

2018 Breeding Bird Survey Report, Lawton Farm Recreation Area, Scituate Rhode Island



**Prepared for: Scituate Conservation Commission
Clara Cooper-Mullin and Richard McKinney
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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 2018. 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 2018 were similar to the previous year's survey results with respect to species richness and overall bird abundance. Highlights of the 2018 survey results are listed below:

- 1) The total species richness recorded this year (38) was comparable to that recorded in recent years, consistent with the increased species richness observed since 2014. This year the five most abundant species were Bobolink, American Robin, Red-eyed Vireo, Gray Catbird, and Eastern Towhee.
- 2) Over the seven 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. 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 2018 was 225 individuals, similar to that observed in 2017.
- 5) Seventeen shrubland species were observed in surveys this year, an increase of three over 2017. A total of 22 unique shrubland species have been reported over the six consecutive survey years (2012-2018). These findings suggest that Lawton Farm continues to provide important habitat for shrubland species.

Lawton Farm provides 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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For more information contact Clara Cooper-Mullin (coopermullinc@gmail.com) or Richard McKinney (rmckinney@uri.edu).

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 2018. 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 oryzivorous*) 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 7th consecutive year of point count surveys at Lawton Farm.

3. Methods

The 2018 point count surveys were conducted at the same sites used in the 2012-2017 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 2018.

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 2018. These sites are the same as the point counts conducted from 2012-2017.

Site 1: The first survey site was 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 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 along 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 2018 point count surveys followed the same protocol used in the 2012-2017 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 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) 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 1st, 8th and 22nd, 2018 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).

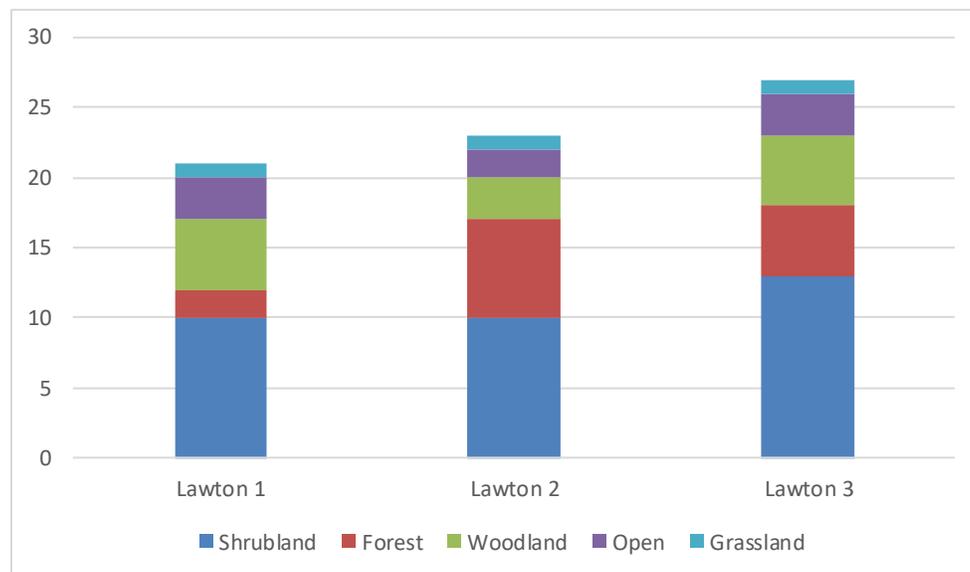
4. Results

We observed 38 unique bird species in 2018 across the three sites during the three survey periods. The most abundant species were Bobolink (*Dolichonyx oryzivorus*; 38 records), American Robin (*Turdus migratorius*; 21 records), Red-eyed Vireo (*Vireo olivaceus*; 18 records), Gray Catbird (*Dumetella carolinensis*; 13 records), and Eastern Towhee (*Pipilo erythrophthalmus*; 11 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. Bobolinks were not observed in Fields 2 or 3 this year. Over the 7 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 number of species observed this year was comparable to the number observed over the last few years, maintaining a trend of increased species richness observed in recent years: 2017 (40 species observed), 2016 (38), 2015 (32), 2014 (35), 2013 (25), and 2012 (28). A total of 10 species were observed across all three sites, and 14 species were observed at two sites. Site 1 had 1 unique recorded species (species observed only at Site 1), while Site 2 had 4 and Site 3 had 5 unique species (Table 3). A total of 28 species were observed at Site 3 during the three survey events, followed by Site 2 with 24 species and Site 1 with 21 species observed.

The percentage of shrubland bird species reported was not significantly different across the survey sites and averaged $45.2 \pm 2.8\%$ of all species recorded at each site (Figure 2b). A total of 7 of the 8 forest-nesting species recorded across all sites were observed at Site 2 (Figure 2a). Woodland species and the sole grassland-nesting species were observed more or less equally across all 3 sites (Figure 2a, Table 3).

a)



b)

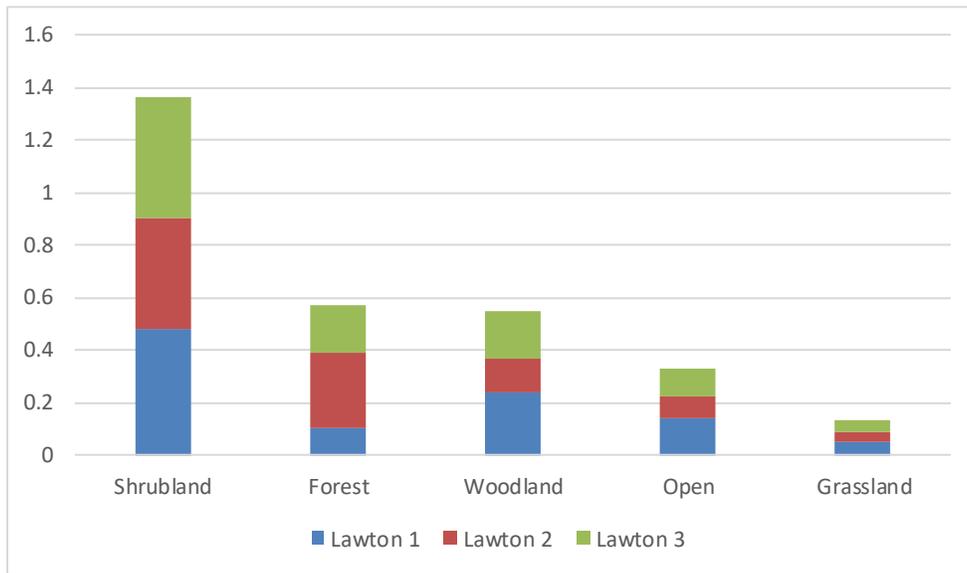


Figure 2: a) Number of shrubland, forest, woodland, open, and grassland birds observed, and b) proportion of the five bird species guilds at the 3 Lawton Farm point count sites relative to the total number of species of that guild observed at the site during the survey events in June, 2018.

Two 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 Chestnut-sided Warbler (*Dendroica pensylvanica*) was also heard singing near site 2; and a flyover Chimney Swift (*Chaetura pelagica*) was observed at site 3 outside of the sample time window.

Total abundance across all sites in 2018 was 225 individuals, similar to the number observed in 2017. In 2018, the greatest number of individuals recorded in a count within 100 m of the site occurred on 6/22/18 at Site 1 (34 individuals). Within that count, Bobolink (*Dolichonyx oryzivorus*) was the highest (14 individuals recorded), followed by Red-winged Blackbird (*Agelaius phoeniceus*) (5 individuals recorded).

Date	Number of Individuals	Number of Species
6/1/18	96	21
6/8/18	63	24
6/22/18	66	28

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, 2018. Species reported are not unique species, and may reflect species counted at more than one site during a survey event.

Except for the first count 6/1/2018, the number of species and individuals seen during the point counts remained constant as the season progressed (Table 2). Ten species were reported at all three sites: Red-eyed Vireo (*Vireo olivaceus*), Blue Jay (*Cyanocitta cristata*),

Bobolink, American Robin (*Turdus migratorius*), Gray Catbird, Yellow Warbler (*Setophaga petechia*), Eastern Towhee (*Pipilo erythrophthalmus*), Northern Cardinal (*Cardinalis cardinalis*), Common Grackle (*Quiscalus quiscula*), and American Goldfinch (*Carduelis tristis*). Seventeen of the species seen during the 2018 counts were shrubland birds, but Bobolink was the only grassland species (Table 3).

5. Discussion

Bird abundance and the number of species observed at Lawton Farm in 2018 remained at a level consistent with the numbers observed in the last few years. In 2018 we observed 6 species that weren't present in 2017, although these had been observed in the past at Lawton so were not new species to the site. These results continue to suggest that previous habitat management actions (e.g., creation of shrubland habitat, creating more continuous grassland and open habitat) are effectively maintaining habitat for the species 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 appear to be benefiting Bobolinks that are nesting in the area, as well as providing a larger area that may allow for colonization by other grassland bird species, although we haven't seen any evidence of use by other grassland species to date.

The species unique to each site continue to reinforce the unique characteristics of the sites: at Site 1 mostly open habitat species were observed, whereas at Site 2 a majority of the forest-nesting species were reported as a result of the forested land adjacent to the site.

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.

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.

Common Name	Scientific Name	Guild	Presence / Absence		
			Lawton 1	Lawton 2	Lawton 3
Wild Turkey	<i>Meleagris gallopavo</i>	F	0	1	0
Mourning Dove	<i>Zenaida macroura</i>	O	0	0	1
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	S	1	0	1
Downy Woodpecker	<i>Picoides pubescens</i>	W	0	1	0
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	0	1
Barn Swallow	<i>Hirundo rustica</i>	O	1	1	0
Black-capped Chickadee	<i>Poecile atricapillus</i>	F	0	0	0
Tufted Titmouse	<i>Baeolophus bicolor</i>	F	0	1	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	F	0	1	1
Carolina Wren	<i>Thryothorus ludovicianus</i>	S	0	0	1
House Wren	<i>Thryomanes bewickii</i>	S	0	1	0
Veery	<i>Catharus fuscescens</i>	F	0	1	0
Wood Thrush	<i>Hylocichla mustelina</i>	F	1	1	0
American Robin	<i>Turdus migratorius</i>	W	1	1	1
Gray Catbird	<i>Dumetella carolinensis</i>	S	1	1	1
Northern Mockingbird	<i>Mimus polyglottos</i>	S	1	0	0
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S	1	0	1
Blue-winged Warbler	<i>Vermivora pinus</i>	S	0	1	0
Black-and-white Warbler	<i>Mniotilta varia</i>	S	0	0	1
Ovenbird	<i>Seiurus aurocapilla</i>	F	0	1	1
Common Yellowthroat	<i>Geothlypis trichas</i>	S	0	1	1
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	1	0	1
Field Sparrow	<i>Spizella pusilla</i>	S	0	0	1
Song Sparrow	<i>Melospiza melodia</i>	S	1	1	0
Northern Cardinal	<i>Cardinalis cardinalis</i>	S	1	1	1
Indigo Bunting	<i>Passerina cyanea</i>	S	1	0	1
Bobolink	<i>Dolichonyx oryzivorus</i>	G	1	1	1
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	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 2018. 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”.