

2017 Breeding Bird Survey Report, Lawton Farm Recreation Area, Scituate Rhode Island



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1. Executive Summary:

This report describes the results of a series of breeding bird point count surveys conducted at the Lawton Farm Recreation Area in Scituate, Rhode Island during June 2017. To identify breeding birds and evaluate habitat preferences of different species, point count surveys were conducted at three sites within Lawton Farm representing shrubland, forest, and field habitats. In general, survey results in 2017 were similar to the previous year's survey results with respect to species richness and overall bird abundance. Highlights of the 2017 survey results are listed below:

- 1) The total species richness recorded this year (40) was slightly higher than that recorded last year, continuing a trend of increasing species richness since 2014. This year the five most abundant species were bobolink, red-winged blackbird, gray catbird, American goldfinch, and barn swallow.
- 2) Over the six consecutive years that this series of surveys has been carried out, a total of 63 unique species have been recorded at Lawton Farm.
- 3) Bobolinks continue to be observed at Lawton Farm in substantial numbers in Field 1 and 2. This year Bobolinks were again observed in Field 3, during the last survey event. Lawton Farm continues to provide important habitat for this grassland species, a species of conservation concern in Rhode Island.
- 4) Total abundance across all sites in 2016 was 217 individuals, similar to that observed in 2016.
- 5) Fourteen shrubland species were observed in surveys this year, an increase of two over 2016. A total of 22 unique shrubland species have been reported over the six consecutive survey years (2012-2017). These findings suggest that Lawton Farm continues to provide important habitat for shrubland species.

Lawton Farm provides a number of unique habitats to a variety of bird species, and thus contributes to maintaining regional bird diversity within New England. From a conservation point of view this is extremely valuable as this area is helping to maintain and enhance local and regional biodiversity. The property is particularly important to shrubland species and a grassland species, since both categories of birds have suffered regional declines due to habitat loss and forest succession in recent years.

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2. Introduction

This report describes the results of a series of breeding bird point count surveys conducted at the Lawton Farm Recreation Area in Scituate, Rhode Island in June 2017. Lawton Farm is a 54.4 acre parcel consisting primarily of open fields and shrubland, except for approximately 20 acres of forested wetlands and a small stand of upland hardwoods in the southwest corner. The ownership of the property is divided between the Scituate Land Trust, which purchased 39.4 acres (plat 9-1, lot 9) of the property via a conservation easement in 1990 through an Open Space Grant from the Rhode Island Department of Environmental Management (RIDEM), and the Town of Scituate, which purchased the remaining 15 acres (plat 9-1, lot 272) the same year (Town of Scituate, Real Estate Data). The 15 acres owned by the Town does not have a conservation easement or any other type of protection that would prevent development. The Scituate Town Council has assigned the task of managing the Lawton Farm property to the Scituate Conservation Commission (SCC). The SCC is an advisory board that works to promote and develop natural resources, protect watershed resources, and to preserve natural aesthetic areas within the Town of Scituate (Town of Scituate). A property management plan for Lawton Farm was developed in 2009 and the SCC continues to implement the conservation and management objectives described within the plan.

An important objective for the property is to maintain grassland habitat for Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*). To evaluate the progress of this management objective and to better understand bird use of the valuable shrub and grassland habitat that the property offers, point count surveys have been conducted since 2012. This report provides results of the sixth consecutive year of point count surveys at Lawton Farm.

3. Methods

The 2017 point count surveys were conducted at the same sites used in the 2012-2016 surveys. The three sites were selected based on the different types of shrubland in addition to forest and field habitats (Table 1 and Figure 1).

Table 1: Lawton Farm point count site habitat descriptions 2017.

Site	Description
Site 1	Field with periodic mowing, forested perimeter
Site 2	Field, shrubland and forest on perimeter
Site 3	Shrubland created by irregular mowing of the field, a meadow, and forest



Figure 1: Point count sampling sites at Lawton Farm, Scituate, Rhode Island in 2017. These sites are the same as the point counts conducted from 2012-2016.

Site 1: The first survey site was located in the central portion of the property on the edge of Field 1 (Figure 1; 41.75792° N, -71.55652° W, Figure 2). The field was bordered by small patches of shrubland to the north and west. This site included a hedgerow of mature trees

which was removed in 2012 to connect Fields 1 and 2 to improve habitat for bobolink and other grassland bird species. The eastern portion of the shrubland was dominated by multiflora rose (*Rosa multiflora*), which transitioned into a small herbaceous wetland to the west. To the north of the shrubland was a small area of forest where red maple (*Acer rubrum*) and white ash (*Fraxinus americana*) are the dominant species. To the east and south of the sampling site was Field 1, which is mowed every other year to maintain grassland habitat; mowing occurs in September to prevent disturbance of nesting birds. The hay bales are sold as construction hay.



Figure 2: A view of Site 1 looking southerly with field 1 to the left. In an effort to improve nesting habitat for grassland species, this year some of the walking trails have been closed and allowed to naturally re-vegetate. The former walking path is just barely evident in the middle of the photo.

Site 2: The second sampling site was located in the western portion of the property on the southwestern edge of Field 3 (41.75715° N, -71.55952° W) adjacent to a patch of shrubland which began management in 2012 for invasive plant removal of species such as autumn olive (*Elaeagnus umbellata*) multiflora rose. Prominent species in this area included saplings of black cherry (*Prunus serotina*), Oriental bittersweet (*Celastrus orbiculatus*), and poison ivy (*Toxicodendron radicans*). The sampling site also included upland forest dominated by white ash and white oak (*Quercus alba*) (Figure 3).



Figure 3. A view of Site 2 looking northwest.

Site 3: The third sampling site was located in the northern boundary of the property on the northern edge of Field 4 (41.75745° N, -71.55952° W). Field 4 included patchy regeneration of saplings of black cherry, American ash, and white oak. This sampling site provided the most heterogeneous vegetation mixture which contained short grasses and forbs interspersed with shrubs that measure up to four feet tall (Figure 4). White oak and American ash were the dominant species within the upland forest located on the northern limits of the survey site.



Figure 4. A south-facing view of the heterogeneous shrub habitat at Site 3. The forested line in the background divides this site from Site 2.

The methodology used in the 2017 point count surveys followed the same protocol used in the 2012-2016 surveys. The purpose of the point count surveys was to identify breeding birds within Lawton Farm and to evaluate habitat preferences of different species. The three selected survey sites were separated by a distance of greater than 100 m to minimize the possibility recording the same bird at more than one site. Point counts were preceded by a three-minute wait period in order to minimize the disturbance to birds and to allow them to acclimate to the observers' presence. Point counts were conducted by a primary observer facing south (R. McKinney) and a secondary observer facing north (C Cooper-Mullin) in order to achieve a 360° view of the site. Species identification and abundance were recorded based on songs, calls, direct observations, and fly overs within 100 m of the observation site during each ten-minute point count. Observers made distinctions between birds present ≤ 50 m from the site and those between 50 and 100 m from the site. Observers communicated to avoid recording the same bird twice and to clarify location and species. All data was recorded by one observer (R. McKinney) to keep the notes about birds consistent. Each site was surveyed on three separate occasions on June 2nd, 16th and 30th, 2017 and all were conducted between 0600 and 0900 hours.

To examine bird species associations with the survey sites, we classified birds into five guilds based on their preferred nesting and foraging habitat. Shrubland birds were those identified as primarily nesting in shrub habitat according to King and Schlossberg (2012). Forest birds were those described as cavity nesting species by Scott et al. (1977). Woodland,

grassland, and open habitat birds were classified based on their primary habitat preference listed in Ehrlich et al. (1988).

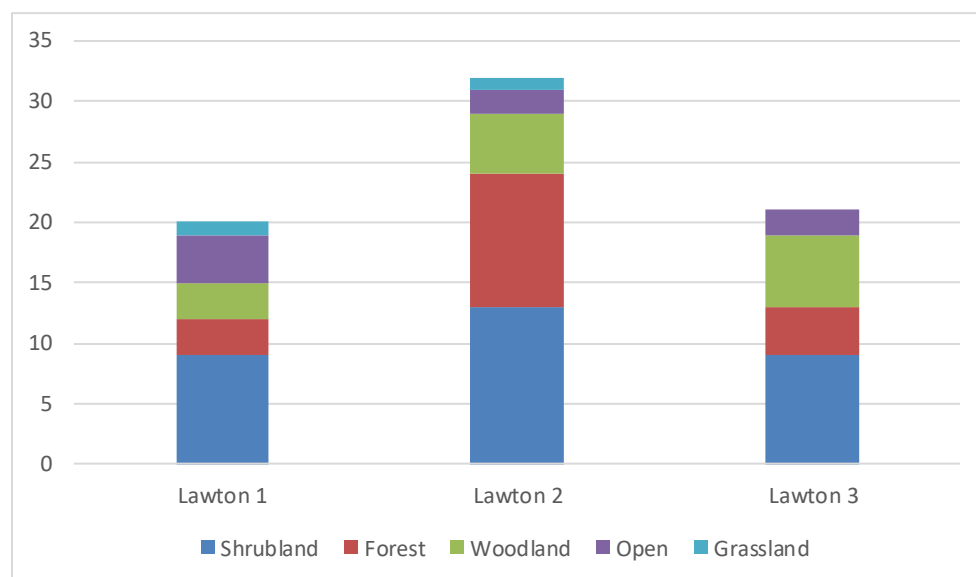
4. Results

We observed 40 unique bird species in 2017 across the three sites during the three survey periods. The most abundant species were Bobolink (*Dolichonyx oryzivorus*; 30 records), Red-winged Blackbird (*Agelaius phoeniceus*; 22 records), Gray Catbird (*Dumatella carolinensis*; 15 records), American Goldfinch (*Carduelis tristis*; 11 records), and Barn Swallow (*Hirundo rustica*; 10 records). Bobolinks continue to be observed at Lawton Farm in substantial numbers in Field 1 where they nest and use the area for foraging and cover. Similar to last year's survey, bobolinks were also observed at Site 2, but only during the last survey event. Over the six consecutive years that this series of surveys has been carried out, a total of 63 unique species have been recorded at Lawton Farm.

The total species richness recorded this year was the highest recorded to date, surpassing that of the previous 5 years: 2016 (38), 2015 (32), 2014 (35), 2013 (25), and 2012 (28). A total of 9 species were observed across all three sites, and 15 species were observed at two sites. Site 1 had 5 unique recorded species (species observed only at Site 1), while Site 2 had 9 and Site 3 had 2 unique species (Table 3). A total of 32 species were observed at Site 2 during the three survey events, followed by Site 3 with 21 species and Site 1 with 20 species observed.

The percentage of shrubland bird species reported was not significantly different across the survey sites and averaged 42.8 ± 2.2 % of all species recorded at each site (Figure 2a). A total of 11 forest-nesting species, or 61.1% of the total forest-nesting species recorded across all sites, were reported at Site 2 (Figure 2b). Woodland species were reported primarily at Sites 2 and 3 (78.5% of the total woodland species recorded across all sites), while the sole grassland-nesting species was observed at Sites 1 and 2, although with much greater frequency and abundance at Site 1 (Figure 2b, Table 3).

a)



b)

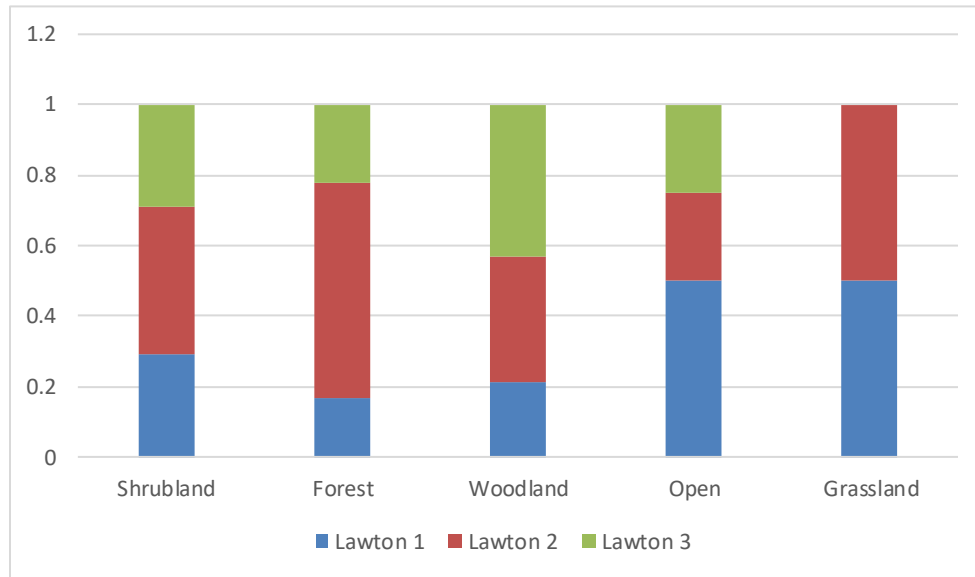


Figure 2: a) Proportion of shrubland, forest, woodland, open, and grassland birds observed, and b) distribution of the five bird species guilds at the 3 Lawton Farm point count sites during the survey events in June, 2017.

Five species were observed on the property during the three sample events, but seen either outside of the sample site locations or outside of the sample time window at a site: a Cooper’s Hawk (*Accipiter cooperii*), Chimney Swift (*Chaetura pelagica*), Common Raven (*Corvus corax*), and Scarlet Tanager (*Hylocichla mustelina*) at or near Site 2, and a Fish Crow (*Corvus ossifragus*) flyover at site 3 outside of the sample time window.

Total abundance across all sites in 2017 was 217 individuals, similar to the number observed in 2016 (Table 3). In 2017, the greatest number of individuals recorded in a count within 100 m of the site occurred on 6/27/16 at Site 1 (35 individuals). Within that count, Bobolink (*Dolichonyx oryzivorus*) was the highest (12 individuals recorded), followed by Red-winged Blackbird (*Agelaius phoeniceus*) (4 individuals recorded).

Date	Number of Individuals	Number of Species
6/2/17	79	39
6/16/17	64	39
6/30/17	74	41

Table 2: Number of individual birds counted and the number of species counted at the 3 Lawton Farm point count sites during the survey events in June, 2017. Species reported are not unique species, and may reflect species counted at more than one site during a survey event.

The number of species and individuals seen during the point counts remained more or less constant as the season progressed (Table 2). Nine species were reported at all three sites: Red-eyed Vireo (*Vireo olivaceus*), Blue Jay (*Cyanocitta cristata*), American Robin (*Turdus*

migratorius), Gray Catbird, Yellow Warbler (*Setophaga petechia*), Eastern Towhee (*Pipilo erythrophthalmus*), Inigo Bunting (*Passerina cyanea*), Common Grackle (*Quiscalus quiscula*), and American Goldfinch. Six species (Barn Swallow *Hirundo rustica*, Cedar Waxwing *Bombycilla cedrorum*, Ovenbird *Seiurus aurocapilla*, Common Yellowthroat *Geothlypis trichas*, Song Sparrow *Melospiza melodia*, and Bobolink) were observed at Sites 1 and 2, and eight species were reported at Sites 2 and 3: Ruby-throated Hummingbird *Archilochus colubris*, Downy Woodpecker *Picoides pubescens*, Great Crested Flycatcher *Myiarchus crinitus*, White-breasted Nuthatch *Sitta carolinensis*, Prairie Warbler *Setophaga discolor*, Field Sparrow *Spizella pusilla*, Northern Cardinal *Cardinalis cardinalis*, and Baltimore Oriole *Icterus galbula*. Red-winged Blackbirds were reported at Sites 1 and 3.

Twelve of the species seen during the 2016 counts were shrubland birds, but the Bobolink was the only grassland species (Table 3).

5. Discussion

Both bird abundance and the number of species observed at Lawton Farm continues to increase. The mean number of species observed for 2012 – 2014 was 29, whereas the mean for the last three years (2015-2017) increased to 34. In 2017 we observed 16 species that weren't present in 2016, including 3 species, Hermit Thrush, Northern Parula, and Rose-breasted Grosbeak, that were observed for the first time. These results suggest that as previous habitat management actions (e.g., creation of shrubland habitat, creating more continuous grassland and open habitat) take effect, additional species are utilizing the area. The large field maintained as grassland habitat continues to support many nesting Bobolinks, although our survey location near the field (Site 1) only captures a portion of the total nesting individuals. Management efforts to link what were the two grassland fields into one continuous field should benefit both Bobolinks and Red-winged Blackbirds that are nesting in the area, as well as providing a larger area that may allow for colonization by other grassland bird species. The combined fields have an area of about 8.66 ha, which is above the minimum patch area requirements of 5 ha needed to support breeding habitat for Eastern Meadowlark (*Sturnella magna*), a target species for conservation at Lawton Farm (Herkert 1994).

Species observed at all three sites consisted of those considered to be habitat generalists in southern New England. A number of these species: American Robin, Eastern Towhee, American Goldfinch, Blue Jay, Common Grackle, and Gray Catbird, are human tolerant birds and can be found in urban as well as rural habitats. However, several species that are not tolerant of human activity, including Red-eyed Vireo, Indigo Bunting, and Yellow Warblers, were observed at all three sites and this suggests that the protected habitat and natural setting of Lawton Farm is providing needed habitat for these species. The species unique to each site provide insight into the unique characteristics of the sites: at Site 1 mostly open habitat species were observed, whereas at Site 2 a number of forest-nesting species were reported, presumably as a result of the forested land adjacent to the site.

The unique habitat characteristics of the three sites is also evident in the proportion of species with differing habitat requirements using the sites. Site 1, located within the large grassland field, had the highest percentage of grassland and open-habitat species. Site 2, located near a field that is beginning succession to shrubland but is adjacent to an expansive forested area, had the highest proportion of forest-nesting species. This area can also provide forest edge habitat to species such as Black-capped Chickadee and Tufted Titmouse that utilize forest edges. Site 3 is in a mid-successional shrubland adjacent to a woodland, or

Common Name	Scientific Name	Guild	Presence / Absence		
			Lawton 1	Lawton 2	Lawton 3
Mourning Dove	<i>Zenaida macroura</i>	O	1	0	0
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	S	1	0	0
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	S	0	1	1
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	W	0	0	1
Downy Woodpecker	<i>Picoides pubescens</i>	W	0	1	1
Northern Flicker	<i>Colaptes auratus</i>	F	0	1	0
Eastern Wood-Pewee	<i>Contopus virens</i>	F	0	1	0
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	F	0	1	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	F	1	1	1
Blue Jay	<i>Cyanocitta cristata</i>	W	1	1	1
American Crow	<i>Corvus brachyrhynchos</i>	W	0	1	0
Barn Swallow	<i>Hirundo rustica</i>	O	1	1	0
Black-capped Chickadee	<i>Poecile atricapillus</i>	F	0	1	0
Tufted Titmouse	<i>Baeolophus bicolor</i>	F	0	0	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	F	0	1	1
Veery	<i>Catharus fuscescens</i>	F	0	1	0
Hermit Thrush	<i>Catharus guttatus</i>	F	0	1	0
Wood Thrush	<i>Hylocichla mustelina</i>	F	0	1	0
American Robin	<i>Turdus migratorius</i>	W	1	1	1
Gray Catbird	<i>Dumetella carolinensis</i>	S	1	1	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S	1	1	0
Ovenbird	<i>Seiurus aurocapilla</i>	F	1	1	0
Common Yellowthroat	<i>Geothlypis trichas</i>	S	1	1	0
Northern Parula	<i>Setophaga americana</i>	F	0	1	0
Magnolia Warbler	<i>Setophaga magnolia</i>	S	0	1	0
Yellow Warbler	<i>Setophaga petechia</i>	S	1	1	1
Prairie Warbler	<i>Setophaga discolor</i>	S	0	1	1
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	S	1	1	1
Chipping Sparrow	<i>Spizella passerina</i>	W	0	0	1
Field Sparrow	<i>Spizella pusilla</i>	S	0	1	1
Song Sparrow	<i>Melospiza melodia</i>	S	1	1	0
Northern Cardinal	<i>Cardinalis cardinalis</i>	S	0	1	1
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	F	1	0	0
Indigo Bunting	<i>Passerina cyanea</i>	S	1	1	1
Bobolink	<i>Dolichonyx oryzivorus</i>	G	1	1	0
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	O	1	0	1
Common Grackle	<i>Quiscalus quiscula</i>	O	1	1	1
Brown-headed Cowbird	<i>Molothrus ater</i>	W	1	0	0
Baltimore Oriole	<i>Icterus galbula</i>	W	0	1	1
American Goldfinch	<i>Spinus tristis</i>	S	1	1	1

Table 3. Bird species observed within 100 m of the point count center during three survey events consisting of 10 minute counts at three sites within Lawton Farm Recreation Area, Scituate, Rhode Island, in 2017. Observations were based on singing, calls, visual observation, and fly overs. Guilds were assigned based on preferred breeding habitat; S = shrubland, F = forest, W = woodland, G = grassland, O = open land. Presence of a species was indicated by a “1” in the presence / absence columns, absence was indicated by a “0”.

forested area with lower tree density. This is reflected in this area supporting a number of woodland habitat species.

Overall, Lawton Farm is a unique natural area that although of relatively small area has a variety of habitats for birds and supports a diverse array of species, many of which are designated Species of Greatest Conservation Need in the 2015 Rhode Island Wildlife Action Plan. By maintaining a variety of bird habitats, particularly grassland and shrubland, in a protected setting Lawton Farm will continue to contribute to the conservation of bird species in Rhode Island.

Literature Cited

Ehrlich, P.R., Dobkin, D.S., and Wheye, D. *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. Simon and Schuster, New York, 1988.

Herkert, J.R. 1994. The effects of habitat fragmentation on midwestern grassland bird communities. *Ecological Applications* 4:461–71.

King, D.I., Schlossberg S.R. 2012. Conservation practices benefit shrubland birds in New England. Conservation Effects Assessment Project, Natural Resources Conservation Service.

Scott VE, Evans KE, Patton DR, Stone CP. 1977. Cavity-Nesting Birds of North American Forests. US Forest Service, Agriculture Handbook No. 511.