

GARRET MOUNTAIN BIOBLITZ

June 11 – June 12, 2021

Garret Mountain Reservation & Rifle Camp Park

Passaic County, New Jersey



Bioblitz Headquarters at the Boathouse

Report prepared by:

Vera Lazar
Friends of Garret Mountain Reservation
friendsofgarret@gmail.com
August 21, 2021



Sponsored by the
Passaic County Board of County Commissioners



BIOBLITZ

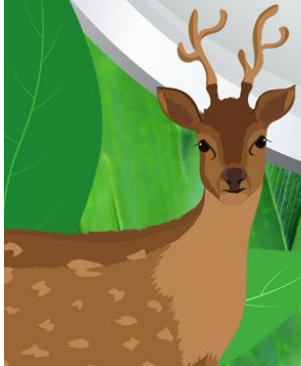
WITH FRIENDS OF GARRET MOUNTAIN RESERVATION

A BioBlitz is an event that focuses on finding and identifying as many species as possible in a specific area over a 24 hour period. At a BioBlitz, scientists, families, students, teachers, and other community members work together to get a snapshot of an area's biodiversity. We're inviting the community to help us by attending one of our expert led nature walks or events and by downloading the iNaturalist app to take pictures of the plants and animals you find around Garret Mountain Reservation and Rifle Camp Park.

GARRET MOUNTAIN RESERVATION | RIFLE CAMP PARK

Starts Friday, June 11 at 4 PM
through
Saturday, June 12 at 4 PM

REGISTER: [PASSAICCOUNTYREC.ORG](https://passaiccountyrec.org)



@passaiccountynj

Garret Mountain Bioblitz - June 11 – June 12, 2021

Location: Garret Mountain Reservation & Rifle Camp Park Passaic County, New Jersey

Summary

The Friends of Garret Mountain Reservation and Passaic County Parks & Recreation Dept. sponsored a Bioblitz at Garret Mountain Reservation and Rifle Camp Park. The event began at 4:00pm Friday June 11, 2021 and concluded at 4:00pm Saturday, June 12, 2021. This was a citizen-science effort to record as many species as possible at the two parks, in the designated time period. The iNaturalist app was used to collect and compile most of the data. Data on bird species was collected via eBird. There were a number of expert-led walks for the general public, as well as other educational and wildlife-themed activities. Activities were offered by Friends of Garret Mountain, Torrey Botanical Society, Montclair Bird Club, Lokai Rose, and the NJ Watershed Ambassador.

Goals

1. To Obtain data on all species in Garret Mountain Reservation and Rifle Camp Park. Data would be available to help with bird and wildlife habitat management, restoration plans, forestry, and environmental management plans for the parks.
2. To Provide an Ecological “snapshot” in time, which can be used for future comparisons.
3. To Identify “hot spots” and priority areas for protection.
4. To Educate the general public about the birds, wildlife, plant life, and ecological importance of Garret Mountain.
4. To Introduce and educate the public on the use of the iNaturalist app.

iNaturalist Project Page:

<https://www.inaturalist.org/projects/garret-mountain-reservation-rifle-camp-park-n-j-bioblitz-2021>

A total of 535 observations were made using the iNaturalist app. There were 207 different species recorded. Details can be found on the project page.

eBird Hotspot Page:

<https://ebird.org/hotspot/L209818/activity?yr=all&m>

A total of 51 Bird Species were recorded during the Bioblitz. Checklists can be found on the eBird Garret Mountain hotspot page.

Activities and Methods

- A. There were a number of guided walks, which were open to the general public:
1. Experts from Torrey Botanical Society led four Botany Walks on Saturday. Two of the walks took place at Garret Mountain and two were at Rifle Camp Park. Joseph Labriola (TBS / FoGMR) led the morning Garret Mountain walk around Barbour's Pond. Data from the walks was uploaded to iNaturalist.
 2. Sandy Sorkin (Montclair Bird Club) led two Bird Walks on Saturday morning, at Barbour's Pond. Data was uploaded to eBird.
 3. Fred Pfeifer (NABA / FoGMR) led a Butterfly Walk around Barbour's Pond on Saturday morning.
 4. Biologist Dianne Connor led a Nature Walk around Barbour's Pond on Friday evening.
 5. Vera Lazar (FoGMR) led a Nature walk at Rifle Camp Park on Saturday morning.
- B. Additional Studies:
1. On Friday night, Fred Pfeifer conducted a Sheet Lighting study at Garret Mountain, at a location south of the Boathouse.
 2. On Saturday morning, Donna Climent (NJ Watershed Ambassador) conducted a Macroinvertebrate Study at Slippery Rock Brook at Garret Mountain Reservation. Water samples were collected from the stream and field guides were used to identify the macroinvertebrates that were found.
- C. Other Activities:
1. Kerry Klug (Passaic County Parks & Recreation) provided information at the Bioblitz sign-in table at the Boathouse at Garret Mountain Reservation (Bioblitz Headquarters). Additional information was provided by members of FoGMR, Montclair Bird Club, and NABA.
 2. Alessia Eramo (FoGMR) offered instructional presentations on the use of the iNaturalist app, Friday afternoon and Saturday morning at the Boathouse
 3. Lokai Rose, a nonprofit organization, offered several educational, wildlife-themed displays and games at the Boathouse and surrounding area. Activities included: Creatures of the Night, Bioluminescent Scorpion Search, Butterfly Experience, Animal Habitat Display, and Scat Identification Game.
 4. Christine Toth (FoGMR) gave tours of the new Butterfly Garden (located near the Tower Picnic Area). The garden featured Black Swallowtail caterpillars on the Zizia. Master Gardener Kathy Sauerborn set up a butterfly display table including informational signs, brochures, and live caterpillars. She discussed topics including host plants and Monarch migration with visitors.
 5. An Astronomy Event had been scheduled for Rifle Camp Park, but was cancelled due to weather conditions.
- D. All activities and events were free and open to the public. The public was also invited to participate individually, by taking pictures of their observations and uploading to iNaturalist. All photos taken at the two parks, during the Bioblitz period, were automatically added to the project. Once uploaded, photos were available to be identified by scientists and other experts.

Public Outreach

One of the goals of the Bioblitz was to encourage public participation and to educate people about the birds, wildlife, plant life, and ecological importance of Garret Mountain. In the months preceding the Bioblitz, efforts were made to encourage public participation. A Bioblitz Flyer was created by Kerry Klug, Passaic County Recreation Program Coordinator. Announcements and flyers were distributed via email and posted to social media. Local schools, environmental organizations, and community groups were invited to participate. Letters were sent to teachers, principals, superintendents, and boards of education in Clifton, Paterson, Passaic, Woodland Park, Little Falls, Totowa, Wayne, and Montclair; and to professors and Science Departments at Passaic County Community College, William Paterson University, and Montclair State University.

Information and flyers were provided to environmental groups and posted on community bulletin boards. A Facebook page and event was created by Friends of Garret Mountain, and shared on social media. The event was advertised on the Passaic County Recreation Department web site, and information was sent to people who registered for previous events. Registration for the Bioblitz was handled by Passaic County Recreation Dept. The event was also advertised by Friends of Garret Mountain, and by participating groups Montclair Bird Club, Torrey Botanical Society, and Lokai Rose.

Passaic County Parks & Recreation Website: <https://passaiccountynj.myrec.com/info/default.aspx>

Friends of Garret Mountain Facebook Group: <https://www.facebook.com/groups/friendsofgarret>

Friends of Garret Mountain Bioblitz Page: <https://www.facebook.com/FoGMBioblitz>

Garret Mountain Bioblitz Facebook Event: <https://www.facebook.com/events/595287731432044>

Results and Discussion

Note: This is a general discussion of the overall results. It is recommended that further analysis be done, within and among the categories of data.

Plants - Members of the Torrey Botanical Society led four Botany Walks. Two walks were held at Garret Mountain and two at Rifle Camp Park. Data was uploaded to iNaturalist. A total number of 141 plant species were recorded, and 11 species of fungi & lichens. All data can be found on the iNaturalist project page:

<https://www.inaturalist.org/projects/garret-mountain-reservation-rifle-camp-park-n-j-bioblitz-2021>

Key Findings - A diversity of flora was found, especially along the ridgetop areas at Rifle Camp Park (traprock glade/outcrop habitat), and also along the wetlands, streams, and areas around Barbour's Pond at Garret Mountain Reservation.

Rock Spikemoss (*Sellaginella rupestris*) a plant listed as imperiled, was found to be growing along the ridgetop area at Rifle Camp. Prickly Pear Cactus (*Opuntia humifusa*) was also found to be growing in this general area. Both plants were found to be in close proximity of the Nature Center.

Joseph Labriola led a TBS botany walk at Garret Mountain in the area around Barbour's Pond. A Trip Report has been included in the Appendix. Native herbaceous wetland species, including Jack-in-the Pulpit (*Arisaema triphyllum*), Skunk Cabbage (*Symplocarpus foetidus*), and New York Fern (*Thelypteris noveboracensis*), were found in the forested wetlands immediately west of Barbour's Pond.

Several non-native invasive species were also seen, including Japanese Barberry, Japanese Stiltgrass, Garlic Mustard, Mile a Minute Vine, Japanese Honeysuckle, Porcelain Berry, and Water Chestnut.

A diverse tree canopy was found in both parks. However the low shrub and herb layers have essentially disappeared due to heavy deer herbivory.



Chestnut Oak

Birds - On Friday afternoon and Saturday, expert birders from Montclair Bird Club, Bergen County Audubon Society, NJ Audubon, Friends of Garret Mountain, and others, made observations throughout the two parks. Checklists were entered on eBird.

Sandy Sorkin (MBC) led two Bird Walks on Saturday at Barbour's Pond – The first walk started at 6:18am and the other at 10:02am. Both walks were open to the general public. Bird lists for these walks can be found in the Appendix.

A total of 51 bird species were observed. This includes observations made on the two bird walks, plus other observers' lists from the Bioblitz period.

Checklists can be found at: <https://ebird.org/hotspot/L209818/activity?yr=all&m>

Key Findings - A number of species were found to be breeding in the Parks, including Brown Thrasher, Wood Thrush, Baltimore Oriole, Hairy Woodpecker, American Robin, Northern Flicker, Warbling Vireo, Mourning Dove, and Canada Goose.

Species of Special Concern - Brown Thrasher, Wood Thrush, Great Blue Heron, and Spotted Sandpiper are all listed as Species of Special Concern (breeding status). Two of these species, Brown Thrasher and Wood Thrush, were found to be breeding in the parks. Status of Great Blue Heron and Spotted Sandpiper are unknown.

At least three bird species - Eastern Towhee, Chimney Swift, and Wood Thrush - are listed as *New Jersey Priority Species of Greatest Conservation Need*.

It is highly recommended that a comprehensive breeding bird study be done for both parks.

Note: Since the event took place in mid-June, migratory birds that utilize the parks during the Spring migration were not present during the Bioblitz.



Warbling Vireo (Photo credit: Sandy Sorkin)

Insects - Butterflies seen included Question Mark, Cabbage White, Least Skipper, and Black Swallowtail caterpillar. Blue Dasher dragonfly was seen. Damselflies included Ebony Jewelwing and Eastern Forktail.

Various beetles were seen, including Red Milkweed Beetle. Water Striders were found in Slippery Rock Brook. Unfortunately, due to the cloudy weather, a very limited number of butterfly species were found. Butterflies and Dragonflies are “solar-powered,” and without ample sunshine, there were very few observations. For this reason, it is highly recommended to do a follow up study on a sunny day.

Note: For comparison, on the day after the Bioblitz (which was a sunny day), 14 species of dragonflies and damselflies were seen at the pond at Rifle Camp Park.

On Friday evening, a Sheet Lighting study was conducted by Fred Pfeifer. Unfortunately, the weather conditions (light rain and drizzle) were not favorable for this either. Still, a variety of moths, beetles, and other insects were seen. The highlight was a male Glow-worm. Data can be found on the Bioblitz project page. It is recommended that a follow up study be done on a clear night.



*Question Mark butterfly
(Photo credit: Ann Schnakenberg)*



*Black Swallowtail caterpillar on Zizia
(Photo credit: Christine Toth)*

Stream Macroinvertebrates –

Presentation by Donna Climent (NJ Watershed Ambassador WMA 4) - “Bugs in the Brook”

Water samples were taken from the Slippery Rock Brook, and Field Guides were used to identify the living creatures (macroinvertebrates) that were found. The macroinvertebrates were kept in water, for observation and identification, and returned to the stream unharmed.

Results / Key Findings - (provided by Donna Climent)

“Macroinvertebrates are indicators of stream health and water quality based on their different pollution tolerance levels. We found three organisms under the pollution intolerant category (mayfly, water penny, caddisfly), six organisms under the pollution sensitive category (crayfish, net-spinning caddisfly, sowbug, scud, damselfly, crane fly) and three organisms under the pollution tolerant category (black fly, midge fly, aquatic worm). Based on the great biodiversity of macroinvertebrates found in Slippery Rock Brook, we can conclude that the stream is healthy!”



Collecting Macros from Slippery Rock Brook

Reptiles & Amphibians –

No specific study was conducted. Bullfrogs were observed in Barbour’s Pond and in the Pond at Rifle Camp Park. A Red-eared Slider was seen in Barbour’s Pond. A very limited number of herps were observed, as they also are more active in sunny weather. Additional studies are recommended.

Note: The NJ Herp Atlas Project had included observations of Green Frog, Bullfrog, Redbelly Turtle, Eastern Painted Turtle, Eastern Mud Turtle, and Snapping Turtle for Barbour’s Pond.

Mammals –

No specific study was conducted. White-tailed Deer, Muskrat, Eastern Chipmunk, and Groundhog were observed. Additional Studies are recommended.

Goals (Discussion)

1. To Obtain data on all species in Garret Mountain Reservation and Rifle Camp Park. Data would then be available to help with bird and wildlife habitat management, restoration plans, forestry, and environmental management plans for the parks.

Valuable information was collected, including the observation of two breeding bird “species of special concern” and the documentation of a rare plant species. The data which was collected points to the need for additional ecological studies in all categories, including (but not limited to) breeding birds and vulnerable plants which may be present in the parks and the surrounding areas.

Limiting factors include:

- Only certain areas of the parks were studied.
- The cloud cover greatly limited observations of butterflies and other species.
- Some categories of species (such as fish or other pond organisms) were not included in the study.

2. To Provide an Ecological “snapshot” in time, which can be used for future comparisons.

The 2021 Bioblitz can serve as a biological benchmark to monitor changes in plants and animals presence as they adapt to the future changing climate on the region, including Garret Mountain. Various questions and scenarios could be considered. For example, will a warmer climate lead to the presence of more “southern” invasive plant species? Likewise, how would a projected warmer spring and summer affect bird migration and breeding?

3. To Identify “hot spots” and priority areas for protection.

The data suggest that there are key areas in need of protection and further studies. These areas include the traprock glade/outcrop areas of both parks, Barbour’s Pond and the surrounding wetlands, the pond at Rifle Camp Park, Slippery Rock Brook, and potential vernal pools in both parks. There were also areas of Common Milkweed in both parks, which should be protected.

4. To Educate the public about the birds, wildlife, plant life, and ecological importance of Garret Mountain.

There were a variety of expert-led walks and presentations, providing many opportunities to engage and educate the public. Lokai Rose offered a number of interesting wildlife displays and wildlife-themed educational games for both children and adults.

One problem encountered was that many students (and others) were unable to participate due to lack of transportation.

5. To Introduce and educate the public on the use of the iNaturalist app.

Presentations and demos on the use of iNaturalist were given at the park. Throughout the event, people were available to assist and answer questions. Tutorials and instructional videos were also shared via email and social media.

Recommendations

It is highly recommended that additional ecological studies be done at Garret Mountain Reservation and Rifle Camp Park, and the surrounding areas.

1. Comprehensive ecological studies should be held in the parks, including:
 - Breeding Birds
 - Butterflies, Dragonflies, and Damselflies
 - Flowering Plants/Phenology
 - Traprock Glade Habitat
 - Vernal Pools
 - Flora and Fauna within the Deer Exclosure
2. Surveys should also be done for species, including:
 - Fish and aquatic pond organisms
 - Reptiles and amphibians
 - Mammals
 - Bats
 - Migratory Birds
3. Given the limited time and resources, it was difficult to have complete coverage of both parks. One possibility for the future is to hold a separate Bioblitz event for each park. That would allow more thorough coverage for each park.
4. There were also a number of overlapping and/or conflicting times for walks, making it difficult for people to participate in all activities. This was especially an issue when walks were held in different locations. Holding a separate Bioblitz for each park would solve this issue too.
5. Field trips could be arranged for local schools (or other transportation made available) to enable students to more easily participate in such events.
6. Habitat Protection and Enhancement:
 - There were few places for turtles to bask. Installation of logs at the south end of Barbour's Pond, and at the pond at Rifle Camp, would provide a place for turtles to bask.
 - A few stands of Milkweed were found to be growing in the parks. These areas should be protected with "No Mow" signs. Additional Milkweed and pollinator plants should be planted as well.
 - Efforts should be made to remove invasive plants, such as Mile a Minute and Japanese Stiltgrass, and restore the native flora where possible.
 - Attempts should be made to restore the forest understory in both parks. However, protection from browsing deer would be essential.



Common Milkweed (Photo credit: Vera Lazar)

Friends of Garret Mountain Reservation is a 501(c)(3) nonprofit organization
For further information, please contact:
friendsofgarret@gmail.com

APPENDIX

iNaturalist Project Page

<https://www.inaturalist.org/projects/garret-mountain-reservation-rifle-camp-park-n-j-bioblitz-2021>

About Leave 27

2021 Bioblitz! record all species observed within Garret Mountain Reservation and Rifle Camp Park starting on Friday June 11 at 4 pm through Saturday June 12 at 4 pm

[Read More >](#) [Your Membership](#)

[Project Journal](#)

Garret Mountain Reservation, Rifle Camp Park N.J. Bio...
JUN 11, 2021 - JUN 12, 2021

Overview **535** OBSERVATIONS **207** SPECIES **76** IDENTIFIERS **25** OBSERVERS [Stats](#)

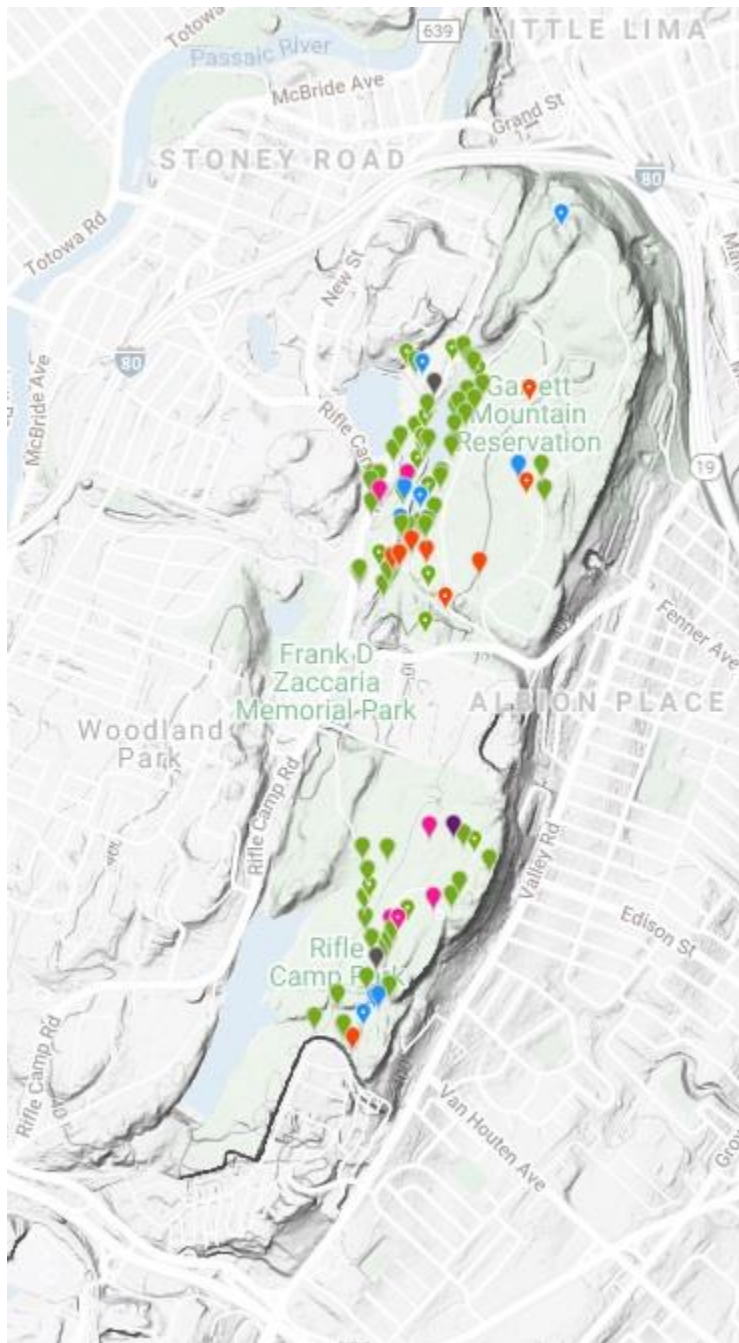
Stats

- 535 Observations**
 - Research Grade
 - Needs ID
 - Casual
- 207 Species**
 - Unknown
 - Protozoans
 - Fungi
 - Plants
 - Chromista
 - Mollusks
 - Insects
 - Arachnids
 - Ray-Finned F...
 - Amphibians
 - Reptiles
 - Birds
 - Mammals
 - Other Animals
- 696 Identifications**
 - Improving
 - Supporting
 - Leading
 - Maverick

Most Comments and Faves

- White Mulberry** *Morus alba* 1 2 months ago
- Blue Sedge** *Carex glaucoidea* 2 months ago
- Virginia Dwarf dandelion** *Krigia virginica* 2 months ago
- Genus Phengodes** 2 2 months ago

Map of Observations – From iNaturalist Project Page



eBird Garret Mountain Hotspot Page: <https://ebird.org/hotspot/L209818/>

(Compiled from eBird data: 51 bird species observed)

| |
|------------------------------|
| American Goldfinch |
| American Robin |
| Baltimore Oriole |
| Barn Swallow |
| Black-capped Chickadee |
| Blue Jay |
| Blue-gray Gnatcatcher |
| Brown Thrasher |
| Brown-headed Cowbird |
| Canada Goose |
| Carolina Wren |
| Cedar Waxwing |
| Chimney Swift |
| Chipping Sparrow |
| Common Grackle |
| Common Raven |
| Downy Woodpecker |
| Eastern Kingbird |
| Eastern Towhee |
| Eastern Wood-Pewee |
| European Starling |
| Fish Crow |
| Gray Catbird |
| Great Blue Heron (Blue form) |
| Great Crested Flycatcher |
| Great Egret |
| Hairy Woodpecker |

| |
|-----------------------------------|
| House Finch |
| House Sparrow |
| House Wren |
| Killdeer |
| Mallard |
| Mourning Dove |
| Northern Cardinal |
| Northern Flicker (Yellow-shafted) |
| Northern Mockingbird |
| Northern Rough-winged Swallow |
| Pileated Woodpecker |
| Red-bellied Woodpecker |
| Red-eyed Vireo |
| Red-tailed Hawk |
| Red-winged Blackbird |
| Song Sparrow |
| Spotted Sandpiper |
| Tree Swallow |
| Tufted Titmouse |
| Warbling Vireo |
| White-breasted Nuthatch |
| White-throated Sparrow |
| Wood Duck |
| Wood Thrush |

eBird Garret Mountain Checklists: <https://ebird.org/hotspot/L209818/activity?yr=all&m>

| | | |
|------------------------------------|---------------------|----|
| Alex Bernzweig | 📅 12 Jun 2021 11:17 | 15 |
| Benita Fishbein | 📅 12 Jun 2021 10:02 | 26 |
| Sanford Sorkin | 📅 12 Jun 2021 10:02 | 26 |
| Jack Trojan | 📅 12 Jun 2021 09:10 | 32 |
| Carole Hughes | 📅 12 Jun 2021 08:40 | 34 |
| Benita Fishbein | 📅 12 Jun 2021 07:03 | 25 |
| Christopher Takacs | 📅 12 Jun 2021 06:50 | 37 |
| Sanford Sorkin | 📅 12 Jun 2021 06:18 | 25 |
| Rick Wright | 📅 12 Jun 2021 06:18 | 25 |
| Dianne Conner | 📅 11 Jun 2021 18:15 | 11 |
| Fred Pfeifer | 📅 11 Jun 2021 16:28 | 27 |

<https://ebird.org/checklist/S90494989>

**From Montclair Bird Club – Broadwing July 2021
(by Sandy Sorkin)**

BioBlitz

**Garret Mountain Reservation & Rifle Camp Park
June 12, 2021—eBird Data**

| | Bird Species | Walk 1 6:18–8:49 AM | Walk 2 10:02–11:28 AM |
|----|-----------------------------------|---------------------------|-----------------------------|
| | Species | 25 | 26 |
| 1 | Canada Goose | 17 | 7 |
| 2 | Mallard | 2 | 3 |
| 3 | Mourning Dove | 6 | 3 |
| 4 | Chimney Swift | 1 | 4 |
| 5 | Spotted Sandpiper | | 1 |
| 6 | Red-tailed Hawk | | 1 |
| 7 | Red-bellied Woodpecker | 3 | 1 |
| 8 | Downy Woodpecker | | 1 |
| 9 | Northern Flicker (Yellow-shafted) | 2 | 1 |
| 10 | Eastern Wood-Pewee | 1 | 1 |
| 11 | Great Crested Flycatcher | 3 | 1 |
| 12 | Warbling Vireo | 5 | 2 |
| 13 | Blue Jay | 2 | 2 |
| 14 | Black-capped Chickadee | | 1 |
| 15 | Tufted Titmouse | | 1 |
| 16 | Northern Rough-winged Swallow | 3 | 3 |
| 17 | Barn Swallow | 4 | 2 |
| 18 | European Starling | 2 | 3 |
| 19 | Gray Catbird | 5 | 3 |
| 20 | Northern Mockingbird | | 1 |
| 21 | Wood Thrush | 1 | 2 |
| 22 | American Robin | 16 | 15 |
| 23 | House Sparrow | 5 | 8 |
| 24 | Baltimore Oriole | 2 | 4 |
| 25 | Red-winged Blackbird | 6 | |
| 26 | Common Grackle | 15 | |
| 27 | Great Blue Heron (Blue form) | 1 | |
| 28 | Great Egret | 1 | |
| 29 | Cedar Waxwing | 2 | |
| 30 | House Finch | 6 | |
| 31 | American Goldfinch | 2 | |

TORREY BOTANICAL SOCIETY – FIELD TRIP REPORT
(Submitted by Joseph Labriola)

GARRET MOUNTAIN RESERVATION, PATERSON AND WOODLAND PARK
PASSAIC COUNTY, NEW JERSEY
JUNE 12, 2021

On a cool cloudy late spring day the Torrey Botanical Society (TBS) participated in a field trip that was part of a Bioblitz sponsored by the Friends of Garret Mountain and the Passaic County Department of Parks and Recreation. The trip route focused on the southwestern portion of the Garret Mountain Reservation, situated on the First Watchung Mountain, at elevations ranging from 450- to-500 feet above sea level. TBS last visited this portion of the Reservation on April 17, 2010.

As in previous TBS field trips, the participants initially focused on the southwestern portion of the park located to the south of Barbour's Pond. Landscape small tree and shrub plantings installed during the last several years as part of County parks restoration and State highway mitigation projects included River Birch *Betula nigra*, Swamp White Oak *Quercus bicolor*, and Canadian Serviceberry *Amelanchier canadensis* that was just finishing fruiting. The trip route then turned southerly following the yellow-blazed hiking trail along the cool moist ravine containing Slippery Rock Brook and the adjacent abandoned traprock quarry. The lower portion of the stream had a clump of a yellow- flowering semi-aquatic plant that was previously identified as Creeping Buttercup *Ranunculus repens*. The upland slopes to the east of the stream had a fairly diverse forest canopy dominated by Red Oak *Quercus rubra*, Tulip-tree *Liriodendron tulipifera*, Black Birch *Betula lenta*, Yellow Birch *B.alleghaniensis*, American Beech *Fagus grandifolia*, and American Basswood *Tilia Americana* and associated understory-tall shrub layer of Sugar Maple *Acer saccharum*, and Witch Hazel *Hamamelis virginiana*. The formerly observed native low shrub and herb layers have essentially disappeared during the last 20 years due to heavy deer herbivory. The open waters of Barbour's Pond were covered by a dense growth of floating aquatic plants, predominantly Lesser Duckweed *Lemna minor* and American White Water Lily *Nymphaea odorata*. The group next visited a linear depression to the west that contained a forested wetland. The wettest seasonally inundated portion contained Green Ash *Fraxinus pennsylvanica*, Sour Gum *Nyssa sylvatica*, and the herbs Skunk Cabbage *Symplocarpus foetidus*, Jack-in-the-pulpit *Arisaema triphyllum*, New York Fern *Thelypteris noveboracensis*, and Fowl Manna Grass *Glyceria striata*. At the dam area adjacent to the northwest end of Barbour's Pond, an extensive colony of Common Milkweed *Asclepias syrica* was just beginning to flower along with Deptford Pink *Dianthus armeria*, and Common Hawkweed *Hieracium vulgatum*. A native hawkweed species Rattlesnakeweed *H.venosum* was later found in flower on the slopes above the east side of the pond. The last stop was a recently established riparian zone restoration area adjacent to the southeastern corner of the pond. The plantings include young trees of Red Oak, Red Maple *Acer rubrum*, Redbud *Cercis canadensis*, and Pin Oak *Quercus palustris*. A variety of forb and grassy species were seeded with Black-eyed Susan *Rudbeckia hirta* and Common Rush *Juncus effusus* being two of the commonest species. Mature tree species observed on the adjacent upper slopes connecting to the parking lot included Red Oak, Bitternut Hickory *Carya cordiformis*, White Oak *Quercus alba*, Chestnut Oak *Q. prinus*, and a single probably planted Chinkapin Oak *Q.muhlenbergii*, well east of its normal range in the State. Bluet *Hedyotis caerulea* and Plantain Pussetoes *Antennaria parlini* were observed in late flower condition in the sparse herb layer. Total attendance was 7, including members of Torrey Botanical Society, Friends of Garret Mountain, and other Bioblitz participants. The trip leader was Joseph A. Labriola.



Sponsored by the
Passaic County Board of County Commissioners



BIOBLITZ

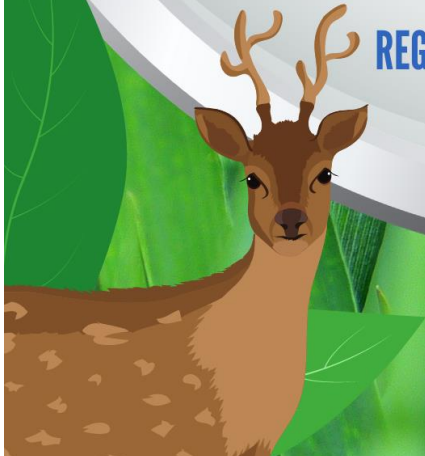
WITH FRIENDS OF GARRET MOUNTAIN RESERVATION

A BioBlitz is an event that focuses on finding and identifying as many species as possible in a specific area over a 24 hour period. At a BioBlitz, scientists, families, students, teachers, and other community members work together to get a snapshot of an area's biodiversity. We're inviting the community to help us by attending one of our expert led nature walks or events and by downloading the iNaturalist app to take pictures of the plants and animals you find around Garret Mountain Reservation and Rifle Camp Park.

GARRET MOUNTAIN RESERVATION | RIFLE CAMP PARK

Starts Friday, June 11 at 4 PM
through
Saturday, June 12 at 4 PM

[REGISTER: PASSAICCOUNTYREC.ORG](https://www.passaiccountyrec.org)



@passaiccountynj