

Observing Wildlife Longitudinally in Washington Square Park
NYC Parks Research Permit Annual Report
March 26, 2019

PROJECT DESCRIPTION

The primary purpose of Observing Wildlife Longitudinally in Washington Square Park (WSP Wildlife Survey) is to catalogue the park's wildlife population. A second goal of the survey is to provide community science opportunities. The NYC Parks Natural Resources Group first issued a permit for the WSP Wildlife Survey in 2016. This report describes the methods and findings of the 2018 survey year.

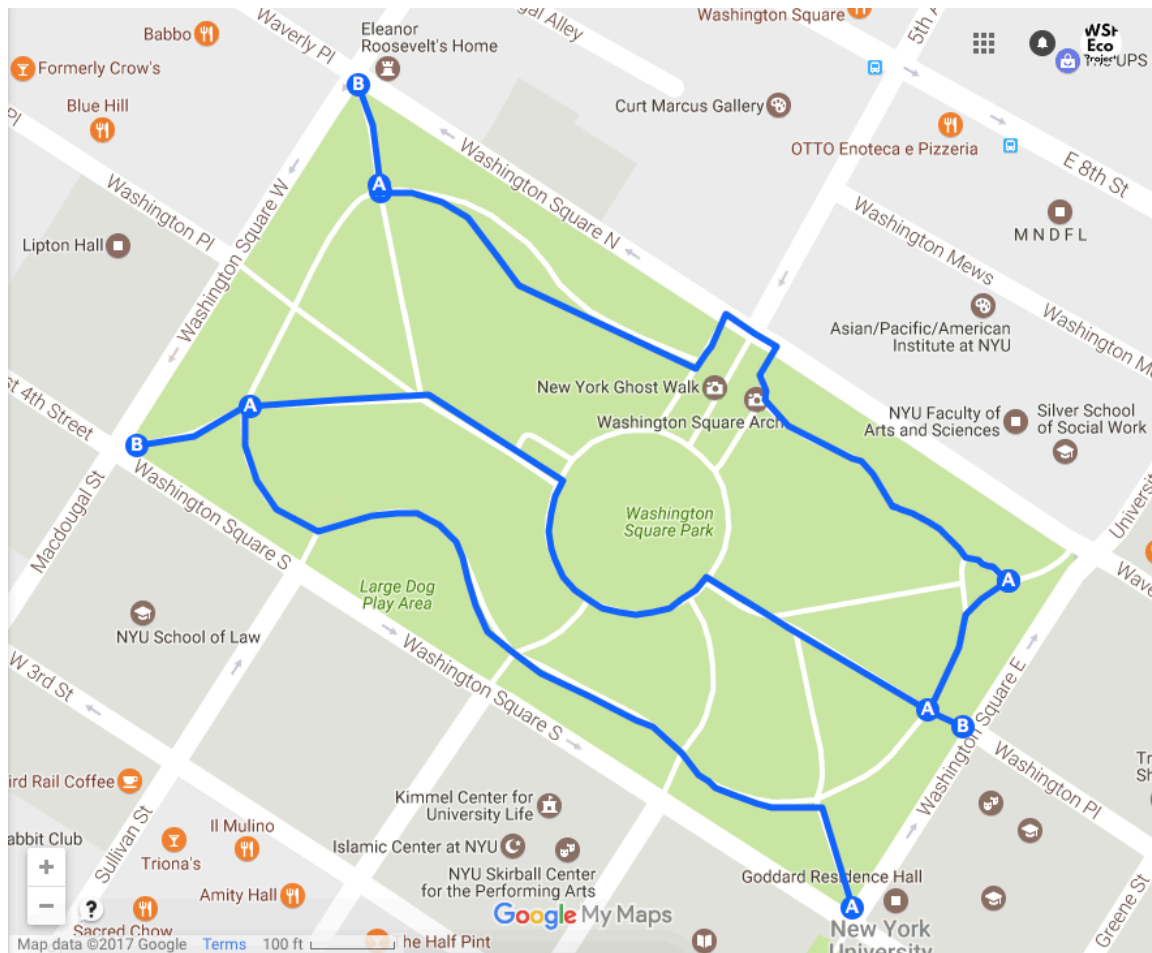


Fig. 1. WSP Wildlife Survey Continuous Line Transect.

METHODOLOGY

The WSP Wildlife Survey protocol is a continuous line transect (Fig. 1). The main surveyors (Georgia Silvera Seamans, Loyan Beausoleil) walked the line transect in the same direction and for approximately the same amount of time each time the survey was

administered. The approximate start time for each survey was between 7 am and 8 am Eastern Standard Time on days without rain.

Wildlife seen within the park’s boundaries while walking the continuous line transect were recorded. Bird observations in 2018 (and in 2017) were not recorded on a paper map. All data was directly submitted to the eBird website.

Criteria for exclusion were:

- Birds identified to the taxa level only
- Birds that were heard only,
- Birds that flew over or were observed outside the park. (The exception to this rule was the Red-tailed Hawk for two reasons: (1) a pair of Red-tail Hawks has nested on a building on the park’s southern edge since 2011 and (2) hawks’ engage in behaviors that place them outside the park’s boundaries.)
- Flocks of birds or squirrels that gathered around a human feeder were not counted.
- *The presence of invertebrate wildlife (ex: butterfly) was noted but not counted.*

Table 1.

Summary of Official Continuous Line Transects (surveys) 2016 – 2018

	2018	2017 (03-12)	2016 (08-12)
Number of Surveys	22	19	7
Number of Bird Species	34 ⁺	36 ^{+^}	33
Total Number of Individuals	3371	2546	1154
Top Five Most Abundant Species	1. House Sparrow 2. Rock Dove 3. White-throated Sparrow 4. European Starling 5. Mourning Dove	1. House Sparrow 2. Rock Dove 3. American Robin 4. White-throated Sparrow 5. European Starling	1. House Sparrow 2. Rock Dove 3. White-throated Sparrow 4. American Robin 5. European Starling
Highest Number of Species During a Survey	21 (Oct. 25, 2018)	17 (Sept. 22, 2017)	15 (Sept. 26, 2016; Oct. 13, 2016)
Squirrels/Total Rodents	296/302 (98%)	377/382 (~99%)	177/181 (~98%)
<p>⁺ These numbers reflect species that met criteria and were observed during official surveys. See the “Special Bird Surveys” section for additional species information.</p> <p>[^] Data from 2017 has been revised.</p>			

RESULTS

Official Continuous Line Transects - Birds

Twenty-two (22) official continuous line transects were completed in 2018 (Table 1).

House Sparrow and Rock Pigeon remain the two most populous species in the park. American Robin dropped out of the top five most abundant species in 2018. Mourning Dove was the fifth most abundant species in 2018.

There was a slight decrease in the number of bird species (-2) observed in 2018 versus in 2017. The total number of individuals was much higher (+771) in 2018 versus in 2017 though this could be correlated with the higher number of surveys (+3) completed in 2018.

Across all three years (2016-2018), late summer/early fall (September-October) remains the best time to see the most number of species in a single survey.

Table 2.

Summary of species information from non-official bird counts, 2017 – 2018

Events	2018	2017
Fall Bird Walk (Heather Wolf)	N/A	17 sp (9/23/17)
Fall Bird Walk (Leslie Day)	N/A	11 sp (11/4/17)
Great Backyard Bird Count (GBBC)	9 sp each (3/17-18/2018)	N/A
Feminist Bird Club	36 sp (10/13/18)	N/A

Special Bird Surveys for Community Science

Experiential environmental education is one of the components of our mission. The wildlife survey provides opportunities for the public to observe and count birds in the park (Table 2).

Three special surveys were held in 2018. We participated in the Great Backyard Bird Count on two days in February 2018. On October 13, 2018, Washington Square Park was the site of a Feminist Bird Club walk. During this bird walk 36 species were observed. It is worth noting that multiple individuals were spotted for many of these species. We list all the species here to showcase the richness that Washington Square Park can support.

1. Rock Pigeon (Feral Pigeon)
2. Mourning Dove
3. Red-tailed Hawk
4. Belted Kingfisher
5. Yellow-bellied Sapsucker

6. Red-bellied Woodpecker
7. Downy Woodpecker
8. Northern Flicker
9. Blue-headed Vireo
10. Blue Jay
11. Tufted Titmouse
12. White-breasted Nuthatch
13. Brown Creeper
14. Winter Wren
15. Golden-crowned Kinglet
16. Ruby-crowned Kinglet
17. Swainson's Thrush
18. Hermit Thrush
19. American Robin
20. Gray Catbird
21. European Starling
22. Dark-eyed Junco
23. White-throated Sparrow
24. Song Sparrow
25. Lincoln's Sparrow
26. Swamp Sparrow
27. Eastern Towhee
28. Ovenbird
29. Black-and-white Warbler
30. Common Yellowthroat
31. Magnolia Warbler
32. Bay-breasted Warbler
33. Black-throated Blue Warbler
34. Palm Warbler
35. Yellow-rumped Warbler
36. House Sparrow

In 2017 we offered two special surveys. Expert tour guides Leslie Day and Heather Wolf led two bird walks in the fall of 2017.

Non-bird Totals

Squirrels remain at least 97% of the total rodent population observed in the park in 2018 (Table 1).

Animals observed but unofficially counted include bee species (Bumblebee, Western Honey Bee, etc.), Flower Fly and other fly species, Cabbage White butterfly, dragonfly species, and Cicadas.

DISCUSSION & CONCLUSION

Washington Square Park is a 9.75-acre park that supports year-round and winter populations of birds and other animals. The park also acts as a “small forest fragment” providing stopover services for long- and short-distance migrants (Hostetler, 2016).

We strongly urge the Parks Department to manage vegetation in the park for birds and other wildlife. Specifically we recommend the following strategies to increase structural complexity in the park:

- Fill in the mid-level forest gap with native small trees (for example: *Amelanchier canadensis* or *A. arborea*) and shrubs especially fruiting species (ex: *Aronia* sp., *Ilex glabra*, *Sambucus canadensis*, *Vaccinium angustifolium*)
- Fill in the lower-level forest gap especially in full shade areas with native herbaceous perennials, grasses, and ferns
- Plant more evergreen shrubs for winter interest, forage, and shelter (ex: *I. glabra*, *Juniperus virginiana*)
- Increase population of native wildflowers and grasses
- Maintain leaf litter and more high-forage groundcover to support late fall migrants, wintering birds, and early spring

Finally, as we continue to develop baseline wildlife population data for the park, we will provide citizen science opportunities by engaging the public in bird counts throughout the year.

Respectfully submitted by
Georgia Silvera Seamans for Washington Square Park Eco Projects