

Castalia Quarry MetroPark Natural Resource Management Plan

Tara Kauffman, Natural Resources Manager
Brad Phillips, Environmental Projects Coordinator
(March 2012-updated February 2019)

Erie MetroParks mission is to conserve natural resources while connecting the community with nature through education and exploration.

Castalia Quarry MetroPark, which is owned and managed by Erie MetroParks, is located one mile southwest of Castalia, Ohio. State Route 101 passes through the site. The old quarry proper is located on the south side of SR.101, and covers 110 acres. An additional 42 acres sit directly across 101 on the north side (*see attachment property map*). The north side is adjacent to Resthaven Wildlife Area. Castalia Quarry hosts many natural resources, including an uncommon flora, exposed geology, ground-water fed bodies of water, a unique microclimate, and a great view.

Features and resources at CQM

The outstanding feature at the quarry is the rock. Quarrying activities have created a limestone hole with sheer walls. This has created a microclimate within the hole, where it is hotter, calmer and drier compared to adjacent areas. The exposed rock faces and surfaces belong to the Devonian period of ~380 million years before present, when a shallow ocean covered the land and the shells of the inhabitants of these seas accumulated to form a limy ooze which hardened to rock. Later this rock became exposed through erosion and formed a knob in the local landscape. Numerous fossils are visible on the rock surfaces, including horn coral, crinoids, and brachiopods. There are two distinct types of limestone. High calcium calcite occupies the higher strata, while higher magnesium dolomite resides lower.

In more recent geologic history, this knob survived the scouring action of the several glaciations into Ohio. Glacial grooves can be found in several spots on the east side. As the glaciers retreated, lakes larger than present-day Lake Erie overtopped or lapped the sides of the knob.

This limestone knob is part of a larger body of bedrock which stretches north into Lake Erie, forming the Western Basin islands, and south through Ohio. It is part of a karst formation, in which ground water can move quite freely and copiously. Apparently, quarrying exposed seams in this formation, allowing several small permanent ponds or pools to form. Rainfall to the south of the local area can rapidly increase the flow rate of at least one of the ponds. These ponds have never dried up in the summer, indicating a steady water supply. A rock formation called the 'Shatter-rock Arch is located by the midshelf pond. It is in the process of slowly disintegrating.

At least two small caves can be found in this rock. The larger one has been residence to a roost of Eastern Pipistrel bats. This roost may be the Northernmost wintering roost known for this species. In 2011 a Small-footed bat was discovered at the quarry. Overwintering bats should not be disturbed. Humans visiting

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the cave may cause them to arouse, which wastes precious energy, and may cause them to die before spring insects reappear. This cave is located near the cliff edge and SW of the glacial groove area. Access is restricted by construction of fencing over the entrances. The second cave is very small, more of a crack, and is located south of the driveway across from the exposed glacial grooves.

Quarrying ceased in 1965, and many species have colonized the formerly barren area since then. The hotter, drier microclimate has favored the establishment of an uncommon community of plants. Rock weathering and wind-blown soil accumulation have allowed plants to establish, especially in rock cracks. The current surface ranges widely. Bare rock 'pavements' can be found on the upper shelf, mid-shelf, and South floor areas. Gravel covered zones are found on the West shelf, upper shelf, and the more northern areas of the floor. Rough rocky zones are found all about on the cliff faces, including several rock slump areas. Fine 'washings' are present in the East bay and North of the road where the parking lot is situated. Mud zones have formed in the vicinity of all water bodies, especially the floor pools.

It is much lower and moister on the north side of 101, except for a central area of sand washings. It may have been part of the wet Castalia prairie at one time, but is currently grown up in trees and shrubs. There is historical evidence of a spring on the north side as well, which was buried by the sand. On the north side 4 mitigation pools were built in late 2003, one on the west side, two along the north edge, and one on the north-east corner. They were built with funds from the EPA mitigation program, to make up for wetlands destroyed or damaged by development elsewhere. This is part of the multi-county mitigation bank which NCRCPD established, with Envirotech (John Kiertscher) as consultant. The pools function as vernal pools, usually drying up completely during the summer. Some restoration seed was spread throughout the pools early in 2004. These pools were envisioned as an extension of the Resthaven wetlands and prairie habitats.

Approximately 437 species of vascular plants have been reported for the entire site, through Dec. 2016. Of these, 13 are listed by the State of Ohio as threatened or potentially so. 1 is listed as endangered, which means it is found very few places within Ohio. Most of these species are rare because their growth requirements are exacting, and few sites are suitable (*see attachment plants thru 2016*).

The plant communities are diverse here. Prairie plants have established in a few places. A little bluestem prairie patch is found on the small shelf overlooking the east bay. Indian grass and big bluestem are found several places, including within the west bay and on the north sand washings. Young mesic woodland occupies the perimeter of the quarry. Drought tolerant wildflowers and grasses sprout in the gravel and in rock cracks. Adjacent to the shallow ponds on the floor are wetland plants, including various sedges (*see attachment rare plants*).

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In September of 2012, a site visit to Castalia Quarry was made by Division of Wildlife, Fish and Wildlife Service and Erie MetroParks to potentially find areas suitable to plant the Lakeside Daisy (threatened species). The old limestone quarry was a good candidate because of its dry rocky habitat, seed has been dispersed by FWS on a yearly basis to establish a population. These sites included areas within the North Rim, West Cove and Upper Rim (*see attachment Lakeside Daisy Map*). Erie MetroParks has a memorandum of understanding stating that it will be Erie MetroParks responsibility to ensure the protection and management while simultaneously keeping management compatible with the passive recreational uses of the site. The population is now established and continues to increase yearly.

The animal life of CQM is also diverse, although it has not yet been studied systematically. Over 137 species of birds have been recorded here so far. Nine reptiles and amphibians have been found, including milk snake and five-lined skink. 15 mammal species have been found by incidental observation, including 4 species of bats (*see attachments birds thru 2016 and vertebrates thru 2011*).

Butterflies were systematically monitored from 1999 thru 2007, and 50 species were found on site (*see attachment butterflies thru 2011*).

Another fine resource is the view afforded by the elevation of the rock above the surrounding landscape. One observation platform has already been constructed to take advantage of this relief. It stands approximately 200 feet above the level of nearby Lake Erie. From this point, one can easily spot Perry's Monument on South Bass Island and the sister rocks on which it stands.

Threats to the natural resources at CQM

At present, Castalia Quarry MetroPark is utilized by hikers and bikers. Most hikers are content to stay on the established perimeter trail and do not threaten any natural resources. Bikers are more likely to explore off trail. This can pose a hazard to the rare plants in the quarry, especially those whose populations are few and limited to one or two sites. As use of the quarry increases, so too will the hazard. Most of the rare plants are inconspicuous, hence not easily noticed or avoided. On the other hand, they are not likely to be targets of 'flower-picking' either.

A greater threat to these rare plants comes from woody shrubbery, which has covered large areas at the quarry. The prairie sites are especially vulnerable, as is the west shelf. A more general shrubby threat is *Lonicera maackii*, or Amur Honeysuckle, which is an aggressive alien plant. It has already established throughout the quarry. Its ability to dominate woodland understory and edge will reduce species diversity by shading out wildflowers, etc.

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Phragmites australis (Common Reed grass), another aggressive invader, is established on the north east corner and in small patches along the mitigation pools.

Management Strategies

Lakeside Daisy- Monitoring of plant populations is conducted annually and will continue under the terms of the MOU. Control of shrubby plants is ongoing in the planted areas to ensure the habitat remains suitable. Foot and bike traffic are also monitored to ensure the daisy population is not being harmed.

Prairie areas – Controlled burns should be conducted at least biennially to prevent woody growth from overtaking the area, and encouraging fire adapted prairie plants to thrive. Overall the quarry has a medium priority and will be burned on average every 2 years (*see attachment burn area map*). Removal of woody shrubbery such as Autumn Olive and Amur Honeysuckle will continue to maintain and expand prairie species.

Phragmites – In 2010 the Phragmites in the mitigation pools were sprayed by Crowley's Vegetation and in 2011 Erie MetroParks staff did follow up control. The population of Phragmites persists but does not seem to be a threat at present. There is also a row of Eastern Cottonwood trees that block the view into the mitigation pools, windows were cut to allow for a viewing opportunity in 2013.

Woody aggressive alien plants – Amur honeysuckle may be impossible to eradicate, but will need to be cut back periodically along the trails to prevent encroachment.

People threats – Traffic flow should be restricted near the endangered sites where practicable. This would work well on the west shelf and upper shelf. It will not work as well on the quarry floor, where the rare plants are widely distributed (*see attachment rare plants*).

Castalia Quarry has a lot of dead ash trees; many of these trees have already fallen but others continue to be a hazard where they are near trails, and will be removed as necessary. Those not near trails will provide great woodpecker habitat.

**Castalia Quarry
MetroPark**



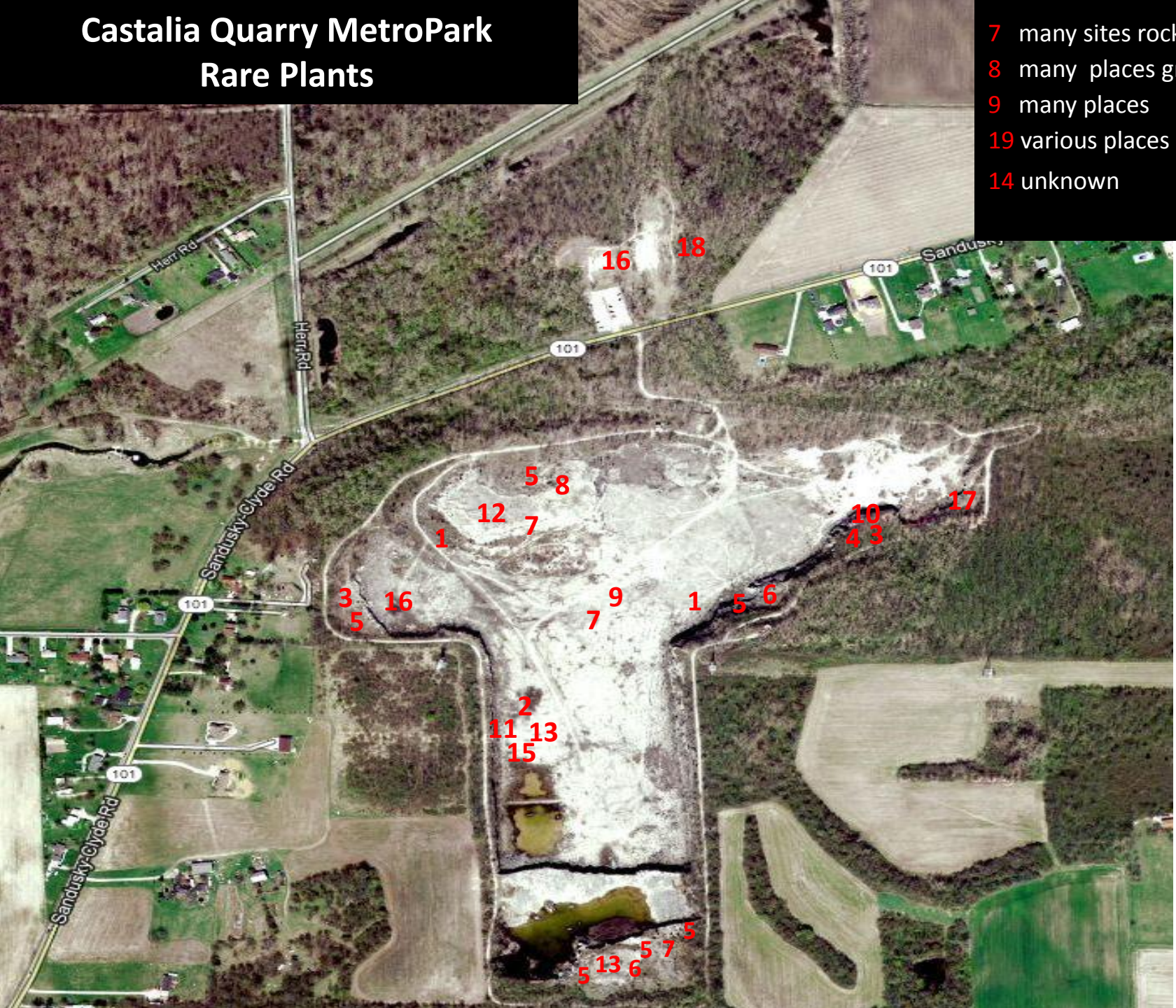
Castalia Quarry

Lakeside Daisy Planting Areas

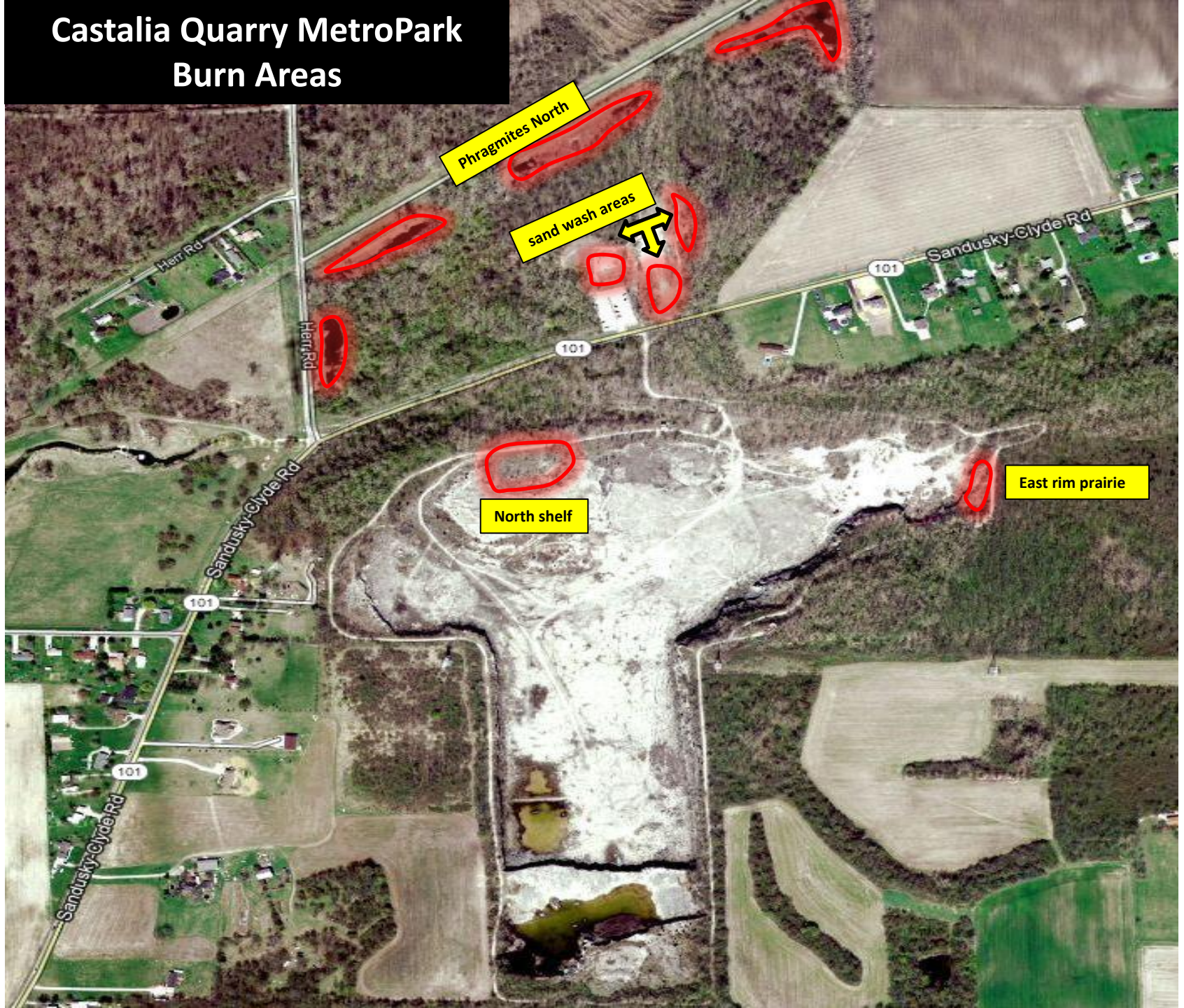


Castalia Quarry MetroPark Rare Plants

- 7 many sites rocky/gravelly
- 8 many places gravelly
- 9 many places
- 19 various places
- 14 unknown



Castalia Quarry MetroPark Burn Areas





PLANT List, Castalia Quarry thru 2016

Thursday, March 23, 2017

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|-----------------------------|------|--------|--------|----------|
| L V | | | | | | |
| | <i>Pteridium aquilinum</i> (L.) Kuhn | Bracken | X | N | | |
| | <i>Cystopteris bulbifera</i> (L.) Bernh. | Fern, Bulblet Bladder | X | N | | |
| | <i>Osmunda claytoniana</i> L. | Fern, Interrupted | X? | N | | |
| | <i>Botrychium virginianum</i> (L)Sw. | Fern, Rattlesnake | X | N | | |
| | <i>Onoclea sensibilis</i> L. | Fern, Sensitive | x et | N | | |
| | <i>Botrychium dissectum</i> Spreng | Grape-fern, Dissected | X | N | | |
| | <i>Equisetum arvense</i> L. | Horsetail, Field | X | N | | |
| | <i>Asplenium platyneuron</i> (L.) BSP | Spleenwort, Ebony | X | N | | |
| | | | 8 | | 0 | 0 |
| P | | | | | | |
| | <i>Zizia aurea</i> (L.) Koch | Alexanders, Golden | X | N | | |
| | <i>Anemone virginiana</i> L. | Anemone, Tall (Thimbleweed) | X | N | | |
| | <i>Anemone quinquefolia</i> L. | Anemone, Wood | X | N | | |
| | <i>Sagittaria latifolia</i> Willd. | Arrowhead, Common | X | N | | |
| | <i>Asparagus officinalis</i> L. | Asparagus, Garden | X | A | | |
| | <i>Aster</i> sp wingy | Aster | X | N | | |
| | <i>Symphotrichum pilosum</i> (Willd.) G.L. Nesom [<i>Aster p..us</i> Willd.] | Aster, Awl | X? | N | | |
| | <i>Symphotrichum lateriflorum</i> (L.) [<i>Aster l..us</i> (L.) Britt.] | Aster, Calico | x et | N | | |
| | <i>Symphotrichum</i> sp, cordate | Aster, cordate, nonwingy | X | N | | |
| | <i>Symphotrichum novae-angliae</i> (L.) G.L. Nesom [<i>Aster n.. L.</i>] | Aster, New England | X | N | | |
| | <i>Geum canadense</i> Jacq. | Avens, White | X | N | | |
| | <i>Actaea pachypoda</i> Ell. | Baneberry, White | X | N | | |
| | <i>Penstemon hirsutus</i> (L.) Willd. | Beard-tongue, Hairy | X | N | | |
| | <i>Galium aparine</i> L. | Bedstraw, Cleavers | X | N | | |
| | <i>Galium triflorum</i> Michx. | Bedstraw, Sweet-scented | X | N | | |
| | <i>Galium mollugo</i> L. | Bedstraw, White | X | A | | |
| | <i>Galium circaezans</i> Michx. | Bedstraw, Wild Licorice | X | N | | |
| | <i>Bidens</i> sp | Beggar-ticks, a | X | N | | |
| | <i>Bidens vulgata</i> Greene | Beggar-ticks, Tall | X? | N | | |
| | <i>Campanula rapunculoides</i> L. | Bellflower, Creeping | X | A | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|------------------------------|------|--------|--------|----------|
| | <i>Campanula americana</i> L. | Bellflower, Tall | X | N | | |
| | <i>Uvularia grandiflora</i> Sm. | Bellwort, Large-flowered | X | N | | |
| | <i>Uvularia perfoliata</i> Sm. | Bellwort, Perfoliate | X | N | | |
| | <i>Monarda didyma</i> L. | Bergamot, Bee-balm | X | N | | |
| | <i>Monarda fistulosa</i> L. | Bergamot, Wild | X | N | | |
| | <i>Convolvulus arvensis</i> L. | Bindweed, Field | U L | A | | |
| | <i>Calystegia sepium</i> (L) R.Br. | Bindweed, Hedge | X | N | | |
| | <i>Rudbeckia hirta</i> L. | Black-eyed Susan | X | N | | |
| | <i>Liatris spicata</i> (L.) Willd | Blazingstar, Dense | X | N | | |
| | <i>Liatris scariosa</i> Willd,OR <i>L. asper</i> ? | Blazingstar, rough or large | A L | N | | |
| | <i>Liatris spicata</i> f. <i>albiflora</i> Britton | Blazingstar, White | X | N | | |
| | <i>Sisyrinchium montanum</i> Greene | Blue-eyed Grass, Northern | X | N | | T |
| | <i>Sisyrinchium albidum</i> Raf. | Blue-eyed Grass, White | X | N | | |
| | <i>Sisyrinchium angustifolium</i> Mill. | Blue-eyed-Grass, Common | X | N | | |
| | <i>Houstonia canadensis</i> Roemer & Schultes | Bluets, Canada | X | N | | |
| | <i>Hedyotis nigricans</i> (Lam.) Fosberg | Bluets, Narrow-leaved Summer | X | N | | P |
| | <i>Eupatorium perfoliatum</i> L. | Boneset, Common | X | N | | |
| | <i>Kuhnia eupatoroides</i> L. | Boneset, False | X | N | | |
| | <i>Eupatorium sessilifolium</i> L. | Boneset, Upland | x et | N | | |
| | <i>Polygonum scandens</i> L. | Buckwheat, Climbing False | X | N | | |
| | <i>Lycopus virginicus</i> L. | Bugleweed, Virginia | X? | N | | |
| | <i>Scirpus atrovirens</i> Willd. | Bulrush, Dark-green | X? | N | | |
| | <i>Scirpus pendulus</i> Muhl. [<i>S. lineatus</i>] | Bulrush, Drooping | X | N | | |
| | <i>Schoenoplectus acutus</i> (Muhl. ex Bigelow) Love | Bulrush, Hard-stemmed | X | N | | |
| | <i>Bolboschoenus fluviatilis</i> (Torr.) J. Sojak [<i>Scirpus</i> f..] | Bulrush, River | X? | N | | |
| | <i>Schoenoplectus tabernaemontani</i> (C.C.Gmel.) Palla [<i>Scirpus validus</i>] | Bulrush, Soft-stemmed | X | N | | |
| | <i>Juncus torreyi</i> Coville | Bulrush, Torrey's | X | N | | |
| | <i>Arctium minus</i> Bernh. | Burdock, Common | X | A | | |
| | <i>Lespedeza virginica</i> (L.) Britton | Bush-clover, Slender | X? | N | | |
| | <i>Ranunculus abortivus</i> L. | Buttercup, Kidney-leaved | X | N | | |
| | <i>Ranunculus hispidus</i> Michx var <i>nitidus</i> | Buttercup, Swamp | X | N | | |
| | <i>Ranunculus acris</i> L. | Buttercup, Tall | X | A | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|----------------------------------|-----|--------|--------|----------|
| | <i>Asclepias tuberosa</i> L. | Butterfly-weed | X | N | | |
| | <i>Silene vulgaris</i> (Moench) Garcke | Campion, Bladder | X | A | | |
| | <i>Silene latifolia</i> Poir. | Campion, White | X | A | | |
| | <i>Smilax herbacea</i> L. | Carrion-flower | X | N | | |
| | <i>Daucus carota</i> L. | Carrot, Wild (Queen Anne's Lace) | X | A | | |
| | <i>Nepeta cataria</i> L. | Catnip | X | A | | |
| | <i>Typha angustifolia</i> L. | Cat-tail, Narrow-leaved | X | A | | X |
| | <i>Stellaria media</i> (L.) Vill. | Chickweed, Common | X | A | | |
| | <i>Cerastium fontanum</i> Baumg.[<i>C.vulgatum</i>] | Chickweed, Common Mouse-eared | X | A | | |
| | <i>Holosteum umbellatum</i> L. | Chickweed, Jagged | X | A | | |
| | <i>Cichorium intybus</i> L. | Chicory | X | A | | |
| | <i>Osmorhiza longistylis</i> (Torr) DC | Cicely, Smooth Sweet | X | N | | |
| | <i>Osmorhiza claytonii</i> (Michx) C.B.Clarke | Cicely, Woolly Sweet | X | N | | |
| | <i>Potentilla simplex</i> Michx. | Cinquefoil, Common | X | N | | |
| | <i>Potentilla norvegica</i> L. | Cinquefoil, Rough | X | N | | |
| | <i>Potentilla recta</i> L. | Cinquefoil, Rough-fruited | X | A | | |
| | <i>Pilea pumila</i> (L) A.Gray | Clearweed, Common | X | N | | |
| | <i>Trifolium pratense</i> L. | Clover, Red | X | A | | |
| | <i>Trifolium repens</i> L. | Clover, White | X | A | | |
| | <i>Cimicifuga racemosa</i> (L) Nutt. | Cohosh, Black | X | N | | |
| | <i>Aquilegia canadensis</i> L. | Columbine | X | N | | |
| | <i>Aquilegia vulgaris</i> L. | Columbine, European | X | A | | |
| | <i>Symphytum officinale</i> L. | Comfrey, Common | X | A | | |
| | <i>Rudbeckia laciniata</i> L. | Coneflower, Cut-leaved | X | N | | |
| | <i>Ratibida pinnata</i> (Vent) Barnhart | Coneflower, Gray-headed | X | N | | |
| | <i>Coreopsis lanceolata</i> L. | Coreopsis, Long-stalked | X | N | | |
| | <i>Coreopsis tripteris</i> L. | Coreopsis, Tall | X | N | | |
| | <i>Corydalis flavula</i> (Raf.) DC | Corydalis, Yellow | X | N | | |
| | <i>Geranium carolinianum</i> L. | Crane's-bill, Carolina | X | N | | |
| | <i>Barbarea vulgaris</i> R.Br. | Cress, Common Winter | X | A | | |
| | <i>Lepidum campestre</i> (L.) R.Br. | Cress, Cow (Field Peppergrass) | X | N | | |
| | <i>Cardamine hirsuta</i> L. | Cress, Hoary Bitter | X | A | | |
| | <i>Arabis thaliana</i> (L.) Heynh. | Cress, Mouse-ear | X | A | | |
| | <i>Cardamine pensylvanica</i> Muhl. | Cress, Pennsylvania Bitter | X | N | | |

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|-----|--|---------------------------|-------|--------|--------|----------|
| | <i>Cardamine bulbosa</i> (Schreb) BSP | Cress, Spring | X | N | | |
| | <i>Ranunculus sceleratus</i> L. | Crowfoot, Cursed | X | N | | |
| | <i>Ranunculus recurvatus</i> Poir. | Crowfoot, Hooked | x et | N | | |
| | <i>Echinocystis lobata</i> (Michx.) T.& G. | Cucumber, Wild | X | N | | |
| | <i>Tetraneuris herbacea</i> Greene [<i>Hymenoxys herbacea</i> (Greene) Cusick] | Daisy, Lakeside | re | N | | |
| | <i>Hesperis matronalis</i> L. | Dame's Rocket | X | A | | |
| | <i>Taraxacum officinale</i> Weber | Dandelion, Common | X | A | | |
| | <i>Hemerocallis fulva</i> L. | Day-lily, Orange | X | N | | |
| | <i>Lamium purpureum</i> L. | Dead-nettle, Purple | X | A | | |
| | <i>Penthorum sedoides</i> L. | Ditch-Stonecrop | X | N | | |
| | <i>Rumex crispus</i> L. | Dock, Curled | X? | A | | |
| | <i>Cuscuta gronovii</i> Willd. | Dodder, Common | X | N | | |
| | <i>Apocynum cannabinum</i> L. | Dogbane, Indian-Hemp | X? | N | | |
| | <i>Lemna minor</i> L. | Duckweed, Lesser | X | N | | |
| | <i>Vallisneria americana</i> Michx. | Eel-grass | X | N | | |
| | <i>Oenothera biennis</i> L. | Evening-primrose, Common | X | N | | |
| | <i>Aureolaria flava</i> (L.) Farw. | False Foxglove, Smooth | U L | N | | |
| | <i>Scrophularia marilandica</i> L. | Figwort, Maryland | X | N | | |
| | <i>Linum virginianum</i> L. | Flax, Yellow | X | N | | |
| | <i>Erigeron annuus</i> (L) Pers. | Fleabane, Daisy (toothy) | X | N | | |
| | <i>Erigeron philadelphicus</i> L. | Fleabane, Philadelphia | X | N | | |
| | <i>Erigeron strigosus</i> Muhl. ex Willd. | Fleabane, Rough | X | N | | |
| | <i>Allium vineale</i> L. | Garlic, Field | X | A | | |
| | <i>Gaura biennis</i> L. | Gaura, Biennial | X-r l | N | | |
| | <i>Gentianopsis crinita</i> (Froel.) Ma | Gentian, Eastern Fringed | X | N | | P |
| | <i>Geranium maculatum</i> L. | Geranium, Wild | X | N | | |
| | <i>Teucrium canadense</i> L. | Germander, American | X | N | | |
| | <i>Tragopogon dubius</i> Scop. | Goats-beard, Field | X | A | | |
| | <i>Tragopogon pratensis</i> L. | Goats-beard, Yellow | X | A | | |
| | <i>Solidago uliginosa</i> Nutt. | Goldenrod, Bog | X | N | | |
| | <i>Solidago canadensis</i> L. | Goldenrod, Canada (+Tall) | X | N | | |
| | <i>Euthamia graminifolia</i> (L.) Nutt. | Goldenrod, Flat-topped | X | N | | |
| | <i>Solidago nemoralis</i> Ait. | Goldenrod, Gray | X | N | | |
| | <i>Euthamia gymnospermoides</i> Greene [E. <i>remota</i> Greene] | Goldenrod, Great Lakes | X? | N | | T |

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|-----|---|---------------------------|-----------|--------|--------|----------|
| | Oligoneuron ohioense (Frank ex Riddell) G.N. Jones [Solidago o..s Frank] | Goldenrod, Ohio | X | N | was P | |
| | Oligoneuron riddellii (Frank ex Riddell) Rydb. [Solidago riddellii Frank ex Riddell] | Goldenrod, Riddell's | X | N | | |
| | Solidago speciosa Nutt. | Goldenrod, Showy | X | N | | |
| | Oligoneuron rigidum (L.) Small var rigidum [Solidago rigida L.] | Goldenrod, Stiff | x et | N | | |
| | Muscari botryoides (L.) Mill. | Grape-Hyacinth | X | E | | |
| | Echinochloa crus-galli (L) Beauv. | Grass, Barnyard | X | N | | |
| | Andropogon gerardi Vitman. | Grass, Big Bluestem | X | N | | |
| | Poa sp. | Grass, Bluegrass, a | X | Z | | |
| | Elymus hystrix L. [Hystrix patula] | Grass, Bottlebrush | X | N | | |
| | Poa compressa L. | Grass, Canada Blue | X? | A | | |
| | Elymus canadensis L. | Grass, Canada Wild Rye | x bl89 | N | | |
| | Andropogon virginicus L. | Grass, Common Broom-sedge | X | N | | |
| | Phragmites australis (Cav.) Trin. ex Steudel | Grass, Common Reed | X | A | | X |
| | Digitaria sp. | Grass, Crabgrass, a | X | A | | |
| | Bromus tectorum L. | Grass, Downy Brome | X | A | | |
| | Glyceria striata (Lam.)A.Hitch. | Grass, Fowl Manna | x et | N | | |
| | Setaria faberi Herrm. | Grass, Giant Foxtail | X | A | | |
| | Sorghastrum nutans (L.) Nash | Grass, Indian | X | N | | |
| | Panicum lindheimeri (Nash) Fern. | Grass, Lindheimer's Panic | x dnr | N | T | |
| | Schizachyrium scoparium (Michx.) Nees. | Grass, Little Bluestem | X | N | | |
| | Lolium pratense (Huds.) Darbyshire [Festuca pr..sis] | Grass, Meadow Fescue? | X | A | | |
| | Panicum lanuginosum Ell. [P. acuminatum Sw.] | Grass, Old Field Panic | X | N | | |
| | Dactylis glomerata L. | Grass, Orchard | X? | A | | |
| | Lolium perenne L. | Grass, Perennial Ryegrass | X | A | | |
| | Panicum philadelphicum Bernh. ? | Grass, Philadelphia Panic | X | N | E | |
| | Danthonia spicata (L.) P.Beauv. | Grass, Poverty Oat | C L | N | | |
| | Spartina pectinata Link. | Grass, Prairie Cord | X | N | | |
| | Agrostis gigantea Roth. [A.alba] | Grass, Redtop | X | N | | |
| | Phalaris arundinacea L. | Grass, Reed Canary | X | A | | X |
| | Sporobolus cryptandrus (Torr.) A. Gray | Grass, Sand Dropseed | X | N | was P | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|----------------------------------|------|--------|--------|----------|
| | <i>Sporobolus neglectus</i> Nash. | Grass, Small Rush | X | N | | |
| | <i>Hordeum jubatum</i> L. | Grass, Squirrel-tail Barley | X | A | | |
| | <i>Panicum virgatum</i> L. | Grass, Switch | X | N | | |
| | <i>Tridens flavus</i> (L) A.Hitchc. | Grass, Tall Redtop | X | N | | |
| | <i>Phleum pratense</i> L. | Grass, Timothy | X | A | | |
| | <i>Elymus virginicus</i> L. | Grass, Virginia Wild Rye | X | N | | |
| | <i>Echinochloa walteri</i> (Pursh) Heller | Grass, Walters Barnyard | X | N | | |
| | <i>Leersia virginica</i> Willd. | Grass, White | X | N | | |
| | <i>Panicum capillare</i> L. | Grass, Witch- | X | N | | |
| | <i>Bromus pubescens</i> Muhl. ex Willd? ['purgans'] | Grass, Woodland Brome | X | N | | |
| | <i>Setaria pumila</i> (Poir) Roem. & Schult. [S. <i>glauca</i> (L.) Beauv.] | Grass, Yellow Foxtail | X? | A | | |
| | <i>Lithospermum arvense</i> L. | Gromwell, Corn | X | A | | |
| | <i>Hieracium floribundum</i> Wimm.& Grab. | Hawkweed, Glaucous | X | A | | |
| | <i>Lamium amplexicaule</i> L. | Henbit | X | A | | |
| | <i>Hepatica americana</i> (DC.) Ker | Hepatica, Round-leaved | X | N | | |
| | <i>Geranium robertianum</i> L. | Herb Robert | X | N | | |
| | <i>Berteroa incana</i> (L.) DC. | Hoary-alyssum | X | A | | |
| | <i>Cryptotaenia canadensis</i> (L) DC | Honewort, | X | N | | |
| | <i>Humulus lupulus</i> L. | Hops, Common | X | N | | |
| | <i>Conzya canadensis</i> (L.) Cronq. | Horseweed, Common | X | Z | | |
| | <i>Iris virginica</i> L. or <i>versicolor</i> | Iris, Larger Blue Flag | X? | N | | |
| | <i>Vernonia gigantea</i> (Walt)Trel ex Branner & Coville | Ironweed, Tall | X | N | | |
| | <i>Arisaema triphyllum</i> (L.) Schott | Jack-in-the-pulpit | X | N | | |
| | <i>Impatiens capensis</i> Meerb. | Jewelweed, Orange (Touch-me-not) | X | N | | |
| | <i>Impatiens pallida</i> Nutt. | Jewelweed, Yellow | X | N | | |
| | <i>Eutrochium purpureum</i> (L.) E.E. Lamont [<i>Eupatorium</i> p.. L.] | Joe-Pye-Weed, Purple (Sweet) | X | N | | |
| | <i>Eutrochium maculatum</i> (L.) E.E. Lamont [<i>Eupatorium</i> m..L.] | Joe-pye-weed, Spotted | X | N | | |
| | <i>Centuarea stoebe</i> L. [<i>C. maculosa</i>] | Knapweed, Spotted | X? | A | | X |
| | <i>Polygonum virginianum</i> L. | Knotweed, Virginia | X | N | | |
| | <i>Chenopodium album</i> L. | Lambsquarters | X | A | | |
| | <i>Allium tricoccum</i> Ait. | Leek, Wild | X | N | | |
| | <i>Lilium michiganense</i> Farw. | Lily, Michigan | x?LT | N | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|---------------------------------------|-----|--------|--------|----------|
| | <i>Lobelia siphilitica</i> L. | Lobelia, Great Blue | X | N | | |
| | <i>Lobelia kalmii</i> L. | Lobelia, Kalm's | X | N | | |
| | <i>Lobelia spicata</i> Lam. | Lobelia, Pale spike | X | N | | |
| | <i>Lythrum salicaria</i> L. | Loosestrife, Purple | X | A | | X |
| | <i>Lythrum alatum</i> Pursh. | Loosestrife, Wing-angled | X | N | | |
| | <i>Phryma leptostachya</i> L. | Lopseed | X | N | | |
| | <i>Medicago lupulina</i> L. | Medick, Black | X | A | | |
| | <i>Asclepias incarnata</i> L. | Milkweed, Swamp | X | N | | |
| | <i>Asclepias verticillata</i> L. | Milkweed, Whorled | X | N | | |
| | <i>Mimulus ringens</i> L. | Monkey-flower, Common | X | N | | |
| | <i>Leonurus cardiaca</i> L. | Motherwort, Common | X | A | | |
| | <i>Pycnanthemum virginianum</i> (L.) Robins. & Fern. | Mountain-mint, Virginia | X | N | | |
| | <i>Verbascum thapsus</i> L. | Mullein, Common | X | A | | |
| | <i>Erucastrum gallicum</i> (Willd.) O.E.Schultz | Mustard, Dog | X | A | | |
| | <i>Alliaria petiolata</i> (M.Bieb) Cavara & Grande | Mustard, Garlic | X | A | | X |
| | <i>Descurainia</i> or <i>Diploaxis</i> ? | Mustard, pinnatifid | X | A | | |
| | <i>Arabis glabra</i> (L.) Bernh. ? | Mustard, Tower | X | N | | |
| | <i>Najas</i> sp | Naiad sp. | X | N | | |
| | <i>Boehmeria cylindrica</i> (L.) Sw. | Nettle, False | X | N | | |
| | <i>Urtica dioica</i> L. | Nettle, Stinging | X | N | | |
| | <i>Solanum dulcamara</i> L. | Nightshade, Bittersweet | X | A | | |
| | <i>Solanum nigrum</i> L. [<i>S. ptychanthum</i>] | Nightshade, Black | X | N | | |
| | <i>Circaea lutetiana</i> L. | Nightshade, Common Enchanter's | X | N | | |
| | <i>Carduus nutans</i> L. | Nodding-thistle | X | A | | |
| | <i>Cyperus</i> sp. | Nut-sedge, a common one | X | N | | |
| | <i>Physostegia virginiana</i> (L.) Benth. | Obedient-plant | X | N | | |
| | <i>Spiranthes magnicamporum</i> Sheviak | Orchid, Ladies'-tresses, Great Plains | X | N | | P |
| | <i>Spiranthes cernua</i> (L.) Rich. | Orchid, Ladies'-tresses, Nodding | X? | N | | |
| | <i>Chamaecrista fasciculata</i> (Michx.) Greene. | Partridge-pea | X | N | | |
| | <i>Parietaria pensylvanica</i> Willd. | Pellitory | X | N | | |
| | <i>Isanthus brachiatus</i> (L.) B.S.P. | Pennyroyal, False | X | N | | |
| | <i>Phlox divaricata</i> L. | Phlox, Blue | X | N | | |
| | <i>Dianthus armeria</i> L. | Pink, Deptford | X | A | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|-----------------------------|-----------|--------|--------|----------|
| | <i>Plantago major</i> L. | Plantain, Common | X | A | | |
| | <i>Plantago lanceolata</i> L. | Plantain, English | X | A | | |
| | <i>Plantago rugelii</i> Decne. | Plantain, Rugel's(Pale) | X | N | | |
| | <i>Phytolacca americana</i> L. | Pokeweed | X | N | | |
| | <i>Potamogeton foliosus</i> Raf.? | Pondweed, Leafy | X | N | | |
| | <i>Silphium terebinthinaceum</i> Jacq. | Prairie-dock | x bl89 | N | | |
| | <i>Opuntia humifusa</i> Raf. | Prickly-Pear, Common | U L | N | | P |
| | <i>Portulaca oleracea</i> L. | Purslane, Common | X | A | | |
| | <i>Antennaria neglecta</i> Greene | Pussy-toes, Field | X | N | | |
| | <i>Antennaria parlinii</i> Fernald [A. <i>plantaginifolia</i> (L.) Richardson] | Pussy-toes, Plantain-leaved | X | N | | |
| | <i>Galinsoga quadriradiata</i> Ruiz & Pavon | Quickweed, Common | X | A | | |
| | <i>Ambrosia artemisiifolia</i> L. | Ragweed, common | X | N | | |
| | <i>Ambrosia trifida</i> L. | Ragweed, Giant | X | N | | |
| | <i>Packera paupercula</i> (Michx.) [Senecio <i>p..us</i> Michx.] | Ragwort, Balsam | X | N | | was T |
| | <i>Packera aurea</i> (L.) [Senecio aureus L.] | Ragwort, Golden | X | N | | |
| | <i>Packera obovata</i> (Muhl. ex Willd.) W.A. Weber [Senecio o..us Muhl. ex Willd.] | Ragwort, Round-leaved | X | N | | |
| | <i>Prenanthes alba</i> L. | Rattlesnake-root, White | X | N | | |
| | <i>Arabis hirsuta</i> (L.) Scop. var adpr. | Rock Cress, Hairy | X | N | | P |
| | <i>Hibiscus moscheutos</i> L. | Rose-mallow, Swamp | X | N | | |
| | <i>Silphium trifoliatum</i> L. | Rosinweed, Whorled | X | N | | |
| | <i>Thalictrum dioicum</i> L. | Rue, Early Meadow | X | N | | |
| | <i>Thalictrum dasycarpum</i> Fisch. & Lall. | Rue, Tall Meadow | X | N | | |
| | <i>Thalictrum thalictroides</i> (L.) Eames & Boiv. | Rue-anemone | X | N | | |
| | <i>Juncus alpinoarticulatus</i> Chaix | Rush, Alpine | x dnr | N | | P |
| | <i>Juncus dudleyi</i> Wiegand | Rush, Dudley's | X | N | | |
| | <i>Juncus nodosus</i> L. | Rush, Knotted ? | X | N | | |
| | <i>Juncus tenuis</i> Willd. | Rush, Path | X | N | | |
| | <i>Juncus brachycarpus</i> Engelm. | Rush, Short-fruited | X? | N | | |
| | <i>Juncus brachycephalus</i> (Engelm.) Buchenau. | Rush, Short-headed | X | N | | |
| | <i>Arenaria stricta</i> Michx. | Sandwort, Rock | X? | N | | |
| | <i>Arenaria serpyllifolia</i> L. | Sandwort, Thyme-leaved | X | A | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|---|------------------------------|------|--------|--------|----------|
| | <i>Carex glaucoidea</i> Tuckerm. | Sedge, Blue-green | X | N | | |
| | <i>Carex tribuloides</i> Wahl. | Sedge, Blunt Broom | X? | N | | |
| | <i>Carex eburnea</i> Boott | Sedge, Bristle-leaved | X | N | | |
| | <i>Carex blanda</i> Dewey | Sedge, Common Wood | X? | N | | |
| | <i>Carex crawei</i> Dewey | Sedge, Crawe's | X | N | | was P |
| | <i>Carex vulpinoidea</i> Michx. | Sedge, Foxtail | x et | N | | |
| | <i>Carex hitchcockiana</i> Dewey | Sedge, Hitchcock's | X | N | | |
| | <i>Carex viridula</i> Michx. | Sedge, Little Green | X | N | | P |
| | <i>Carex pensylvanica</i> Lam. | Sedge, Pennsylvania | X? | N | | |
| | <i>Carex hystericina</i> Muhl. | Sedge, Porcupine | X | N | | |
| | <i>Carex atlantica</i> L.H.Bailey [incomperta] | Sedge, Prickly Bog | X | N | | |
| | <i>Carex conjuncta</i> Boott. | Sedge, Soft Fox | X | N | | |
| | <i>Prunella vulgaris</i> L. | Self-heal(Heal-all) | X | A | | |
| | <i>Polygala senega</i> L. | Seneca-snakeroot | X | N | | |
| | <i>Capsella bursa-pastoris</i> (L.) Medik. | Shepherd's-Purse | X | A | | |
| | <i>Arabis canadensis</i> L. ? | Sickle-pod ? | X | N | | |
| | <i>Symplocarpus foetidus</i> (L) Salisb. ex Barton | Skunk-cabbage | X | N | | |
| | <i>Polygonum lapathifolium</i> L. | Smartweed, Nodding | X | N | | |
| | <i>Polygonum pensylvanicum</i> L. | Smartweed, Pennsylvania | x et | N | | |
| | <i>Sanicula marylandica</i> L. | Snakeroot, Black | X | N | | |
| | <i>Ageratina altissima</i> (L.) R.M.King & H.Rob. [<i>Eupatorium rugosum</i> Houtt.] | Snakeroot, White | X | N | | |
| | <i>Chaenorrhinum minus</i> (L.) Lange | Snapdragon, Dwarf | X | A | | |
| | <i>Helenium autumnale</i> L. | Sneezeweed | X | N | | |
| | <i>Saponaria officinalis</i> L. | Soapwort (Bouncing Bet) | X | A | | |
| | <i>Smilacina racemosa</i> (L.) Desf. | Solomon's-plume, | X | N | | |
| | <i>Polygonatum pubescens</i> (Willd.) Pursh | Solomon's-seal, Hairy | X | N | | |
| | <i>Smilacina stellata</i> Desf. | Solomon's-seal, Starry False | X | N | | |
| | <i>Sonchus arvensis</i> L | Sow-thistle, Field | X | A | | |
| | <i>Sonchus asper</i> (L.) Hill | Sow-thistle, Spiny-leaved | X | A | | |
| | <i>Bidens bipinnata</i> L. | Spanish Needles | X | N | | |
| | <i>Veronica arvensis</i> L. | Speedwell, Corn | X | A | | |
| | <i>Veronica peregrina</i> L. | Speedwell, Purslane | X | N | | |
| | <i>Tradescantia ohiensis</i> Raf. | Spiderwort, Ohio | X | N | | |
| | <i>Eleocharis erythropoda</i> Steud. | Spike-rush, Red-footed | x et | N | | |

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|-----|--|---|-------|--------|--------|----------|
| | <i>Eleocharis tenuis</i> (Willd.) Schultes | Spike-rush, Slender | X | N | | |
| | <i>Eleocharis smallii</i> Britton | Spike-rush, Small's | X | N | | |
| | <i>Eleocharis rostellata</i> Torr. | Spike-rush, Walking | X | N | | |
| | <i>Polemonium reptans</i> L. | Spreading Jacob's-ladder | x et | N | | |
| | <i>Claytonia virginica</i> L. | Spring-beauty | X | N | | |
| | <i>Euphorbia corollata</i> L. | Spurge, Flowering | X | N | | |
| | <i>Euphorbia nutans</i> Lag. | Spurge, Spotted | X | N | | |
| | <i>Hypericum perforatum</i> L. | St.-John's-wort, Common | X | A | | |
| | <i>Hackelia virginiana</i> (L.) I. M. Johnston | Stickseed, Common | X | N | | |
| | <i>Sedum acre</i> L. | Stonecrop, Mossy | X | A | | |
| | <i>Fragaria virginiana</i> Duchesne | Strawberry, Virginia | X | N | | |
| | <i>Helianthus annuus</i> L. | Sunflower, Common | X | Z | | |
| | <i>Helianthus grosseserratus</i> Martens. | Sunflower, Sawtooth | X et | N | | |
| | <i>Helianthus decapetalus</i> L. | Sunflower, Thin-leaved | X | N | | |
| | <i>Melilotus albus</i> Medik. | Sweet-Clover, White | X | A | | |
| | <i>Melilotus officinalis</i> (L) Lam. | Sweet-Clover, Yellow | X | A | | |
| | <i>Dipsacus fullonum</i> L. | Teasel, Common | X | A | | X |
| | <i>Anemone cylindrica</i> A. Gray | Thimbleweed, Prairie | X | N | T | |
| | <i>Cirsium</i> sp. (discolor?) | Thistle, (white felted under) | X | N | | |
| | <i>Cirsium vulgare</i> (Savi) Tenore | Thistle, Bull | X | A | | |
| | <i>Cirsium arvense</i> (L) Scop. | Thistle, Canada | X | A | | X |
| | <i>Cirsium muticum</i> Michx. | Thistle, Swamp | X | N | | |
| | <i>Eupatorium serotinum</i> Michx. | Thoroughwort, Late-flowering | X | N | | |
| | <i>Eupatorium altissimum</i> L. | Thoroughwort, Tall | X | N | | |
| | <i>Schoenoplectus pungens</i> (Vahl) Palla | Three-square | X | N | | |
| | <i>Bidens cernua</i> L. | Tickseed-Sunflower, Nodding | X | N | | |
| | <i>Bidens coronata</i> (L.) Britt.(or polylepis) | Tickseed-Sunflower, Showy | x et | N | | |
| | <i>Desmodium canadense</i> (L.) DC | Tick-trefoil, Canada | X? | N | | |
| | <i>Desmodium glutinosum</i> (Willd.) Wood | Tick-trefoil, Cluster-leaved | X | N | | |
| | <i>Desmodium paniculatum</i> (L) DC | Tick-trefoil, Panicked | X? | N | | |
| | <i>Triosteum perfoliatum</i> L. | Tinker's-weed | X | N | | |
| | <i>Chelone glabra</i> L. | Turtlehead | X | N | | |
| | <i>Cladium mariscoides</i> (Muhl.) Torr. | Twig-rush | o dnr | N | was P | |
| | | unk skinny 10 inch yellow green | X | N? | | |
| | <i>Euphorbia</i> ? | unk spurge, lg capsule, leaf lanceolate | X | | | |

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|-----|---|------------------------------|-----|--------|--------|----------|
| | <i>Abutilon theophrasti</i> Medik. | Velvet-leaf | X | A | | |
| | <i>Triodanis perfoliata</i> (L.) Nieuwl. | Venus'-looking-glass | X | N | | |
| | <i>Verbena hastata</i> L. | Vervain, Blue | X | N | | |
| | <i>Verbena simplex</i> Lehm. | Vervain, Narrow-leaved | X | N | | |
| | <i>Verbena urticifolia</i> L. | Vervain, White | X | N | | |
| | <i>Viola sororia</i> Willd. | Violet, Common Blue | X | N | | |
| | <i>Clematis virginiana</i> L. | Virgin's-bower | X | N | | |
| | <i>Cicuta maculata</i> L. | Water-Hemlock | X | N | | |
| | <i>Lycopus americanus</i> Muhl. | Water-horehound, Cut-leaved | X | N | | |
| | <i>Myriophyllum</i> sp. (prob.spicatum) | Water-milfoil, a | X | A | | X |
| | <i>Alisma subcordatum</i> Raf. | Water-plantain, Southern | X | N | | |
| | <i>Draba reptans</i> (Lam.) Fern. | Whitlow-grass, Carolina | X | N | T | |
| | <i>Erophila verna</i> (L.) Besser [Draba ...] | Whitlow-grass, Vernal | X | A | | |
| | <i>Epilobium hirsutum</i> L. | Willow-herb, Hairy | X? | A | | X |
| | <i>Epilobium coloratum</i> Biehler | Willow-herb, Purple-leaved | X | N | | |
| | <i>Epilobium parviflorum</i> Schreb. | Willow-herb, Sm.-flow. Hairy | X? | A | | X |
| | <i>Oxalis stricta</i> L. | Wood-sorrel, Common yellow | X? | N | | |
| | <i>Oxalis dillenii</i> Jacq. | Wood-sorrel, Southern Yellow | X | N | | |
| | <i>Dioscorea villosa</i> L. | Yam, Wild | X | N | | |
| | <i>Achillea millefolium</i> L. | Yarrow | X | A | | |
| | <i>Yucca filamentosa</i> L. | Yucca | X | A | | |
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|--|--|--------------------------|------|---|--|---|
| | <i>Malus pumila</i> Mill. [<i>Pyrus malus</i>] | Apple, Common | X | A | | |
| | <i>Fraxinus nigra</i> Marshall | Ash, Black | X | N | | |
| | <i>Fraxinus pennsylvanica</i> Marshall | Ash, Red and Green | X | N | | |
| | <i>Fraxinus americana</i> L. | Ash, White | X | N | | |
| | <i>Populus grandidentata</i> Michx. | Aspen, Bigtooth | X | N | | |
| | <i>Populus tremuloides</i> Michaux | Aspen, Quaking | X | N | | |
| | <i>Elaeagnus umbellata</i> Thunb. | Autumn-olive | X | A | | X |
| | <i>Tilia americana</i> L. | Basswood | X | N | | |
| | <i>Betula pendula</i> Roth ? | Birch, European White ? | X | A | | |
| | <i>Celastrus scandens</i> L. | Bittersweet, American | X | N | | |
| | <i>Viburnum prunifolium</i> L. | Black-haw | x et | N | | |
| | <i>Rubus occidentalis</i> L. | Bramble, Black Raspberry | X | N | | |

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|-----|---|----------------------------|-------|--------|--------|----------|
| | <i>Rubus allegheniensis</i> Porter. | Bramble, Common Blackberry | X | N | | |
| | <i>Rubus pubescens</i> ? | Bramble, Dwarf Dewberry | X | N | | |
| | <i>Rubus flagellaris</i> Willd. | Bramble, Northern Dewberry | X? | N | | |
| | <i>Rhamnus cathartica</i> L. | Buckthorn, European | X | A | | X |
| | <i>Rhamnus frangula</i> L. | Buckthorn, Glossy | X | A | | X |
| | <i>Catalpa speciosa</i> (Warder) Engelm. | Catalpa, Northern | X | Z | | |
| | <i>Prunus mahaleb</i> L. | Cherry, Mahaleb | X | A | | |
| | <i>Prunus pensylvanica</i> L.f. | Cherry, Pin | X?? | N | | |
| | <i>Prunus avium</i> L. | Cherry, Sweet | X? | A | | |
| | <i>Prunus serotina</i> Ehrh. | Cherry, Wild Black | X | N | | |
| | <i>Prunus virginiana</i> L. | Choke Cherry | X | N | | |
| | <i>Cotoneaster</i> sp, <i>divaricatus</i> ? | <i>Cotoneaster</i> sp | X | A | | |
| | <i>Populus deltoides</i> Marsh | Cottonwood | X | N | | |
| | <i>Parthenocissus vitacea</i> (Knerr.) A.Hitch.[P.inserta] | Creeper, Thicket | X | N | | |
| | <i>Parthenocissus quinquefolia</i> (L) Planch. | Creeper, Virginia | X | N | | |
| | <i>Ribes americanum</i> Mill. | Currant, American Black | X | N | | |
| | <i>Cornus alternifolia</i> L.f. | Dogwood, Alternate-leaved | X | N | | |
| | <i>Cornus florida</i> L. | Dogwood, Flowering | x et | N | | |
| | <i>Cornus racemosa</i> Lam. | Dogwood, Gray (Panicked) | X? | N | | |
| | <i>Cornus serica</i> L. [stolonifera] | Dogwood, Red-Osier | X | N | | |
| | <i>Cornus drummondii</i> C.A.Meyer | Dogwood, Rough-leaved | X | N | | |
| | <i>Cornus amomum</i> Mill. | Dogwood, Silky | X | N | | |
| | <i>Sambucus canadensis</i> L. | Elderberry or Common Elder | X | N | | |
| | <i>Ulmus rubra</i> Muhl. | Elm, Red (Slippery) | X | N | | |
| | <i>Ulmus pumila</i> L. | Elm, Siberian | X? | A | | X |
| | <i>Ulmus americana</i> L. | Elm, White (American) | X | N | | |
| | <i>Ribes cynosbati</i> L. | Gooseberry, Prickly | X | N | | |
| | <i>Vitis riparia</i> Michx. | Grape, Riverbank | X | N | | |
| | <i>Vitis aestivalis</i> Michx. | Grape, Summer | X | N | | |
| | <i>Smilax hispida</i> Muhl. | Greenbrier, Bristly | X | N | | |
| | <i>Celtis occidentalis</i> L. | Hackberry | X | N | | |
| | <i>Celtis tenuifolia</i> Nutt. | Hackberry, Dwarf | o dnr | N | | was P |
| | <i>Corylus americana</i> Walt. | Hazel, American | X | N | | |
| | <i>Carya ovata</i> (Mill.) K.Koch | Hickory, Shagbark | x et | N | | |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--|------------------------------|------|--------|--------|----------|
| | <i>Carya ovalis</i> (Wang) Sarg. | Hickory, Sweet Pignut | X | N | | |
| | <i>Gleditsia triacanthos</i> L. | Honey-locust | X | N | | |
| | <i>Lonicera maackii</i> (Rupr.) Maxim. | Honeysuckle, Amur | X | A | | X |
| | <i>Lonicera japonica</i> Thunb. | Honeysuckle, Japanese | X | A | | X |
| | <i>Lonicera morrowii</i> A.Gray | Honeysuckle, Morrow | X | A | | X |
| | <i>Lonicera tatarica</i> L. | Honeysuckle, Tartarian | X | A | | X |
| | <i>Ostrya virginiana</i> (Mill.) K.Koch | Hop-Hornbeam | X | N | | |
| | <i>Toxicodendron radicans</i> (L) Ktze. | Ivy, Poison | X | N | | |
| | <i>Robinia pseudoacacia</i> L. | Locust, Black | X | Z | | |
| | <i>Acer negundo</i> L. | Maple, Ash-leaved(Box-elder) | X | N | | |
| | <i>Acer rubrum</i> L. | Maple, Red | X | N | | |
| | <i>Acer saccharinum</i> L. | Maple, Silver | X | N | | |
| | <i>Menispermum canadense</i> L. | Moonseed | X | N | | |
| | <i>Morus rubra</i> L. | Mulberry, Red | X | N | | |
| | <i>Morus alba</i> L. | Mulberry, White | X | A | | |
| | <i>Quercus velutina</i> Lam. | Oak, Black | X | N | | |
| | <i>Quercus muhlenbergii</i> Engelm. | Oak, Chinquapin | X | N | | |
| | <i>Quercus palustris</i> Muenchh. | Oak, Pin | x et | N | | |
| | <i>Quercus alba</i> L. | Oak, White | X? | N | | |
| | <i>Pinus sylvestris</i> L. | Pine, Scotch | X | E | | |
| | <i>Ligustrum vulgare</i> L. | Privet, Common | X | A | | X |
| | <i>Cercis canadensis</i> L. | Redbud | X | N | | |
| | <i>Juniperus virginiana</i> L. | Red-cedar, Eastern | X | N | | |
| | <i>Rosa setigera</i> Michx. | Rose, Climbing Prairie | X | N | | |
| | <i>Rosa canina</i> L. | Rose, Dog | X | A | | X |
| | <i>Rosa multiflora</i> Thunb. | Rose, Multiflora | X | A | | X |
| | <i>Rosa palustris</i> Marsh. | Rose, Swamp | X? | N | | |
| | <i>Elaeagnus angustifolia</i> L. | Russian-olive | X | A | | X |
| | <i>Sassafras albidum</i> (Nutt.) Nees | Sassafras | X | N | | |
| | <i>Lindera benzoin</i> (L.) Blume | Spicebush | X | N | | |
| | <i>Picea</i> | Spruce, seedlings | X | E | | |
| | <i>Rhus glabra</i> L. | Sumac, Smooth | X | N | | |
| | <i>Rhus typhina</i> L. [R. hirta] | Sumac, Staghorn | X | N | | |
| | <i>Platanus occidentalis</i> L. | Sycamore | X | N | | |
| | <i>Ailanthus altissima</i> (Mill.) Swingle | Tree-of-Heaven | X | A | | X |

| Cod | SciName | Common Name | CQR | Origin | Listed | Invasive |
|-----|--------------------------------------|-------------------------------------|------|--------|--------|----------|
| | Viburnum sp. | unk Viburnum | X | | | |
| | unk, shrub by road, SE sect. | unk, fine downy cluster, alt,3 vein | X | | | |
| | Viburnum opulus L. | Viburnum, Euro. Cranberry | X | A | | |
| | Viburnum acerifolium L. | Viburnum, Maple-leaved | x et | N | | |
| | Viburnum lentago L. | Viburnum, Nannyberry | X | N | | |
| | Euonymous alatus (Thunb.) Sieb. | Wahoo, Winged (burning bush) | X | A | | X |
| | Juglans nigra L. | Walnut, Black | X | N | | |
| | Salix nigra Marsh | Willow, Black | X | N | | |
| | Salix eriocephala Michx. (S. rigida) | Willow, Heart-leaved | X | N | | |
| | Salix amygdaloides Anders. | Willow, Peach-leaved | X | N | | |
| | Salix discolor Muhl. | Willow, Pussy | X | N | | |
| | Salix exigua Nutt. (S. interior) | Willow, Sandbar | X | N | | |
| | | | 93 | | 1 | 14 |
| 437 | | | 437 | | 19 | 25 |

Legend for Plant List

| Code | Listed | Origin | Abundance/Distribution | Description of Code |
|------|--------|--------|------------------------|---|
| L V | | | | Lower Vascular Plant |
| P | | | | Herbaceous |
| T | | | | Woody Plant |
| | E | | | Endangered on State List |
| | P | | | Potentially Threatened on State List |
| | T | | | Threatened on State List |
| | | A | | Alien to Area and Country |
| | | N | | Native to Area, Indigenous |
| | | Z | | Naturalized from other part of country |
| | | | ** bl | found by J. Blakeman |
| | | | ** dnr | found by ODNR personnel |
| | | | ** et | found by Envirotech Consultants |
| | | | ** JB | found by J. Bissell |
| | | | ** jm | found by John Mack |
| | | | ** LT | found by L. Terveen |
| | | | A L | Abundant & Local |
| | | | A M | Abundant & Moderately Distributed |
| | | | A W | Abundant & Widespread |
| | | | ark | planted by J. Blakeman in 'ark' prairie |
| | | | C L | Common & Local |
| | | | C M | Common & Moderately Distributed |
| | | | C W | Common & Widespread |
| | | | N | Unknown Abundance or Distribution |
| | | | o | old record, not found recently |
| | | | pl | planted, usually leftover landscaping |
| | | | R L | Rare & Local |
| | | | R M | Rare and Moderately Distributed |
| | | | R W | Rare and Widespread |
| | | | re | restoration planting species |
| | | | U L | Uncommon & Local |
| | | | U M | Uncommon & Moderately Distributed |
| | | | U W | Uncommon & Widespread |
| | | | X | Present |

| Rare Plants of Castalia Quarry Reserve | | | | |
|--|------------------------------------|---------------------------------|---------------|-------------|
| Map No. | Common Name | Scientific Name | Former Status | 2011 Status |
| 1 | Crawe's sedge | <i>Carex crawei</i> | P | |
| 2 | Little Green Sedge | <i>Carex viridula</i> | P | P |
| 3 | Northern Blue-eyed-grass | <i>Sisyrinchium montanum</i> | E | T |
| 4 | Hairy Rock-cress | <i>Arabis hirsuta</i> | P | P |
| 5 | Carolina Whitlow-wort | <i>Draba reptans</i> | T | T |
| 6 | Prickly pear Cactus | <i>Opuntia humifusa</i> | P | P |
| 7 | Narrow-leaved Summer Bluets | <i>Hedyotis nigricans</i> | P | P |
| 8 | Ohio Goldenrod | <i>Solidago ohioensis</i> | P | |
| 9 | Balsam Ragwort | <i>Senecio paupurculus</i> | T | |
| 10 | Dwarf Hackberry | <i>Celtis tenuifolia</i> | P | |
| 11 | Twig-rush | <i>Cladium mariscoides</i> | P | |
| 12 | Lindheimer's Panic-grass | <i>Panicum lindheimeri</i> | E | T |
| 13 | Philadelphia Panic-grass | <i>Panicum philadelphicum</i> | T | E |
| 14 | Dropseed Grass | <i>Sporobolus cryptandrus</i> | P | |
| 15 | Rush | <i>Juncus alpinoarticulatus</i> | P | P |
| 16 | Great plains Ladies-tresses Orchid | <i>Spiranthes magnicamporum</i> | P | P |
| 17 | Prairie Thimbleweed | <i>Anemone cylindrica</i> | T | T |
| 18 | Eastern Fringed Gentian | <i>Gentianopsis crinita</i> | P | P |
| 19 | Great Lakes Goldenrod | <i>Euthamia remota</i> | T | T |

Key

P Potentially threatened

T Threatened

E Endangered



Other Vertebrates of Castalia Quarry thru 2011

Thursday, March 01, 2012

| Group | Common Name | CQR |
|-------|-----------------------------|----------|
| A | Frog, Green | common |
| | Frog, W. Chorus | common |
| | Salamander, Tiger | uncommon |
| | Spring Peeper | common |
| | Toad, American | common |
| | | 5 |
| M | Bat, Eastern Pipistrel | rare |
| | Bat, Little Brown? | unk |
| | Bat, possibly Red | rare |
| | Bat, Small-footed | rare |
| | Chipmunk, Eastern | common |
| | Deer, White-tail | common |
| | Fox, Red | uncommon |
| | Mouse, White-footed or Deer | common |
| | Opossum, Virginia | common |
| | Rabbit, Eastern Cottontail | common |
| | Raccoon | common |
| | Squirrel, Fox | common |
| | Squirrel, Red | common |
| | Woodchuck | common |
| | | 14 |
| R | Skink, Five-lined | unk |
| | Snake, Brown | unk |
| | Snake, Eastern Milk | unk |
| | Snake, Garter | common |
| | | 4 |
| | 23 | 23 |



Butterflies of Castalia Quarry thru 2011

Thursday, March 01, 2012

| Common Name | CQR |
|-------------------------------|-----|
| Azure, Spring | X |
| Azure, Summer | X |
| Blue, Eastern Tailed | X |
| Buckeye | X |
| Cabbage White | X |
| Elfin, Henry's | X |
| Fritillary, Great Spangled | X |
| Fritillary, Meadow | X |
| Fritillary, Variegated | X |
| Hackberry | X |
| Hairstreak, Acadian | X |
| Hairstreak, Banded | X |
| Hairstreak, Striped | X |
| Harvester | X |
| Lady, American Painted | X |
| Lady, Painted | X |
| Monarch | X |
| Mourning Cloak | X |
| Pearl Crescent | X |
| Pearly Eye, Northern | X |
| Polygonia, Comma | X |
| Polygonia, Question Mark | X |
| Red Admiral | X |
| Red-spotted Purple | X |
| Satyr, Little Wood | X |
| Skipper, Common Sooty-wing | X |
| Skipper, European | X |
| Skipper, Least | X |
| Skipper, Northern Broken-dash | X |
| Skipper, Silver-spotted | X |
| Skipper, Southern Golden | X |
| Snout | X |
| Sulfur, Clouded | X |

| Common Name | CQR |
|--------------------------|-----|
| Sulfur, Orange | X |
| Swallowtail, Black | X |
| Swallowtail, Giant | X |
| Swallowtail, Spicebush | X |
| Swallowtail, Tiger | X |
| Tawny Emperor | X |
| Viceroy | X |
| Wood Nymph | X |
| Dusky Wing, Juvenal's | X |
| Skipper, Peck's | X |
| Skipper, Fiery | X |
| Skipper, Tawny-edged | X |
| Skipper, Cross-line | X |
| Skipper, Dun | X |
| Sulfur, Little | X |
| Hairstreak, Gray | X |
| Skipper, Northern Golden | X |



Birds of Castalia Quarry MetroPark thru 2016

Tuesday, February 07, 2017

| Species | CQR |
|--------------------------|----------------|
| Canada Goose | Resident |
| Trumpeter Swan | Transient |
| Wood Duck | Resident |
| Mallard Duck | Resident |
| Green-winged Teal | Spring Migrant |
| Pied-billed Grebe | Migrant |
| Double-crested Cormorant | Transient |
| Great Blue Heron | Resident |
| Great Egret | Transient |
| Green Heron | Resident |
| Turkey Vulture | Resident |
| Osprey | Transient |
| Bald Eagle | Transient |
| Northern Harrier | Transient |
| Sharp-shinned Hawk | Transient |
| Cooper's Hawk | Resident |
| Red Shouldered Hawk | Transient |
| Broad-winged Hawk | Migrant |
| Red-tailed Hawk | Resident |
| American Kestrel | Transient |
| Sandhill Crane | Rare Transient |
| Killdeer | Resident |
| Greater Yellowlegs | Migrant |
| Lesser Yellowlegs | Migrant |
| Solitary Sandpiper | Migrant |
| Spotted Sandpiper | Resident? |
| Sanderling | Migrant |
| American Woodcock | Resident |
| Bonaparte's Gull | Migrant |
| Ring-billed Gull | Transient |
| Herring Gull | Transient |
| Rock Pigeon | Transient |
| Mourning Dove | Resident |

| Species | CQR |
|---------------------------|-----------------|
| Black-billed Cuckoo | Migrant |
| Yellow-billed Cuckoo | Resident |
| Screech Owl | Resident |
| Nighthawk | Migrant |
| Chimney Swift | Resident |
| Ruby-throated Hummingbird | Resident |
| Belted Kingfisher | Resident |
| Red-bellied Woodpecker | Resident |
| Yellow-bellied Sapsucker | Migrant |
| Downy Woodpecker | Resident |
| Hairy Woodpecker | Resident |
| Yellow-shafted Flicker | Resident |
| Pileated Woodpecker | Flyover |
| Eastern Wood Pewee | Resident |
| Acadian Flycatcher | Resident |
| Alder Flycatcher | Summer Visitor |
| Willow Flycatcher | Summer Resident |
| Least Flycatcher | Migrant |
| Eastern Phoebe | Resident |
| Great Crested Flycatcher | Resident |
| Eastern Kingbird | Resident |
| White-eyed Vireo | Resident |
| Yellow Throated Vireo | Resident |
| Blue-headed Vireo | Migrant |
| Warbling Vireo | Resident |
| Red-eyed Vireo | Resident |
| Blue Jay | Resident |
| American Crow | Resident |
| Horned Lark | Transient |
| Purple Martin | Resident |
| Tree Swallow | Transient |
| Rough-winged Swallow | Resident |
| Bank Swallow | Transient |
| Cliff Swallow | Transient |
| Barn Swallow | Resident |

| Species | CQR |
|------------------------------|----------------|
| Black-capped Chickadee | Resident |
| Tufted Titmouse | Resident |
| Red-breasted Nuthatch | Winter Visitor |
| White-breasted Nuthatch | Resident |
| Brown Creeper | Migrant |
| Carolina Wren | Resident |
| House Wren | Resident |
| Winter Wren | Winter Visitor |
| Golden-crowned Kinglet | Migrant |
| Ruby Crowned Kinglet | Migrant |
| Blue-gray Gnatcatcher | Resident |
| Eastern Bluebird | Resident |
| Veery | Migrant |
| Gray-cheeked Thrush | Migrant |
| Swainson's Thrush | Migrant |
| Hermit Thrush | Migrant |
| Wood Thrush | Resident |
| American Robin | Resident |
| Gray Catbird | Resident |
| Northern Mockingbird | Transient |
| Brown Thrasher | Resident |
| Starling | Resident |
| Cedar waxwing | Transient |
| Tennessee Warbler | Migrant |
| Nashville Warbler | Migrant |
| Yellow Warbler | Resident |
| Chestnut-sided Warbler | Resident |
| Magnolia Warbler | Migrant |
| Black-throated Blue Warbler | Migrant |
| Yellow-rumped Warbler | Migrant |
| Black-throated Green Warbler | Migrant |
| Blackburnian Warbler | Migrant |
| Pine Warbler | Migrant |
| Palm Warbler | Migrant |
| Black and White Warbler | Migrant |

| Species | CQR |
|------------------------|-----------------|
| American Redstart | Resident |
| Ovenbird | Resident? |
| Common Yellowthroat | Resident |
| Hooded Warbler | Migrant |
| Wilson's Warbler | Migrant |
| Yellow-breasted Chat | Summer Resident |
| Scarlet Tanager | Summer Resident |
| Northern Cardinal | Resident |
| Rose-breasted Grosbeak | Summer Resident |
| Indigo Bunting | Summer Resident |
| Rufous Sided Towhee | Summer Resident |
| Tree Sparrow | Migrant |
| Chipping Sparrow | Summer Resident |
| Field Sparrow | Summer Resident |
| Savannah Sparrow | Migrant |
| Fox Sparrow | Migrant |
| Song Sparrow | Resident |
| Swamp Sparrow | Resident |
| White-throated Sparrow | Winter Visitor |
| White-crowned Sparrow | Winter Visitor |
| Dark-eyed Junco | Winter Visitor |
| Red-winged blackbird | Resident |
| Eastern Meadowlark | Resident |
| Rusty Blackbird | Migrant |
| Common Grackle | Resident |
| Brown-headed Cowbird | Resident |
| Orchard Oriole | Resident |
| Baltimore Oriole | Resident |
| Purple Finch | Migrant |
| House Finch | Resident |
| Common Redpoll | Winter Visitor |
| Pine Siskin | Winter Visitor |
| American Goldfinch | Resident |
| House Sparrow | Resident |