

## Cleveland Metroparks: Bioblitz at Acacia Reservation

September 7<sup>th</sup> 2013

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On September 7<sup>th</sup> 2013 staff from Cleveland Metroparks Division of Natural Resources and Outdoor Education conducted a public Bioblitz at Acacia Reservation. There were 28 public volunteers, and a dozen regional professionals and staff to perform the different surveys. In all, 7 different surveys were conducted to capture various the taxa present throughout the range of habitats found at Acacia. This Bioblitz was performed as a capture/release, therefore any insects or animals collected for the survey were released after they were counted, identified and measured. Below is a brief description including the results of each survey.

- 1) Plant Survey (2):** Led by Sarah Eysenbach (Vegetation Research Coordinator, Cleveland Metroparks) and second group Led by Brian Gilbert (CM Volunteer and Friends of Euclid Creek).



Previous plant surveys at Acacia created a list of ~130 different species of trees, shrubs and herbs. For the fall Bioblitz the first team was able to identify 39 different species of grasses and forbs. Their list mostly included previously recorded species but they also added 5 new species to the list. The second team was able to identify 58 total species and also contributed an additional 5 species to the total plant species list for Acacia. The species identified include

- 2) **Fish Survey:** Led by Mike Durkalec (Aquatic Biologist: Cleveland Metroparks), this group of volunteers surveyed the large pond in the northwest corner of the property.



The lake is 3.8 acres (2.9 acres on CM property) with a max depth of about 9 feet. The southern half is deepest, while the northern half is very shallow and filled in due to inputs from the feeder creek. The lake is overall eutrophic with decent fish habitat. The pond is already quite popular for recreational angling, although the pond fishery would be overall characterized as fair to middling quality.

Fish Species	Count
Large mouth bass	97
Blue gill	214
carp	33
goldfish	8

Fish diversity is low, with only four species found (although there are many fish in the lake). The largemouth bass and bluegill numbers are good, but the fish run small to medium in size. Larger age classes of the valuable sportfish are missing most likely because of harvest and/or slow growth rates/stunting (winter data analysis will tell more regarding that). Unfortunately, the lake has large numbers of non-native common carp and modest numbers of goldfish. These species tend to root up the mud while feeding, thereby increasing turbidity and reducing beneficial submersed macrophyte growth, which is part of a healthy pond ecosystem, which

indeed was the case here. Removal of these species, once established, is extremely difficult short of draining or using Rotenone (fish poison) and starting over.

- 3) **Ant Survey:** Led by Dr. Kal Ivanov (Cleveland State University), and Dr. Ralph Gibson (Cleveland State University) this group sampled ant communities.



While this survey did not yield any new information, Kal conducted an ant survey at Acacia in the spring that identified 26 different species of ants on the property. This number reflects approximately ~20% of the total number of species of ants for the state of Ohio (133 species total). Most of the ants identified have a widespread and abundant distribution throughout the state. However a few are only found in the glaciated areas of Ohio and have a limited distribution. There was one species of ant that was identified for the first time in Cuyahoga County. Previous distribution records for this ant are known only from a single location in Champaign County where it is found in fen and bog habitat with sedges and Sphagnum moss.

- 4) **Pollinator Survey:** Led by Dr. Randy Mitchell (University of Akron), this group conducted their sample along the different former golf course areas (greens, fairways, rough, adjacent wooded areas).

The limited flowering vegetation present resulted in limited presence of pollinator species. The type of insects identified at Acacia is comparable to the types of pollinators that are found in urban vacant lots. The large former turf areas at Acacia are still dominated grasses, which significantly limits the food source necessary to support pollinator populations.

- 5) **Worm Survey:** Led by Dr. Nidia Arguedas (Cleveland Metroparks) and Dr. Mike Walton (Cleveland State University), this looked for the presence of worms across the different former golf course areas (greens, fairways, rough, adjacent wooded areas)



There were no worms found at all on the former greens of the golf course. A few worms were sampled in the fairways and a few more worms collected in the rough. The most worms collected were sampled from the adjacent wooded areas. From this area, there 4-5 different European species of worms identified. The pattern of worm sampling does reflect the disturbance and land-use history of the former golf course. It is expected that the European species found in the adjacent wooded areas will likely colonize the remaining golf course with time.

- 6) **Bird Survey** : Led by volunteers from the Audubon Society, this group conducted a walking survey of the property and tallied a total species count.

Bird surveys have been periodically performed at Acacia since Cleveland Metroparks took possession earlier this year. At this one day Bioblitz, there were a total of 37 different species of birds identified. Of interest was an osprey which swooped down at the pond during the fish sampling and picked up a goldfish to eat. Along one of the shrub edges the group came across a flock of 50 chipping sparrows, most likely flocking together in preparation for migration. Other migrant songbirds included: mourning warbler, Wilson’s warbler, black-and-white warbler and three American redstarts.

Bird Species	Count
Canada Goose	30
Mallard	5
Great Blue Heron	1
Turkey Vulture	3
Osprey	1
Cooper's Hawk	1
Red-tailed Hawk	3
Killdeer	5
Mourning Dove	23
Chimney Swift	4
Ruby-throated Hummingbird	3
Belted Kingfisher	2
Red-headed Woodpecker	1
Red-bellied Woodpecker	2
Downy Woodpecker	1
Northern Flicker	2
Blue Jay	22
Barn Swallow	1
Black-capped Chickadee	2
Tufted Titmouse	1
White-breasted Nuthatch	3
House Wren	1
Eastern Bluebird	3



Bird Species	Count
American Robin	2
Gray Catbird	3
European Starling	1
Black-and-white Warbler	1
Mourning Warbler	1
American Redstart	2
Wilson's Warbler	1
Chipping Sparrow	50
Song Sparrow	1
Northern Cardinal	8
Common Grackle	x (present)
House Finch	2
American Goldfinch	11
House Sparrow	x (present)

- 7) **General Insect/Arachnid/Amphibian Survey:** Led by Tim Krynak (Cleveland Metroparks), this group collected various visual and sweep samples along the different former golf course areas.



With an eclectic group of participants and background experience, this group performed their taxa survey by recording any organism remaining.

Similar to the various other surveys, this group identified more organisms and greater species diversity in the former golf course “rough” habitat compared to the greens and fairways.

Moths and Butterflies: There were numerous moths and butterflies identified including various Skippers, Sulfurs, Cabbage White, Monarch, Alfalfa, Eastern tailed blue, Common Buckeye and Virginia Ctenucha.

Insects: There were several types including: damselflies and dragonflies (Green darner, 12 spotted dragonfly, Familiar bluet and Black saddlebags), wasps and bees (Thread-waisted Ammophila wasp, honeybee), Katydid (Black-legged meadow and Round-tipped cone head), European mantis, Carolina banded locust and of course...Japanese beetles.

Spiders: Various Argiope species (Banded, Black and Yellow garden spiders)

Amphibians: Bull frogs and American toads

Fungi: Hen of the Woods

- 8) Mammals:** Lead by Tim Krynak, (Cleveland Metroparks), this survey was performed at the same time as the insect/arachnid survey.

The mammals that were found at Acacia included: fox squirrels, chipmunks, white tailed deer, red squirrels and meadow voles. Previous work at Acacia has recorded the presence of coyotes on the property including a den near the maintenance building.