

## **Research Projects in Westchester County Parks, Recreation and Conservation 2019-2023**

1. Turtle Conservation Research
  - a. Conservation division staff are monitoring a population of wood turtles at Ward Pound Ridge Reservation to determine habitat usage and locate nesting sites. In 2024 this research will include estimation of pond turtle population sizes and testing of nest protection strategies.
2. Bear Monitoring at Ward Pound Ridge Reservation
  - a. In Summer 2023 wildlife cameras were used to monitor bear activity at Ward Pound Ridge Reservation. The surveying was done in preparation for the continuation of a collaborative study with Mianus River Gorge Preserve and Cornell University in 2025. The goal of the project is to participate in a regional effort to collect evidence of black bear presence, movement, and habitats in the lower Hudson Valley.
3. Bluebird Monitoring
  - a. Bluebird monitoring takes place each summer at Ward Pound Ridge Reservation where data is collected on box occupancy, number of eggs laid, and number of successful fledglings. In 2024, the project will be expanded to Muscoot Farm.
4. Dog Waste Litter Mitigation
  - a. Conservation Division interns performed a study in Fall 2023 when they mapped location of dog waste or discarded dog waste bags to identify the best locations to place dog waste receptacles for public use.
5. Reforestation Efforts in Beech Stands
  - a. Conservation Division staff are testing the effectiveness of tree diapers for water retention, soil amendments, seedling tubing, and sapling planting in forest stands dominated by beech trees to determine the most important management techniques for promoting successful reforestation.
6. Croton Point Grassland Restoration
  - a. Conservation Division staff mapped the distribution of invasive species on the Croton Point grassland. Collected data will assist with planning of chemical treatment applications and with the creation of a long-term management plan for the area.
7. Nature Center Summer Camp Post-Attendance Surveying
  - a. In 2020 Westchester County Summer camps remained operational despite the pandemic. After the camp season, a survey link was sent to participants and the results led to changes in how we communicate with families, content for camp, and for how we dealt with changing COVID regulations.
8. Adaptive Deer Management Program

- a. Since 2009, Westchester County has partaken in an Adaptive Deer Management Program aimed at decreasing deer density in parks to promote forest regeneration. Through the program, tick, blood, and lymph node samples are taken from harvested deer and sent to Fordham University, Cornell University, and the New York State (NYS) Department of Environmental Conservation (DEC) respectively to track the spread of various diseases.
9. Flora of Ward Pound Ridge Reservation
  - a. The Friends of Trailside Nature Museum and Ward Pound Ridge Reservation have hired local ecologists to perform an all-inclusive botanical survey of Ward Pound Ridge Reservation. Plants will be catalogued with the New York State Museum and some preserved at Trailside Nature Museum.
10. Spotted Lanternfly (SLF) Research
  - a. Westchester County worked closely with the NYS DEC and the USDA to determine the presence of SLF in Westchester County Parks early in their spread. Last year, Westchester County Parks held trainings for staff at all facilities, provided vacuums for managing SLF to local municipalities, and tested the efficacy of “trap trees” using ailanthus to lower SLF populations.
11. Tibbetts Pond Restoration and Management Plan
  - a. In 2021 a firm hired by the Westchester Parks Foundation began research on creating a management and restoration plan for Tibbetts Pond, located in Tibbetts Brook Park in Yonkers, NY. While recommendations are still forthcoming, preliminary recommendations are already being implemented. For example, through grants and funding by the WPF, a harvester has been used to remove water chestnut found in the pond
12. Evaluating Hilltop Hanover Farm’s Onsite Biodiversity and Native Seed Collection Capacity
  - a. Spearheaded by Hilltop Hanover Farm Curator, a study is underway to determine the ecological diversity of the farm and to help instruct the seed collection capacity of the facility.
13. On-going Monitoring of Vernal Pools
  - a. Conservation Division staff has been monitoring vernal pools in several parks for many years. In 2023, candidate pools were selected for more intensive monitoring beginning in 2024 which will include remote depth and temperature logging, the use of acoustic recording devices, and water quality testing.
14. Sugar Maple Sap Production Monitoring
  - a. Staff at Trailside Nature Museum has been collecting data on the sap production and sugar content of tapped sugar maples over the last several years. The information has been critical for deciding which trees to use for syrup making which is the focus of several public programs and attracts many visitors to the parks.
15. Fisher Presence/Absence Study

- a. In 2021 Westchester County Parks partnered with Pace University to assess fisher presence/absence at five County Parks.
16. New England Cottontail Pellet Surveys
- a. In 2020, Westchester County Parks wildlife staff sampled rabbit pellets at Ward Pound Ridge Reservation and Mountain Lakes Park. Pellets were sent for DNA analysis to determine if New England Cottontails were present in the parks.
17. Ten Tallest Plots
- a. Ten Tallest plots were set up at Ward Pound Ridge Reservation to contribute to analyses on the impact of deer on forest regeneration.
18. Bat Species Composition in Westchester County Parks
- a. Acoustic monitoring equipment was deployed at five County Parks in 2020 to identify bat species presence. Results suggested the possibility of Indiana bat (an endangered species) presence at Ward Pound Ridge Reservation. Bat monitoring will continue in 2024 to provide additional evidence related to the presence/absence of rare species.
19. Mesocarnivore Activity Study
- a. Westchester County Parks wildlife staff developed a wildlife camera study to monitor mesocarnivore activity patterns at three County Parks: Muscoot Farm, Mountain Lakes Park, and Ward Pound Ridge Reservation. The study ran until 2019.
20. Assessing Vegetation Impacts for Deer (AVID) Surveys
- a. Westchester County Parks acted as an AVID partner and created plots at Ward Pound Ridge Reservation and Blue Mountain Reservation to monitor the impacts of deer on forest regeneration and wildflowers. Monitoring took place between 2019 and 2022.