenbergii</i> |
| | <i>Fraxinus</i> | | |
| <i>Blue ash</i> | <i>quadrangulata</i> | <i>Shumard oak</i> | <i>Quercus shumardii</i> |
| | <i>Gleditsia</i> | | |
| <i>Honey locust</i> | <i>triacanthos</i> | <i>Black oak</i> | <i>Quercus velutina</i> |
| <i>Kentucky</i> | | | |
| <i>coffeetree</i> | <i>Gymnocladus dioicus</i> | <i>Black locust</i> | <i>Robinia pseudoacacia</i> |
| <i>Black walnut</i> | <i>Juglans nigra</i> | <i>Basswood</i> | <i>Tilia americana</i> |
| <i>Eastern red cedar</i> | <i>Juniperus virginiana</i> | <i>American elm</i> | <i>Ulmus americana</i> |
| | <i>Liriodendron</i> | | |
| <i>Yellow poplar</i> | <i>tulipifera</i> | <i>Red elm</i> | <i>Ulmus rubra</i> |

Invasive plants (13)

| | | | |
|--------------------------|----------------------------|----------------------------|------------------------------|
| <i>Tree of Heaven</i> | <i>Ailanthus altissima</i> | <i>Privet</i> | <i>Ligustrum sp.</i> |
| <i>Asiatic dayflower</i> | <i>Commelina communis</i> | <i>Amur honeysuckle</i> | <i>Lonicera maackii</i> |
| <i>Poison hemlock</i> | <i>Conium maculatum</i> | <i>Moneywort</i> | <i>Lysimachia nummularia</i> |
| <i>Common teasel</i> | <i>Dipsacus fullonum</i> | <i>Japanese stiltgrass</i> | <i>Microstegium vimineum</i> |

| | | | |
|-----------------------|----------------------------|---------------------|-------------------------|
| <i>Cutleaf teasel</i> | <i>Dipsacus laciniatus</i> | <i>Wild parsnip</i> | <i>Pastinaca sativa</i> |
| <i>Autumn olive</i> | <i>Elaeagnus umbellata</i> | <i>Callery pear</i> | <i>Pyrus calleryana</i> |
| <i>Burning bush</i> | <i>Euonymus alatus</i> | | |

Many other species of invasive or noxious plants undoubtedly occur within the Park. In considering factors such as abundance, spatial distribution, and invasive potential, those currently posing the most serious environmental threat are Tree of Heaven, Amur honeysuckle, and Japanese stiltgrass.

FAUNA

Amphibians (4)

| | | | |
|-------------------------|------------------------|----------------------|----------------------------|
| <i>Northern cricket</i> | | | |
| <i>frog</i> | <i>Acris crepitans</i> | <i>Spring peeper</i> | <i>Pseudacris crucifer</i> |
| <i>Fowler's toad</i> | <i>Bufo fowleri</i> | <i>Green frog</i> | <i>Rana clamitans</i> |

Other amphibians that probably are present include streamside salamander (*Ambystoma barbouri*), American toad (*Bufo americanus*), two-lined salamander (*Eurycea bislineata*), long-tailed salamander (*Eurycea longicauda*), Cope's grey treefrog (*Hyla chrysoscelis*), and red-backed salamander (*Plethodon cinereus*).

Reptiles (1)

| | |
|--------------------|-----------------------------|
| <i>Queen snake</i> | <i>Regina septemvittata</i> |
|--------------------|-----------------------------|

Other reptiles that probably are present include spiny softshell (*Apalone spinifer*), racer (*Coluber constrictor*), ring-necked snake (*Diadophis punctatus*), eastern hog-nosed snake (*Heterodon platirhynchos*), northern watersnake (*Nerodia sipedon*), ratsnake (*Pantherophis spiloides*), eastern box turtle (*Terrapene carolina*), and gartersnake (*Thamnophis sirtalis*).

Birds (76)

| | | | |
|-----------------------------------|--------------------------|---------------------------|-------------------------|
| <i>Waterfowl</i> | | <i>Martins and</i> | |
| <i>Canada Goose</i> | <i>Branta canadensis</i> | <i>Swallows</i> | |
| <i>Wood Duck</i> | <i>Aix sponsa</i> | <i>Purple Martin</i> | <i>Progne subis</i> |
| <i>Grouse, Quail &</i> | | <i>Nuthatches</i> | |
| <i>Allies</i> | | <i>Red-breasted</i> | <i>Sitta canadensis</i> |
| | | <i>Nuthatch</i> | |

| | | | |
|-------------------------------------|-----------------------------|---------------------------|---------------------------------|
| Wild Turkey | <i>Carya cordiformis</i> | White-breasted Nuthatch | <i>Sitta carolinensis</i> |
| Pigeons & Doves | | Treecreepers | |
| Rock Pigeon | <i>Columba livia</i> | Brown Creeper | <i>Certhia americana</i> |
| Mourning Dove | <i>Zenaida macroura</i> | | |
| | | Gnatcatchers | |
| Cuckoos | | Blue-gray Gnatcatcher | <i>Polioptila caerulea</i> |
| Yellow-billed Cuckoo | <i>Coccyzus americanus</i> | | |
| | | Wrens | |
| Swifts | | House Wren | <i>Troglodytes aedon</i> |
| Chimney swift | <i>Chaetura pelagica</i> | Carolina Wren | <i>Thryothorus ludovicianus</i> |
| | | | |
| Hummingbirds | | Mimics | |
| Rubythroated hummingbird | <i>Archilochus colubris</i> | Gray Catbird | <i>Dumetella carolinensis</i> |
| | | Brown Thrasher | <i>Toxostoma rufum</i> |
| Cranes | | Northern Mockingbird | <i>Mimus polyglottos</i> |
| Sandhill Crane | <i>Antigone canadensis</i> | | |
| | | Thrushes | |
| Shorebirds | | Eastern Bluebird | <i>Sialia sialis</i> |
| Killdeer | <i>Charadrius vociferus</i> | Swainson's Thrush | <i>Catharus ustulatus</i> |
| | | Wood Thrush | <i>Hylocichla mustelina</i> |
| Hérons, Ibis & Allies | | American Robin | <i>Turdus migratorius</i> |
| Great Blue Heron | <i>Ardea herodias</i> | | |
| | | Waxwings | |
| Vultures, Hawks & Allies | | Cedar Waxwing | <i>Bombycilla cedrorum</i> |
| Black Vulture | <i>Coragyps atratus</i> | | |
| Turkey Vulture | <i>Cathartes aura</i> | Old World Sparrows | |
| Red-shouldered Hawk | <i>Buteo lineatus</i> | House Sparrow | <i>Passer domesticus</i> |
| Red-tailed Hawk | <i>Buteo jamaicensis</i> | | |

Kingfishers

Belted Kingfisher *Megaceryle alcyon*

Woodpeckers

Yellow-bellied *Sphyrapicus varius*
 Sapsucker
 Red-headed *Melanerpes*
 Woodpecker *erythrocephalus*
 Red-bellied *Melanerpes carolinus*
 Woodpecker
 Downy Woodpecker *Dryobates pubescens*
 Hairy Woodpecker *Dryobates villosus*
 Pileated *Dryocopus pileatus*
 Woodpecker

Tyrant Flycatchers

Eastern Wood- *Contopus virens*
 Pewee
 Acadian Flycatcher *Empidonax virescens*
 Eastern Phoebe *Sayornis phoebe*
 Great Crested *Myiarchus crinitus*
 Flycatcher

Vireos

White-eyed Vireo *Vireo griseus*
 Yellow-throated *Vireo flavifrons*
 Vireo
 Blue-headed Vireo *Vireo solitarius*
 Warbling Vireo *Vireo gilvus*
 Red-eyed Vireo *Vireo olivaceus*
 White-eyed Vireo *Vireo griseus*

Finches, Euphonias & Allies

American Goldfinch *Spinus tristis*

New World Sparrows

Chipping Sparrow *Spizella passerina*
 White-throated *Zonotrichia albicollis*
 Sparrow
 Song Sparrow *Melospiza melodia*
 Eastern Towhee *Pipilo*
erythrophthalmus

Blackbirds

Baltimore Oriole *Icterus galbula*
 Red-winged *Agelaius phoeniceus*
 Blackbird
 Brown-headed *Molothrus ater*
 Cowbird
 Common Grackle *Quiscalus quiscula*

Wood-Warblers

Kentucky Warbler *Geothlypis formosa*
 Common *Geothlypis trichas*
 Yellowthroat
 Northern Parula *Setophaga americana*
 Magnolia Warbler *Setophaga magnolia*
 Bay-breasted *Setophaga castanea*
 Warbler
 Yellow Warbler *Setophaga petechia*
 Yellow-rumped *Setophaga coronata*
 Warbler
 Yellow-throated *Setophaga dominica*
 Warbler
 Black-throated *Setophaga virens*
 Green Warbler

Yellow-throated Vireo *Vireo flavifrons*

Jays and Crows

Blue Jay *Cyanocitta cristata*
American Crow *Corvus brachyrhynchos*

Tits, Chickadees & Titmice

Carolina Chickadee *Poecile carolinensis*
Tufted Titmouse *Baeolophus bicolor*

Cardinals, Grosbeaks & Allies

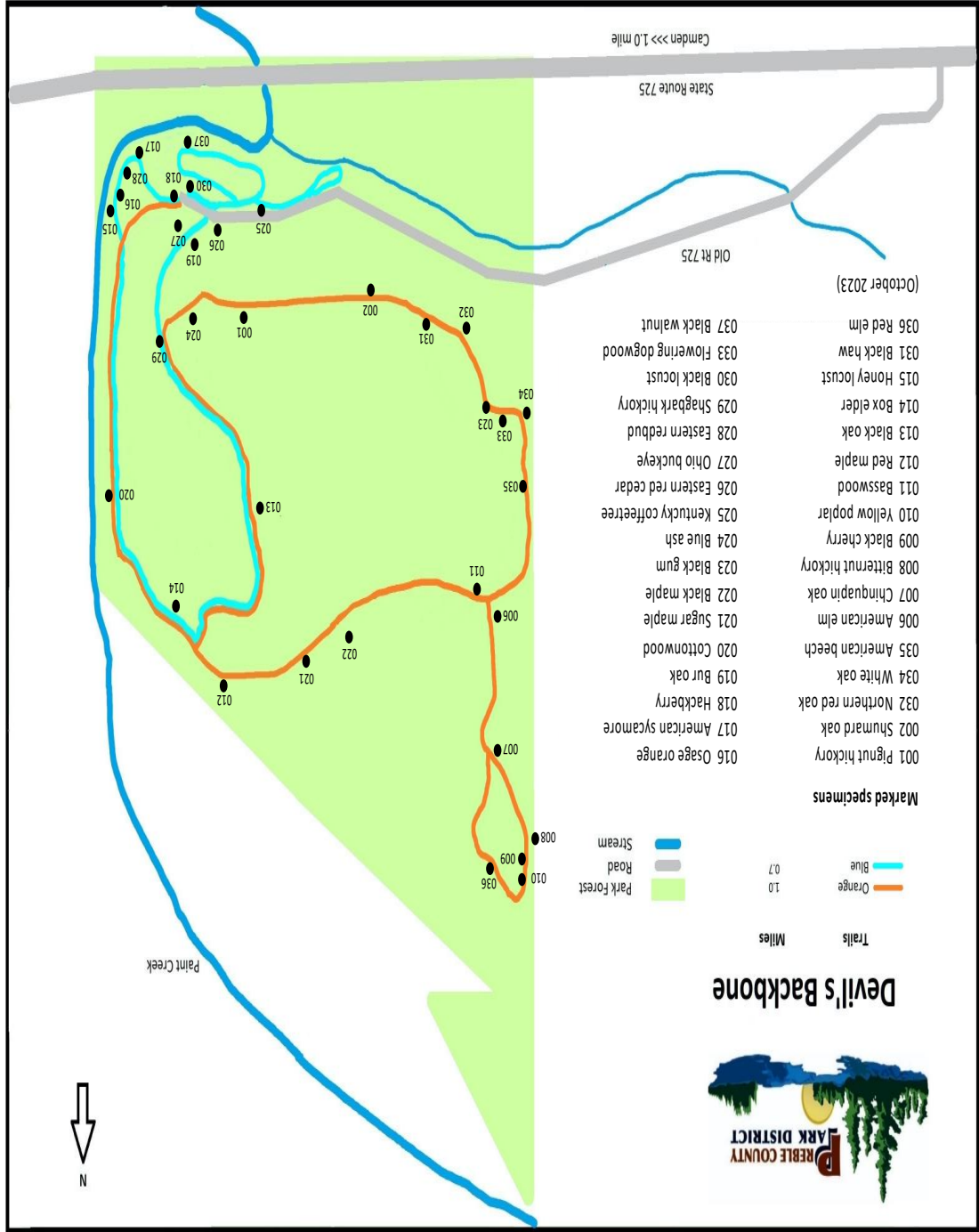
Summer Tanager *Piranga rubra*
Scarlet Tanager *Piranga olivacea*
Northern Cardinal *Cardinalis cardinalis*
Indigo Bunting *Passerina cyanea*

This inventory was curated from 24 complete eBird checklists submitted during the period 8 August 2022 to 3 October 2023.

Marked Trees and Shrubs (33)

| Species | Tag No. | DBH (in.) | Longitude | Latitude |
|---------------------|---------|-----------|---------------|---------------|
| Pignut hickory | 001 | 15 | 39° 37' 37.4" | 84° 39' 57.2" |
| Shumard oak | 002 | 23 | 39° 37' 37.0" | 84° 39' 59.0" |
| American elm | 006 | 20 | 39° 37' 40.0" | 84° 40' 2.0" |
| Chinquapin oak | 007 | 26 | 39° 37' 43.7" | 84° 39' 58.5" |
| Bitternut hickory | 008 | 25 | 39° 37' 44.0" | 84° 40' 2.1" |
| Black cherry | 009 | 13 | 39° 37' 43.9" | 84° 40' 2.9" |
| Yellow poplar | 010 | 24 | 39° 37' 45.5" | 84° 40' 3.2" |
| Basswood | 011 | 13 | 39° 37' 39.9" | 84° 40' 1.0" |
| Red maple | 012 | 13 | 39° 37' 41.3" | 84° 39' 54.6" |
| Black oak | 013 | 30 | 39° 37' 32.4" | 84° 39' 55.9" |
| Box elder | 014 | 7 | 39° 37' 39.3" | 84° 39' 52.3" |
| Honey locust | 015 | 23 | 39° 37' 37.9" | 84° 39' 50.6" |
| Osage orange | 016 | 22 | 39° 37' 36.1" | 84° 39' 51.3" |
| American sycamore | 017 | 18 | 39° 37' 35.8" | 84° 39' 50.7" |
| Hackberry | 018 | 13 | 39° 37' 36.2" | 84° 39' 51.5" |
| Bur oak | 019 | 21 | 39° 37' 37.3" | 84° 39' 54.1" |
| Cottonwood | 020 | 21 | 39° 37' 40.6" | 84° 39' 52.1" |
| Sugar maple | 021 | 15 | 39° 37' 38.8" | 84° 39' 56.6" |
| Black maple | 022 | 21 | 39° 37' 40.7" | 84° 39' 56.5" |
| Black gum | 023 | 11 | 39° 37' 38.6" | 84° 40' 00.5" |
| Blue ash | 024 | 19 | 39° 37' 37.4" | 84° 39' 57.1" |
| Kentucky coffeetree | 025 | 6 | 39° 37' 36.3" | 84° 39' 56.0" |
| Eastern red cedar | 026 | 10 | 39° 37' 36.1" | 84° 39' 53.8" |
| Ohio buckeye | 027 | 9 | 39° 37' 37.0" | 84° 39' 53.8" |
| Eastern redbud | 028 | 6 | 39° 37' 35.7" | 84° 39' 51.4" |
| Shagbark hickory | 029 | 15 | 39° 37' 37.6" | 84° 39' 56.1" |
| Black locust | 030 | 11 | 39° 37' 35.4" | 84° 39' 53.9" |
| Blackhaw viburnum | 031 | 2.5 | 39° 37' 37.1" | 84° 39' 59.8" |
| Northern red oak | 032 | 18 | 39° 37' 36.8" | 84° 39' 59.7" |
| Flowering dogwood | 033 | 3.5 | 39° 37' 38.1" | 84° 40' 1.3" |
| White oak | 034 | 30 | 39° 37' 37.9" | 84° 40' 2.1" |
| Beech | 035 | 25 | 39° 37' 39.6" | 84° 40' 2.8" |
| Red elm | 036 | 11 | 39° 37' 46.2" | 84° 40' 2.4" |
| Black walnut | 037 | 16 | 39° 37' 34.9" | 84° 39' 53.0" |

A suitable specimen of white ash (*Fraxinus americana*) could not be located. Map attached shows the approximate location of marked specimens along trails.





Jon and Amy Costanzo surveying plants
at Devil's Backbone Park in April 2023.
Photo by M. F. Wright