



Avian Inventory of Sagamore Hill National Historic Site

2014 and 2015 Summary Report

Natural Resource Report NPS/NCBN/NRR—2017/1419



ON THE COVER

Photograph of a Savannah Sparrow (*Passerculus sandwichensis*) at Sagamore Hill National Historic Site.
Photograph courtesy of Robin Baranowski (NPS)

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Executive Summary

The Northeast Coastal and Barrier Network (NCBN) conducted avian surveys at Sagamore Hill National Historic Site (SAHI) in 2014 and 2015. All on-site habitats (landscaped, woodland and salt marsh) were sampled, although established points were only sampled in woodland and salt marsh areas. Sample points were established based on existing sample points for the Mid-Atlantic Network's (MIDN) Forest Vegetation Monitoring so that surveys could be easily repeated in the future. A total of 85 species of birds were observed during 2014 and 2015, including approximately 9 species of special concern in New York.

Introduction

In 2014 and 2015, Northeast Coastal and Barrier Network (NCBN) Inventory & Monitoring (I&M) Program staff conducted a bird inventory at Teddy Roosevelt's Sagamore Hill residence. The I&M Program provides guidance, funding, and technical assistance to parks in completing 12 baseline natural resource inventories, including vertebrate and vascular plant inventories. Natural resource inventories are extensive point-in-time surveys to determine the location or condition of a resource, including the presence, class, distribution, and status of biological resources such as plants and animals, and abiotic resources such as air, water, soils, landforms, and climate.

Sagamore Hill National Historic Site (SAHI) is located on the peninsula of Cove Neck, Long Island, New York (Fig. 1). It consists of 35 hectares including a parking lot and visitor center, paved driveways, mowed lawns, fields, orchards, mature forests, salt marsh and a small beach adjacent to Oyster Bay. The easternmost forested and salt marsh areas of SAHI were declared a “Natural Environmental Study Area” by Congress in the early 1970’s (Barton 2008).

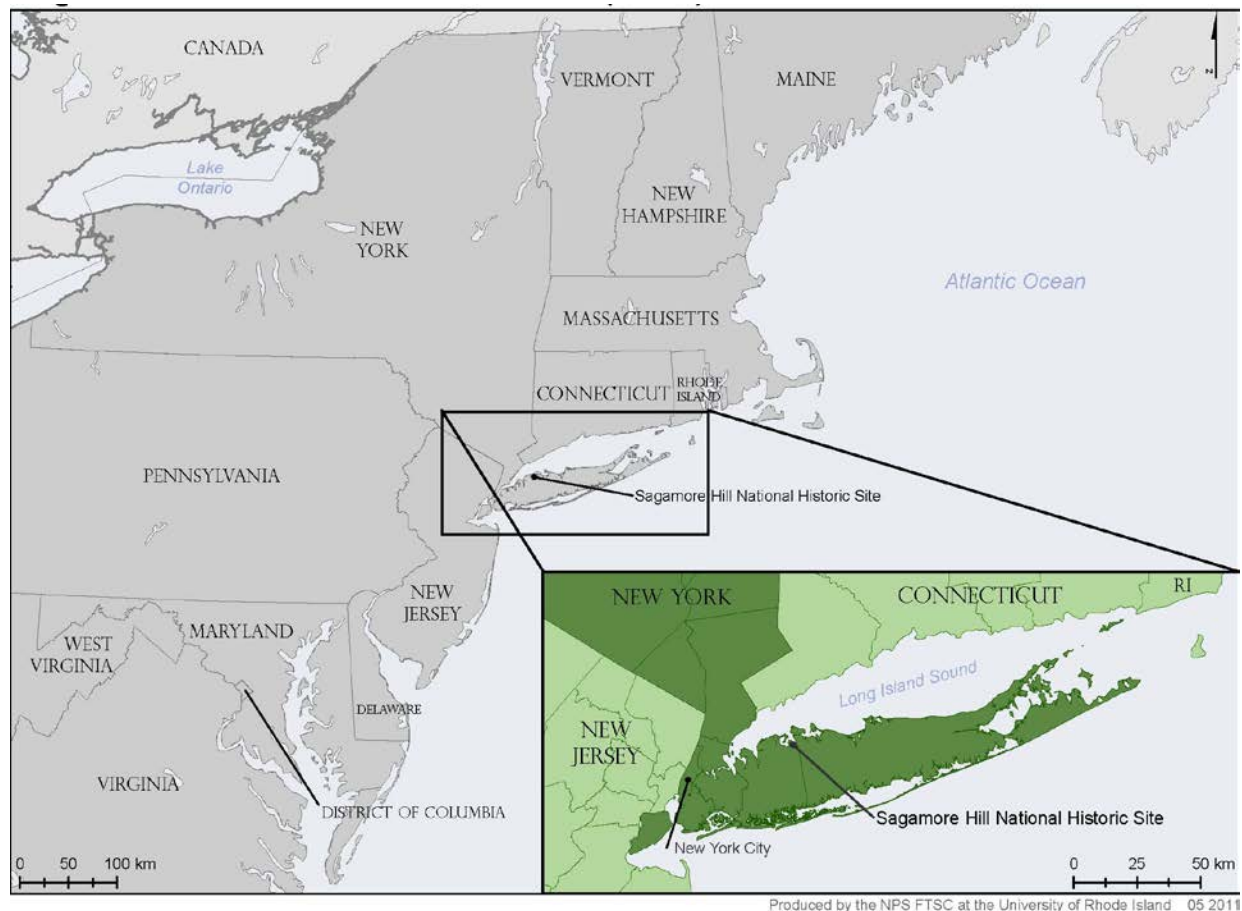


Figure 1. Location of Sagamore Hill National Historic Site (SAHI), Long Island, New York.

Over 300 avian species have been recorded utilizing habitats on Long Island throughout various times of the year. In 2003, an intensive avian survey was conducted at Sagamore Hill National Historic Site with a total of 116 species observed, including 26 confirmed breeders and an additional 24 probable breeders (Barton 2008). The 2003 survey also included guild-specific censuses in which four additional species were identified; Eastern Screech Owl, Great Horned Owl, Black-crowned Night-Heron, and Virginia Rail.

Methods

Avian Survey Point Selection

At Sagamore Hill NHS, avian survey point locations were chosen based on the existing vegetation plots established as part of the Mid-Atlantic Network (MIDN) and NCBN Forest Vegetation Monitoring Program (Barton 2008, Comiskey 2009). A total of five avian survey points were established park-wide. Four woodland survey points were co-located with the existing vegetation plots, and one additional point was established in the saltmarsh to target habitat-specific birds (Fig. 2 and Table 1). Detailed information about the site selection process and sampling design can be found in the Mid-Atlantic Network's Breeding Bird Monitoring Protocol (Johnson et.al. In Review).

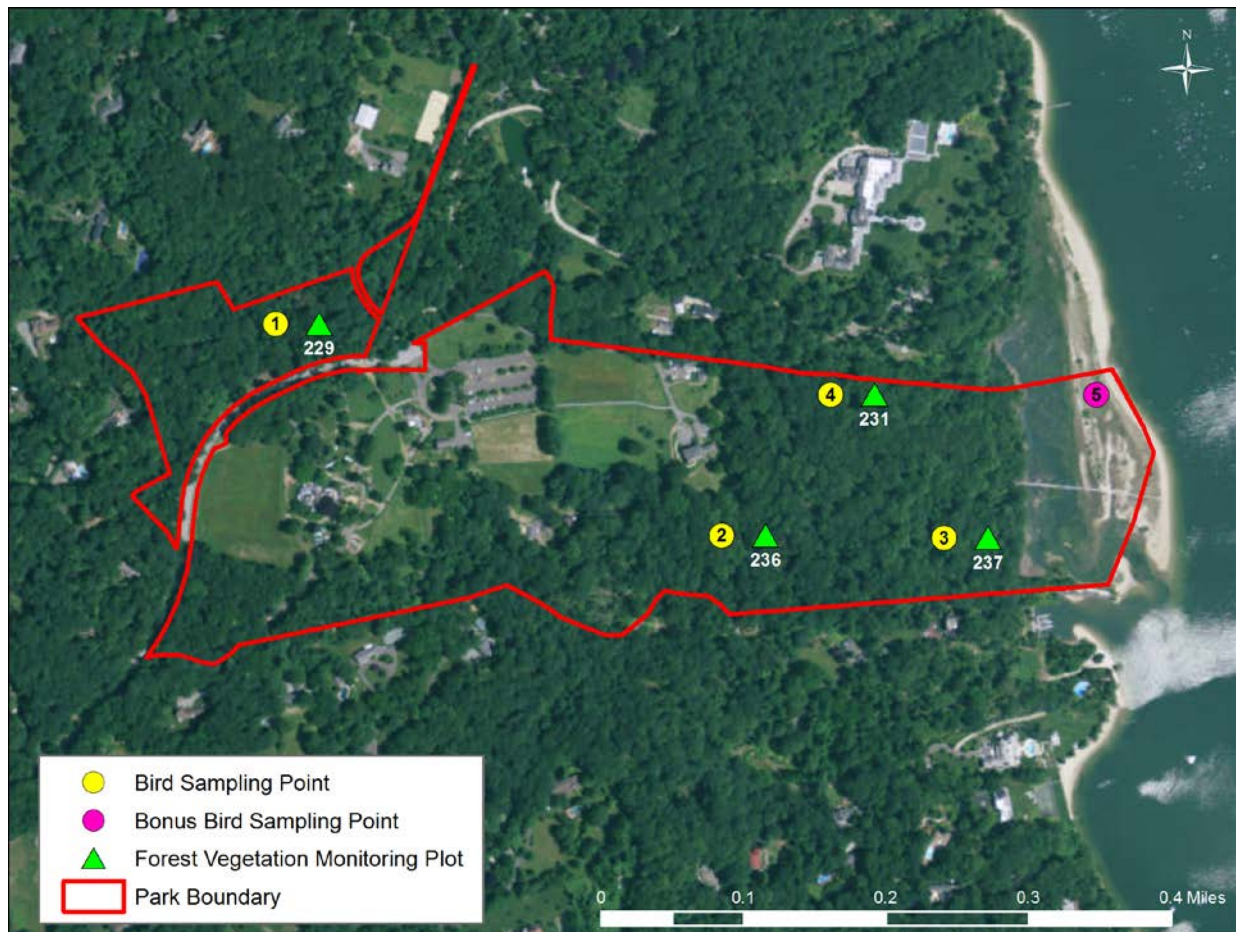


Figure 2. Locations of permanent forest vegetation monitoring plots and avian survey points established in 2014-2015 at Sagamore Hill National Historic Site (SAHI), New York.

Table 1. Breeding bird point ID and coordinates at Sagamore Hill National Historic Site (SAHI), based on Projected Coordinate System: NAD 1983 UTM Zone 18N.

SAHI BBM Points			Comments
ID	UTM_X	UTM_Y	
01	626236	4527327	Point is 50 meters West of a forest vegetation monitoring plot
002	626740	4527088	Point is 50 meters West of a forest vegetation monitoring plot t
003	626991	4527085	Point is 50 meters West of a forest vegetation monitoring plot
004	626863	4527247	Point is 50 meters West of a forest vegetation monitoring plot
005	627163	4527247	Bonus Point: is 250 meters East of forest vegetation monitoring plot 231

Survey Methods

Each point was surveyed once after dark, and then shortly after sunrise during the months of May 2014, August 2014, October 2014 and March 2015 (Table 2). These months were chosen to coincide with avian seasonal migration, breeding season, and over-wintering migrants. A standard point count survey was used to identify and record all bird species seen and heard within a 10 minute period. For each bird observed, the time (minute of the count) and distance band (0-50m or ≥ 50 m) were recorded (Johnson et.al. In Review).

In addition to the marsh and woodland points, the majority of the property (including the cultivated landscape areas) was walked during each survey period in order to incorporate any birds seen in the other habitats or not detected during the point count surveys. Birds observed or heard during this time are included in the total number of birds detected during the 2014-2015 inventory period.

Table 2. Dates avian surveys were conducted at Sagamore Hill National Historic Site (SAHI) in 2014-2015.

Survey #	Dates
1	May 15–16, 2014
2	August 18-19, 2014
3	October 27-28, 2014
4	March 18-19, 2015

Results

A total of 85 species of birds were detected during the 2014/2015 inventory using both point count surveys at established points and incidental observations made while walking the property (Table 3). Forty-four species were detected during point count surveys, and the incidental surveys detected an additional 41 species. Of the 85 species detected, 45 species were probable year round residents, 29 species are probable summer (breeding) residents, 6 species were probable winter (non-breeding) residents, and 4 species were probable spring/fall migrants passing through the area (Table 4).

Twelve of the species detected during the 2014/2015 inventory were not detected during Barton's inventory in 2003 (Table 5). However, there were 45 bird species that were detected during Barton's 2003 inventory, that were not detected during the 2014/2015 inventory (Table 6).

Five species, Broad-winged Hawk, Cooper's Hawk, Osprey, Scarlet Tanager, and Sharp-shinned Hawk are listed as species of special concern in New York state (Table 7). Four species, Chimney Swift, Long-tailed Duck, and Prairie Warbler, and Wood Thrush are known to be of conservation concern (Table 8).

For a complete list of bird species detected at SAHI during the 2003 and 2014 – 2015 surveys, please see Appendix B.

Table 3. Avian species detected using point count surveys and incidental observation at Sagamore Hill National Historic Site in 2014 and 2015. nd indicates species not detected by survey type.

Common Name	Scientific Name	Alpha Code	Point Count	Incidental Observation
Acadian Flycatcher	<i>Empidonax virescens</i>	ACFL	nd	3
American Black Duck	<i>Anas rubripes</i>	ABDU	nd	4
American Crow	<i>Corvus brachyrhynchos</i>	AMCR	1, 2, 3, 4	1, 2, 3, 4
American Goldfinch	<i>Spinus tristis</i>	AMGO	2	2, 3
American Kestrel	<i>Falco sparverius</i>	AMKE	nd	4
American Robin	<i>Turdus migratorius</i>	AMRO	1, 2, 3	1, 2, 3, 4
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BAEA	nd	4
Baltimore Oriole	<i>Icterus galbula</i>	BAOR	1	1, 2
Belted Kingfisher	<i>Megaceryle alcyon</i>	BEKI	nd	1
Black-and-white Warbler	<i>Mniotilta varia</i>	BAWW	nd	1
Black-capped Chickadee	<i>Poecile atricapillus</i>	BCCH	1, 2, 3	1, 2, 3
Blackpoll Warbler	<i>Setophaga striata</i>	BLPW	1	nd
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	BTBW	nd	1
Blue Jay	<i>Cyanocitta cristata</i>	BLJA	1, 2, 3, 4	1, 2, 3, 4
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	BWWA	nd	3
Broad-winged Hawk	<i>Buteo platypterus</i>	BWHA	2	3, 4
Brown Creeper	<i>Certhia americana</i>	BRCR	2	nd
Brown-headed Cowbird	<i>Molothrus ater</i>	BHCO	nd	2, 4
Bufflehead	<i>Bucephala albeola</i>	BUFF	4	4
Canada Goose	<i>Branta canadensis</i>	CAGO	1, 4	1, 3, 4
Carolina Wren	<i>Thryothorus ludovicianus</i>	CARW	nd	1, 3
Cedar Waxwing	<i>Bombycilla cedrorum</i>	CEDW	nd	3
Chimney Swift	<i>Chaetura pelagica</i>	CHSW	nd	1
Chipping Sparrow	<i>Spizella passerina</i>	CHSP	1	1, 2, 3
Common Goldeneye	<i>Bucephala clangula</i>	COGO	nd	4
Common Grackle	<i>Quiscalus quiscula</i>	COGR	1	2, 3
Common Yellowthroat	<i>Geothlypis trichas</i>	COYE	1	1, 2
Cooper's Hawk	<i>Accipiter cooperii</i>	COHA	nd	2

Table 3 (continued). Avian species detected using point count surveys and incidental observation at Sagamore Hill National Historic Site in 2014 and 2015. nd indicates species not detected by survey type.

Common Name	Scientific Name	Alpha Code	Point Count	Incidental Observation
Dark-eyed Junco	<i>Junco hyemalis</i>	DEJU	nd	3
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	DCCO	3	2, 3
Downy Woodpecker	<i>Picoides pubescens</i>	DOWO	2, 3	1, 2, 3
Eastern Bluebird	<i>Sialia sialis</i>	EABL	nd	1, 2, 3
Eastern Kingbird	<i>Tyrannus tyrannus</i>	EAKI	nd	1
Eastern Phoebe	<i>Sayornis phoebe</i>	EAPH	nd	1, 2, 3
Eastern Screech-Owl	<i>Megascops asio</i>	EASO	3, 4	2, 3
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	EATO	nd	1, 3, 4
Eastern Wood-Pewee	<i>Contopus virens</i>	EAWP	nd	1
European Starling	<i>Sturnus vulgaris</i>	EUST	1, 2	1, 2, 3, 4
Gray Catbird	<i>Dumetella carolinensis</i>	GRCA	nd	2, 3
Great Black-backed Gull	<i>Larus marinus</i>	GBBG	1, 3, 4	1, 2, 4
Great Blue Heron	<i>Ardea herodias</i>	GBHE	3	1, 2, 3
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	GCFL	nd	1
Great Egret	<i>Ardea alba</i>	GREG	2, 3	1
Great Horned Owl	<i>Bubo virginianus</i>	GHOW	nd	2
Hairy Woodpecker	<i>Picoides villosus</i>	HAWO	3	2, 3
Hermit Thrush	<i>Catharus guttatus</i>	HETH	1, 3	1, 2, 3
Herring Gull	<i>Larus argentatus</i>	HERG	1, 2, 3, 4	1, 2, 3, 4
House Finch	<i>Haemorhous mexicanus</i>	HOFI	nd	1, 2, 3
House Sparrow	<i>Passer domesticus</i>	HOSP	nd	1, 2, 3, 4
Laughing Gull	<i>Leucophaeus atricilla</i>	LAGU	3	1
Long-tailed Duck	<i>Clangula hyemalis</i>	LTDU	4	4
Mallard	<i>Anas platyrhynchos</i>	MALL	nd	1
Mourning Dove	<i>Zenaidura macroura</i>	MODO	1, 2	1, 2, 3, 4
Mute Swan	<i>Cygnus olor</i>	MUSW	nd	1, 2, 4
Northern Cardinal	<i>Cardinalis cardinalis</i>	NOCA	1, 2, 3, 4	1, 3
Northern Flicker	<i>Colaptes auratus</i>	NOFL	2	2, 3

Table 3 (continued). Avian species detected using point count surveys and incidental observation at Sagamore Hill National Historic Site in 2014 and 2015. nd indicates species not detected by survey type.

Common Name	Scientific Name	Alpha Code	Point Count	Incidental Observation
Northern Mockingbird	<i>Mimus polyglottos</i>	NOMO	1, 2	1, 2, 3, 4
Osprey	<i>Pandion haliaetus</i>	OSPR	2	1, 3
Ovenbird	<i>Seiurus aurocapilla</i>	OVEN	2, 3	1, 2, 3
Pine Warbler	<i>Setophaga pinus</i>	PIWA	3	3
Prairie Warbler	<i>Setophaga discolor</i>	PRAW	nd	1
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	RBWO	1, 2, 3, 4	1, 2, 3,
Red-breasted Merganser	<i>Mergus serrator</i>	RBME	nd	4
Red-eyed Vireo	<i>Vireo olivaceus</i>	REVI	nd	1
Red-tailed Hawk	<i>Buteo jamaicensis</i>	RTHA	2	1, 2, 3, 4
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	RWBL	nd	1, 2, 3, 4
Ring-billed Gull	<i>Larus delawarensis</i>	RBGU	4	2, 3, 4
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	RBGR	nd	2
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	RTHU	nd	1, 2
Savannah Sparrow	<i>Passerculus sandwichensis</i>	SASP	nd	1
Scarlet Tanager	<i>Piranga olivacea</i>	SCTA	nd	1, 2
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SSHA	nd	1, 3
Snowy Egret	<i>Egretta thula</i>	SNEG	2	1, 2
Song Sparrow	<i>Melospiza melodia</i>	SOSP	1	1, 2, 3,
Swamp Sparrow	<i>Melospiza georgiana</i>	SWSP	nd	2
Tree Swallow	<i>Tachycineta bicolor</i>	TRES	nd	1
Tufted Titmouse	<i>Baeolophus bicolor</i>	TUTI	1, 2, 3, 4	1, 2, 3, 4
Turkey Vulture	<i>Cathartes aura</i>	TUVU	nd	1, 2, 3, 4
Unid. Ringed Plover or Stint	<i>Charadrius/Calidris sp.</i>	PEEP	1	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	WBNU	2, 3	1, 2, 3,
White-eyed Vireo	<i>Vireo griseus</i>	WEVI	nd	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	WTSP	nd	1
Wood Thrush	<i>Hylocichla mustelina</i>	WOTH	1	1, 3
Yellow Warbler	<i>Setophaga petechia</i>	Yewa	3	1, 2
Yellow-rumped Warbler	<i>Setophaga coronata</i>	YRWA	3, 4	nd

Table 4. Avian range utilization of Sagamore Hill National Historic Site (Cornell Lab of Ornithology – All About Birds 2016).

Common Name	Scientific Name	Alpha Code	Range Utilization
Acadian Flycatcher	<i>Empidonax virescens</i>	ACFL	Summer (breeding)
American Black Duck	<i>Anas rubripes</i>	ABDU	Year round
American Crow	<i>Corvus brachyrhynchos</i>	AMCR	Year round
American Goldfinch	<i>Spinus tristis</i>	AMGO	Year round
American Kestrel	<i>Falco sparverius</i>	AMKE	Year round
American Robin	<i>Turdus migratorius</i>	AMRO	Year round
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BAEA	Winter (non-breeding)
Baltimore Oriole	<i>Icterus galbula</i>	BAOR	Summer (breeding)
Belted Kingfisher	<i>Megasceryle alcyon</i>	BEKI	Year round
Black-and-white Warbler	<i>Mniotilta varia</i>	BAWW	Summer (breeding)
Black-capped Chickadee	<i>Poecile atricapillus</i>	BCCH	Year round
Blackpoll Warbler	<i>Setophaga striata</i>	BLPW	Migration
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	BTBW	Migration
Blue Jay	<i>Cyanocitta cristata</i>	BLJA	Year round
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	BWWA	Summer (breeding)
Broad-winged Hawk	<i>Buteo platypterus</i>	BWHA	Summer (breeding)
Brown Creeper	<i>Certhia americana</i>	BRCR	Year round
Brown-headed Cowbird	<i>Molothrus ater</i>	BHCO	Year round
Bufflehead	<i>Bucephala albeola</i>	BUFF	Winter (non-breeding)
Canada Goose	<i>Branta canadensis</i>	CAGO	Year round
Carolina Wren	<i>Thryothorus ludovicianus</i>	CARW	Year round
Cedar Waxwing	<i>Bombycilla cedrorum</i>	CEDW	Year round
Chimney Swift	<i>Chaetura pelagica</i>	CHSW	Summer (breeding)
Chipping Sparrow	<i>Spizella passerina</i>	CHSP	Summer (breeding)
Common Goldeneye	<i>Bucephala clangula</i>	COGO	Winter (non-breeding)
Common Grackle	<i>Quiscalus quiscula</i>	COGR	Year round
Common Yellowthroat	<i>Geothlypis trichas</i>	COYE	Summer (breeding)
Cooper's Hawk	<i>Accipiter cooperii</i>	COHA	Year round
Dark-eyed Junco	<i>Junco hyemalis</i>	DEJU	Winter (non-breeding)

Table 4 (continued). Avian range utilization of Sagamore Hill National Historic Site (Cornell Lab of Ornithology – All About Birds 2016).

Common Name	Scientific Name	Alpha Code	Range Utilization
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	DCCO	Year round
Downy Woodpecker	<i>Picoides pubescens</i>	DOWO	Year round
Eastern Bluebird	<i>Sialia sialis</i>	EABL	Year round
Eastern Kingbird	<i>Tyrannus tyrannus</i>	EAKI	Summer (breeding)
Eastern Phoebe	<i>Sayornis phoebe</i>	EAPH	Summer (breeding)
Eastern Screech-Owl	<i>Megascops asio</i>	EASO	Year round
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	EATO	Summer (breeding)
Eastern Wood-Pewee	<i>Contopus virens</i>	EAWP	Summer (breeding)
European Starling	<i>Sturnus vulgaris</i>	EUST	Year round
Gray Catbird	<i>Dumetella carolinensis</i>	GRCA	Year round
Great Black-backed Gull	<i>Larus marinus</i>	GBBG	Year round
Great Blue Heron	<i>Ardea herodias</i>	GBHE	Year round
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	GCFL	Summer (breeding)
Great Egret	<i>Ardea alba</i>	GREG	Migration
Great Horned Owl	<i>Bubo virginianus</i>	GHOW	Year round
Hairy Woodpecker	<i>Picoides villosus</i>	HAWO	Year round
Hermit Thrush	<i>Catharus guttatus</i>	HETH	Year round
Herring Gull	<i>Larus argentatus</i>	HERG	Year round
House Finch	<i>Haemorhous mexicanus</i>	HOFI	Year round
House Sparrow	<i>Passer domesticus</i>	HOSP	Year round
Laughing Gull	<i>Leucophaeus atricilla</i>	LAGU	Summer (breeding)
Long-tailed Duck	<i>Clangula hyemalis</i>	LTDU	Migration
Mallard	<i>Anas platyrhynchos</i>	MALL	Year round
Mourning Dove	<i>Zenaida macroura</i>	MODO	Year round
Mute Swan	<i>Cygnus olor</i>	MUSW	Year round
Northern Cardinal	<i>Cardinalis cardinalis</i>	NOCA	Year round
Northern Flicker	<i>Colaptes auratus</i>	NOFL	Year round
Northern Mockingbird	<i>Mimus polyglottos</i>	NOMO	Year round
Osprey	<i>Pandion haliaetus</i>	OSPR	Summer (breeding)

Table 4 (continued). Avian range utilization of Sagamore Hill National Historic Site (Cornell Lab of Ornithology – All About Birds 2016).

Common Name	Scientific Name	Alpha Code	Range Utilization
Ovenbird	<i>Seiurus aurocapilla</i>	OVEN	Summer (breeding)
Pine Warbler	<i>Setophaga pinus</i>	PIWA	Summer (breeding)
Prairie Warbler	<i>Setophaga discolor</i>	PRAW	Summer (breeding)
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	RBWO	Year round
Red-breasted Merganser	<i>Mergus serrator</i>	RBME	Winter (non-breeding)
Red-eyed Vireo	<i>Vireo olivaceus</i>	REVI	Summer (breeding)
Red-tailed Hawk	<i>Buteo jamaicensis</i>	RTHA	Year round
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	RWBL	Year round
Ring-billed Gull	<i>Larus delawarensis</i>	RBGU	Year round
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	RBGR	Summer (breeding)
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	RTHU	Summer (breeding)
Savannah Sparrow	<i>Passerculus sandwichensis</i>	SASP	Summer (breeding)
Scarlet Tanager	<i>Piranga olivacea</i>	SCTA	Summer (breeding)
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SSHA	Year round
Snowy Egret	<i>Egretta thula</i>	SNEG	Summer (breeding)
Song Sparrow	<i>Melospiza melodia</i>	SOSP	Year round
Swamp Sparrow	<i>Melospiza georgiana</i>	SWSP	Year round
Tree Swallow	<i>Tachycineta bicolor</i>	TRES	Summer (breeding)
Tufted Titmouse	<i>Baeolophus bicolor</i>	TUTI	Year round
Turkey Vulture	<i>Cathartes aura</i>	TUVU	Summer (breeding)
Unid. Ringed Plover or Stint	<i>Charadrius/Calidris sp.</i>	PEEP	unknown
White-breasted Nuthatch	<i>Sitta carolinensis</i>	WBNU	Year round
White-eyed Vireo	<i>Vireo griseus</i>	WEVI	Summer (breeding)
White-throated Sparrow	<i>Zonotrichia albicollis</i>	WTSP	Year round
Wood Thrush	<i>Hylocichla mustelina</i>	WOTH	Summer (breeding)
Yellow Warbler	<i>Setophaga petechia</i>	Yewa	Summer (breeding)
Yellow-rumped Warbler	<i>Setophaga coronata</i>	YRWA	Winter (non-breeding)

Table 5. Avian species detected at Sagamore Hill National Historic Site, NY, in 2014-2015 that were not detected during the inventory conducted by Barton in 2003 (Barton 2008).

Common Name	Scientific Name	ALPHA Code
Acadian Flycatcher	<i>Empidonax virescens</i>	ACFL
American Kestrel	<i>Falco sparverius</i>	AMKE
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	BTBW
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	BWWA
Broad-winged Hawk	<i>Buteo platypterus</i>	BWHA
Brown Creeper	<i>Certhia americana</i>	BRCR
Cooper's Hawk	<i>Accipiter cooperii</i>	COHA
Prairie Warbler	<i>Setophaga discolor</i>	PRAW
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	RBGR
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	RTHU
Savannah Sparrow	<i>Passerculus sandwichensis</i>	SASP
Swamp Sparrow	<i>Melospiza georgiana</i>	SWSP

Table 6. Avian species detected at Sagamore Hill National Historic Site, NY, during the inventory conducted by Barton in 2003 that were not detected in 2014-2015.

Common Name	Scientific Name	ALPHA Code
American Redstart	<i>Setophaga ruticilla</i>	AMRE
American Tree Sparrow	<i>American Tree Sparrow</i>	ATSP
Barn Swallow	<i>Hirundo rustica</i>	BARS
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	BBCU
Blackburnian Warbler	<i>Setophaga fusca</i>	BLBW
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	BCNH
Black-throated Green Warbler	<i>Setophaga virens</i>	BTNW
Blue-headed Vireo	<i>Vireo solitarius</i>	BHVI
Cape May Warbler	<i>Setophaga tigrina</i>	CMWA
Common Loon	<i>Gavia immer</i>	COLO
Common Tern	<i>Sterna hirundo</i>	COTE
Fish Crow	<i>Corvus ossifragus</i>	FICR
Golden-crowned Kinglet	<i>Regulus satrapa</i>	GCKI

Table 6 (continued). Avian species detected at Sagamore Hill National Historic Site, NY, during the inventory conducted by Barton in 2003 that were not detected in 2014-2015.

Common Name	Scientific Name	ALPHA Code
Greater Scaup	<i>Aythya marila</i>	GRSC
Greater Yellowlegs	<i>Tringa melanoleuca</i>	GRYE
Green Heron	<i>Butorides virescens</i>	GRHE
House Wren	<i>Troglodytes aedon</i>	HOWR
Indigo Bunting	<i>Passerina cyanea</i>	INBU
Least Tern	<i>Sternula antillarum</i>	LETE
Magnolia Warbler	<i>Setophaga magnolia</i>	MAWA
Marsh Wren	<i>Cistothorus palustris</i>	MAWR
Northern Parula	<i>Setophaga americana</i>	NOPA
Northern Waterthrush	<i>Parkesia noveboracensis</i>	NOWA
Orchard Oriole	<i>Icterus spurius</i>	OROR
Palm Warbler	<i>Setophaga palmarum</i>	PAWA
Pine Siskin	<i>Spinus pinus</i>	PISI
Purple Finch	<i>Haemorhous purpureus</i>	PUFI
Purple Martin	<i>Progne subis</i>	PUMA
Red-throated Loon	<i>Gavia stellata</i>	RTLO
Ring-necked Pheasant	<i>Phasianus colchicus</i>	RNEP
Rock Dove	<i>Columba livia</i>	RODO
Ruby-crowned Kinglet	<i>Regulus calendula</i>	RCKI
Rusty Blackbird	<i>Euphagus carolinus</i>	RUBL
Sanderling	<i>Calidris alba</i>	SAND
Spotted Sandpiper	<i>Actitis macularius</i>	SPSA
Tree Swallow	<i>Tachycineta bicolor</i>	TRES
Veery	<i>Catharus fuscescens</i>	VEER
Virginia Rail	<i>Rallus limicola</i>	VIRA
Warbling Vireo	<i>Vireo gilvus</i>	WAVI
Wild Turkey	<i>Meleagris gallopavo</i>	WITU
Wilson's Snipe	<i>Gallinago delicata</i>	WISN
Winter Wren	<i>Troglodytes hiemalis</i>	WIWR

Table 6 (continued). Avian species detected at Sagamore Hill National Historic Site, NY, during the inventory conducted by Barton in 2003 that were not detected in 2014-2015.

Common Name	Scientific Name	ALPHA Code
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	YBSA
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	YBCU
Yellow-throated Vireo	<i>Vireo flavifrons</i>	YTVI

Table 7. Avian species listed as species of special concern in New York State detected at Sagamore Hill National Historic Site, NY in 2014-2015 (NY Audubon Society 2016).

Common Name	Scientific Name	ALPHA Code
Broad-winged Hawk	<i>Buteo platypterus</i>	BWHA
Cooper's Hawk	<i>Accipiter cooperii</i>	COHA
Osprey	<i>Pandion haliaetus</i>	OSPR
Scarlet Tanager	<i>Piranga olivacea</i>	SCTA
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SSHA

Table 8. Avian species known to be species of special conservation concern detected at Sagamore Hill National Historic Site, NY in 2014-2015 (US Fish & Wildlife Service, Birds of Conservation Concern 2016).

Common Name	Scientific Name	ALPHA Code
Chimney Swift	<i>Chaetura pelagica</i>	CHSW
Long-tailed Duck	<i>Clangula hyemalis</i>	LTDU
Prairie Warbler	<i>Setophaga discolor</i>	PRAW
Wood Thrush	<i>Hylocichla mustelina</i>	WOTH

Discussion

The birds that have inhabited and migrated through Sagamore Hill have been of interest to people for centuries. Even the park's original home owner Theodore Roosevelt had a lifelong interest in the birds at his home. His first published work was actually an 1870's monograph of birds of Franklin County in upstate New York, followed by a short monograph of birds in Oyster Bay, NY (NPS 2016). He kept lists of birds seen on his Sagamore Hill property, such as the one in Appendix A from 1910. The park is known to draw tens of thousands of visitors each year, many of whom come to bird watch on the scenic grounds.

Although Barton's 2003 inventory detected more species than the 2014/2015 inventory, this is most likely due to effort, the Barton inventory sampled many more days, more sites in more habitats, at different times of the day and night, using additional sampling methods such as call-back surveys. Although the first inventory detected more species, the 2014/2015 inventory detected 12 new species not detected in 2003 (Table 5). The Audubon Society classifies 314 species—nearly half of all North American birds—as severely threatened by global warming. Each of these at-risk birds' potential ranges could expand, contract, or shift in both summer and winter as our climate changes (Audubon 2016).

It is important that the NPS continue to inventory and monitor avian species in the parks in order to better understand species use of parks and how that changed over time. Roosevelt's bird list from 1910 (Appendix A) listed 4 bird species (Grasshopper Sparrow, Sharp-tailed Sparrow, Brown Thrasher, and Meadow Lark) that have not been detected on the property during the last two surveys.

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Appendix A: Theodore Roosevelt's species list at Sagamore Hill.

The following list is Theodore Roosevelt's species list from June 10, 1910 at his Sagamore Hill, NY estate, now Sagamore Hill National Historic Park (Roosevelt 1913).

- Green Heron
- Black-crowned Night Heron
- Red-tailed Hawk
- Yellow-billed Cuckoo
- Screech Owl
- Chimney Swift
- Ruby-throated Hummingbird
- Belted Kingfisher
- Yellow-shafted Flicker
- Eastern Kingbird
- Eastern Wood Peewee
- Tree Swallow
- Barn Swallow
- Blue Jay
- Common Crow
- Black-capped Chickadee
- Catbird
- Brown Thrasher
- Robin
- Wood Thrush
- Cedar Waxwing
- Red-eyed Vireo
- Black-and-White Warbler
- Yellow Warbler
- Black-throated Green Warbler
- Ovenbird
- Yellowthroat
- Eastern Meadowlark
- Red-winged Blackbird
- Baltimore Oriole
- Brown-headed Cowbird
- Scarlet Tanager
- Indigo Bunting
- Purple Finch
- American Goldfinch
- Rufous-sided Towhee
- Grasshopper Sparrow
- Sharp-tailed Sparrow

Appendix B: List of bird species detected in 2003 and 2014-2015 surveys.

Table B-1. Complete list of bird species detected in 2003 (Barton's survey), and 2014-2015 (NCBN survey) at Sagamore Hill National Historic Site, NY.

Common Name	Scientific Name	ALPHA Code
Acadian Flycatcher	<i>Empidonax vireescens</i>	ACFL
American Black Duck	<i>Anas rubripes</i>	ABDU
American Crow	<i>Corvus brachyrhynchos</i>	AMCR
American Goldfinch	<i>Spinus tristis</i>	AMGO
American Kestrel	<i>Falco sparverius</i>	AMKE
American Redstart	<i>Setophaga ruticilla</i>	AMRE
American Robin	<i>Turdus migratorius</i>	AMRO
American Tree Sparrow	<i>American Tree Sparrow</i>	ATSP
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BAEA
Baltimore Oriole	<i>Icterus galbula</i>	BAOR
Barn Swallow	<i>Hirundo rustica</i>	BARS
Belted Kingfisher	<i>Megaceryle alcyon</i>	BEKI
Black-and-white Warbler	<i>Mniotilta varia</i>	BAWW
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	BBCU
Blackburnian Warbler	<i>Setophaga fusca</i>	BLBW
Black-capped Chickadee	<i>Poecile atricapillus</i>	BCCH
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	BCNH
Blackpoll Warbler	<i>Setophaga striata</i>	BLPW
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	BTBW
Black-throated Green Warbler	<i>Setophaga virens</i>	BTNW
Blue Jay	<i>Cyanocitta cristata</i>	BLJA
Blue-headed Vireo	<i>Vireo solitarius</i>	BHVI
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	BWWA
Broad-winged Hawk	<i>Buteo platypterus</i>	BWHA
Brown Creeper	<i>Certhia americana</i>	BRCR
Brown-headed Cowbird	<i>Molothrus ater</i>	BHCO
Bufflehead	<i>Bucephala albeola</i>	BUFF
Canada Goose	<i>Branta canadensis</i>	CAGO
Cape May Warbler	<i>Setophaga tigrina</i>	CMWA
Carolina Wren	<i>Thryothorus ludovicianus</i>	CARW
Cedar Waxwing	<i>Bombycilla cedrorum</i>	CEDW
Chimney Swift	<i>Chaetura pelagica</i>	CHSW
Chipping Sparrow	<i>Spizella passerina</i>	CHSP
Common Goldeneye	<i>Bucephala clangula</i>	COGO

Common Name	Scientific Name	ALPHA Code
Common Grackle	<i>Quiscalus quiscula</i>	COGR
Common Loon	<i>Gavia immer</i>	COLO
Common Tern	<i>Sterna hirundo</i>	COTE
Common Yellowthroat	<i>Geothlypis trichas</i>	COYE
Cooper's Hawk	<i>Accipiter cooperii</i>	COHA
Dark-eyed Junco	<i>Junco hyemalis</i>	DEJU
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	DCCO
Downy Woodpecker	<i>Picoides pubescens</i>	DOWO
Eastern Bluebird	<i>Sialia sialis</i>	EABL
Eastern Kingbird	<i>Tyrannus tyrannus</i>	EAKI
Eastern Phoebe	<i>Sayornis phoebe</i>	EAPH
Eastern Screech-Owl	<i>Megascops asio</i>	EASO
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	EATO
Eastern Wood-Pewee	<i>Contopus virens</i>	EAWP
European Starling	<i>Sturnus vulgaris</i>	EUST
Fish Crow	<i>Corvus ossifragus</i>	FICR
Golden-crowned Kinglet	<i>Regulus satrapa</i>	GCKI
Gray Catbird	<i>Dumetella carolinensis</i>	GRCA
Great Black-backed Gull	<i>Larus marinus</i>	GBBG
Great Blue Heron	<i>Ardea herodias</i>	GBHE
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	GCFL
Great Egret	<i>Ardea alba</i>	GREG
Great Horned Owl	<i>Bubo virginianus</i>	GHOW
Greater Scaup	<i>Aythya marila</i>	GRSC
Greater Yellowlegs	<i>Tringa melanoleuca</i>	GRYE
Green Heron	<i>Butorides virescens</i>	GRHE
Hairy Woodpecker	<i>Picoides villosus</i>	HAWO
Hermit Thrush	<i>Catharus guttatus</i>	HETH
Herring Gull	<i>Larus argentatus</i>	HERG
House Finch	<i>Haemorhous mexicanus</i>	HOFI
House Sparrow	<i>Passer domesticus</i>	HOSP
House Wren	<i>Troglodytes aedon</i>	HOWR
Indigo Bunting	<i>Passerina cyanea</i>	INBU
Laughing Gull	<i>Leucophaeus atricilla</i>	LAGU
Least Tern	<i>Sternula antillarum</i>	LETE
Long-tailed Duck	<i>Clangula hyemalis</i>	LTDU
Magnolia Warbler	<i>Setophaga magnolia</i>	MAWA
Mallard	<i>Anas platyrhynchos</i>	MALL
Marsh Wren	<i>Cistothorus palustris</i>	MAWR
Mourning Dove	<i>Zenaidura macroura</i>	MODO

Common Name	Scientific Name	ALPHA Code
Mute Swan	<i>Cygnus olor</i>	MUSW
Northern Cardinal	<i>Cardinalis cardinalis</i>	NOCA
Northern Flicker	<i>Colaptes auratus</i>	NOFL
Northern Mockingbird	<i>Mimus polyglottos</i>	NOMO
Northern Parula	<i>Setophaga americana</i>	NOPA
Northern Waterthrush	<i>Parkesia noveboracensis</i>	NOWA
Orchard Oriole	<i>Icterus spurius</i>	OROR
Osprey	<i>Pandion haliaetus</i>	OSPR
Ovenbird	<i>Seiurus aurocapilla</i>	OVEN
Palm Warbler	<i>Setophaga palmarum</i>	PAWA
Pine Siskin	<i>Spinus pinus</i>	PISI
Pine Warbler	<i>Setophaga pinus</i>	PIWA
Prairie Warbler	<i>Setophaga discolor</i>	PRAW
Purple Finch	<i>Haemorhous purpureus</i>	PUFI
Purple Martin	<i>Progne subis</i>	PUMA
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	RBWO
Red-breasted Merganser	<i>Mergus serrator</i>	RBME
Red-eyed Vireo	<i>Vireo olivaceus</i>	REVI
Red-tailed Hawk	<i>Buteo jamaicensis</i>	RTHA
Red-throated Loon	<i>Gavia stellata</i>	RTLO
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	RWBL
Ring-billed Gull	<i>Larus delawarensis</i>	RBGU
Ring-necked Pheasant	<i>Phasianus colchicus</i>	RNEP
Rock Dove	<i>Columba livia</i>	RODO
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	RBGR
Ruby-crowned Kinglet	<i>Regulus calendula</i>	RCKI
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	RTHU
Rusty Blackbird	<i>Euphagus carolinus</i>	RUBL
Sanderling	<i>Calidris alba</i>	SAND
Savannah Sparrow	<i>Passerculus sandwichensis</i>	SASP
Scarlet Tanager	<i>Piranga olivacea</i>	SCTA
Sharp-shinned Hawk	<i>Accipiter striatus</i>	SSHA
Snowy Egret	<i>Egretta thula</i>	SNEG
Song Sparrow	<i>Melospiza melodia</i>	SOSP
Spotted Sandpiper	<i>Actitis macularius</i>	SPSA
Swamp Sparrow	<i>Melospiza georgiana</i>	SWSP
Tree Swallow	<i>Tachycineta bicolor</i>	TRES
Tree Swallow	<i>Tachycineta bicolor</i>	TRES
Tufted Titmouse	<i>Baeolophus bicolor</i>	TUTI
Turkey Vulture	<i>Cathartes aura</i>	TUVU

Common Name	Scientific Name	ALPHA Code
Unid. Ringed Plover or Stint	<i>Charadrius/Calidris sp.</i>	PEEP
Veery	<i>Catharus fuscescens</i>	VEER
Virginia Rail	<i>Rallus limicola</i>	VIRA
Warbling Vireo	<i>Vireo gilvus</i>	WAVI
White-breasted Nuthatch	<i>Sitta carolinensis</i>	WBNU
White-eyed Vireo	<i>Vireo griseus</i>	WEVI
White-throated Sparrow	<i>Zonotrichia albicollis</i>	WTSP
Wild Turkey	<i>Meleagris gallopavo</i>	WITU
Wilson's Snipe	<i>Gallinago delicata</i>	WISN
Winter Wren	<i>Troglodytes hiemalis</i>	WIWR
Wood Thrush	<i>Hylocichla mustelina</i>	WOTH
Yellow Warbler	<i>Setophaga petechia</i>	YEWA
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	YBSA
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	YBCU
Yellow-rumped Warbler	<i>Setophaga coronata</i>	YRWA
Yellow-throated Vireo	<i>Vireo flavifrons</i>	YTVI

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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