

**2019 Breeding Bird Survey Report,
Lawton Farm Recreation Area,
Scituate Rhode Island**



**Prepared for: Scituate Conservation Commission
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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 May and June 2019. 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. Survey results in 2019 showed an increase in species richness with a total of 45 species observed across the 3 sites. Highlights of the 2019 survey results are listed below:

- 1) The total number of species observed this year (44) was the highest number since the surveys began in 2012. This year the five most abundant species were Bobolink, Cedar Waxwing, Eastern Towhee, American Robin, and Tree Swallow.
- 2) Over the eight 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, but unlike the past several years no Bobolinks were observed in Fields 2 or 3. However, Lawton Farm continues to provide important habitat for Bobolinks, a species of conservation concern in Rhode Island.
- 4) Total abundance across all sites in 2019 was 304 individuals, a 35% increase over that observed in 2018.
- 5) Nineteen shrubland species were observed in surveys this year, an increase of two over 2018. A total of 24 unique shrubland species have been reported over the past eight survey years (2012-2019). 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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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 May and June 2019. 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. 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. 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 8th consecutive year of point count surveys at Lawton Farm.

3. Methods

The 2019 point count surveys were conducted at the same sites used in the 2012-2018 surveys. The three sites were originally 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 2019.

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 2019. These sites are the same as the point counts conducted from 2012-2018.

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 2019 point count surveys followed the same protocol used in the 2012-2018 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 (C Cooper-Mullin) and a secondary observer facing north (R. McKinney) 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 May 31st, June 7th and June 29th, 2019 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).

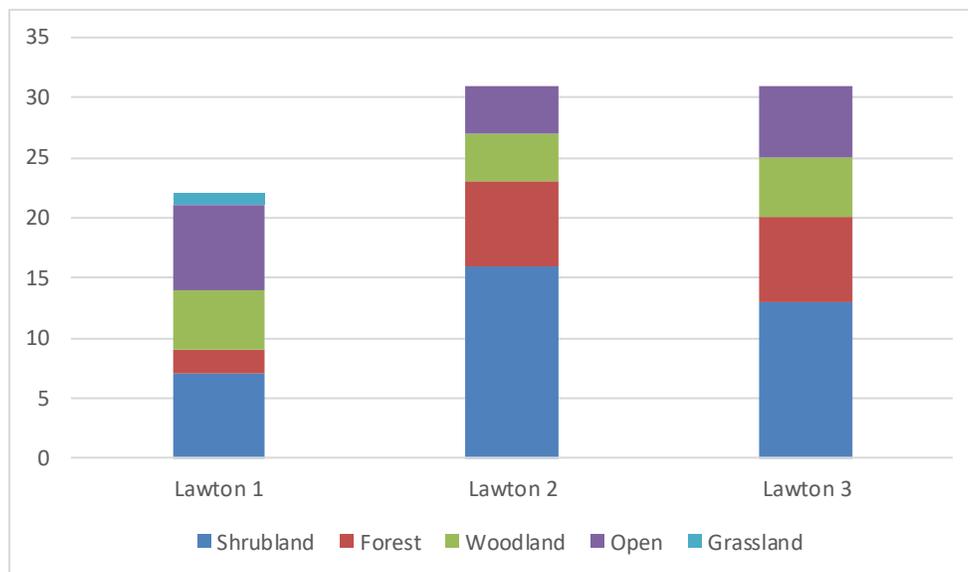
4. Results

We observed 44 unique bird species in 2019 across the three sites during the three survey periods. The most abundant species were Bobolink (*Dolichonyx oryzivorus*; 42 recorded), Cedar Waxwing (*Bombycilla cedrorum*; 28 recorded), Eastern Towhee (*Pipilo erythrophthalmus*; 18 recorded), American Robin (*Turdus migratorius*; 15 recorded), Tree Swallows (*Tachycineta bicolor*; 15 recorded mostly flyovers), and Gray Catbird (*Dumetella carolinensis*; 13 recorded). 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 8 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 the highest number recorded in the 8 years of surveys. A total of 8 species were observed across all three sites, and 24 species were observed at two sites. Site 1 had 3 unique recorded species (species observed only at Site 1), while Site 2 had 5 and Site 3 had 4 unique species (Table 3). A total of 32 species were observed at Site 2 during the three survey events, followed by Site 3 with 31 species and Site 1 with 22 species observed.

Sixteen species, or half of the species reported at Site 2, were shrubland bird species. This was the highest percentage of shrubland species at any of the sites; overall shrubland species averaged 41.3 ± 9.1 % of all species recorded across the 3 sites (Figure 2a), which is consistent with recent surveys (Figure 2a). A total of 7 of the 8 forest-nesting species recorded across all sites were observed at Site 2. Woodland species were observed more or less equally across all 3 sites, and forest species predominantly at sites 2 and 3 (Figure 2b, Table 3).

a)



b)

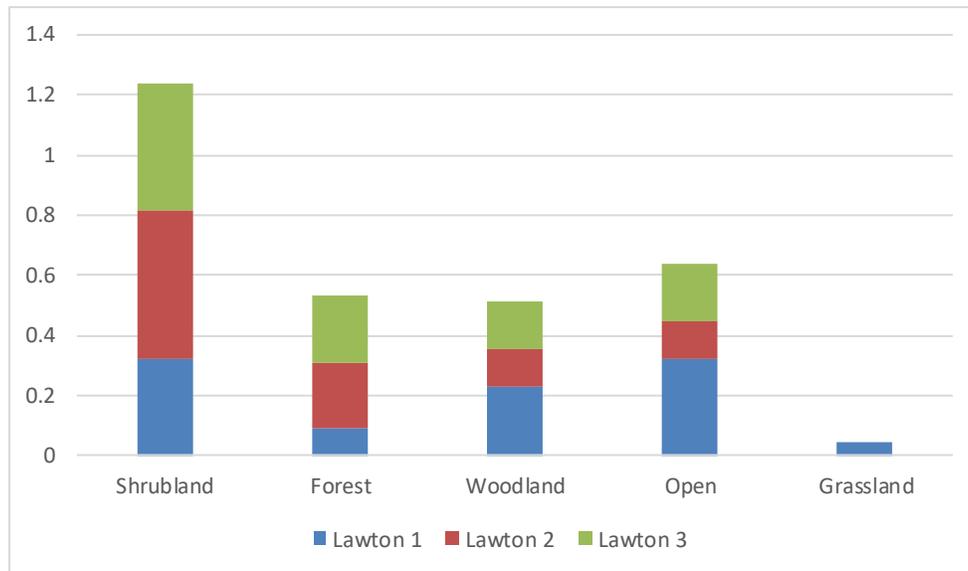


Figure 2: a) Number of shrubland, forest, woodland, open, and grassland birds observed, and b) proportion of the five bird species guilds at the 3 Lawton Farm point count sites relative to the total number of species of that guild observed at the site during the survey events in May and June, 2019.

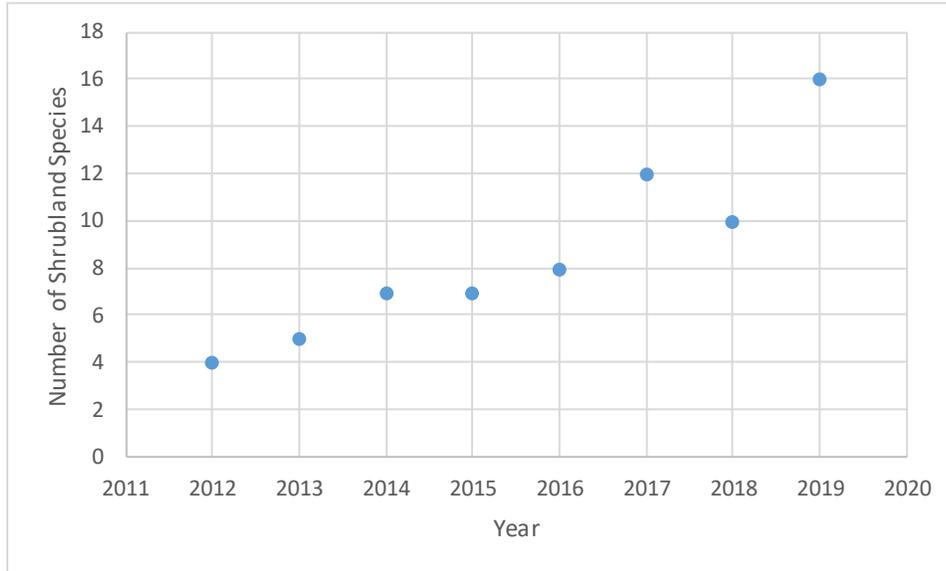
Total abundance across all sites in 2019 was 304 individuals, a roughly 35% increase over the numbers observed in 2017 and 2018. In 2019, the greatest number of individuals recorded in a count within 100 m of the site occurred on 6/29/19 at Site 3 (55 individuals). Within that count, House Finch (*Carpodacus mexicanus*) was the highest (6 individuals recorded), followed by Tree Swallows and Tufted Titmouse (*Baeolophus bicolor*) (5 individuals recorded).

Date	Number of Individuals	Number of Species
5/31/19	115	22
6/7/19	86	32
6/29/19	103	31

Table 2: Number of individual birds and the number of species counted at the 3 Lawton Farm point count sites during the survey events in May and June, 2019. Species reported are not unique species, and may reflect species counted at more than one site during a survey event.

A total of 16 shrubland species were reported at Site 2, the highest number at this site in the eight years of surveys. The number of shrubland species has been steadily increasing since 2012 at both Sites 2 and 3 (Figure 3). Shrubland species observed at Site 2 increased from 4 in 2012 to 16 in 2019, and at Site 3 from 3 in 2012 to 13 in 2019.

a)



b)

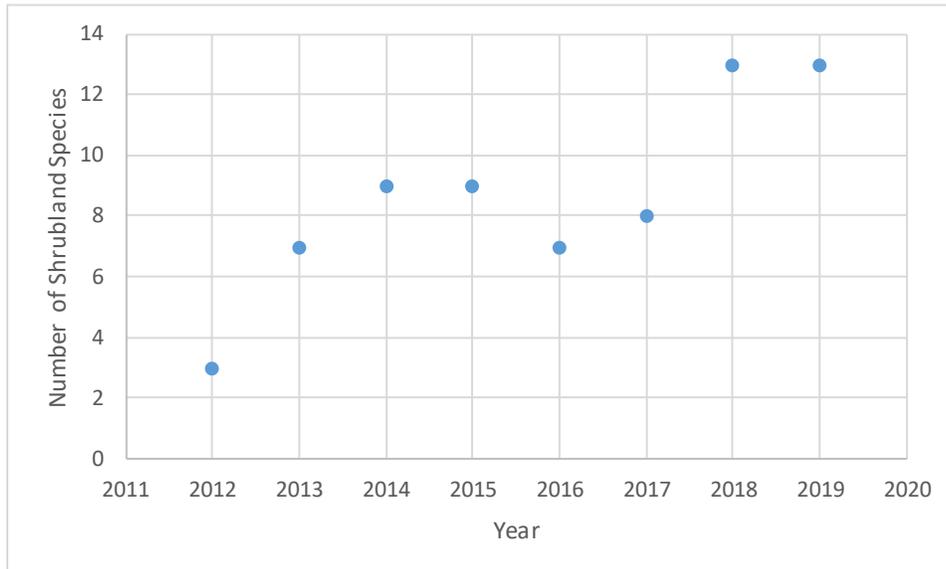


Figure 3: Number of shrubland bird species observed at a) Site 2 and b) Site 3 from Lawton Farm surveys carried out during the years 2012 – 2019.

5. Discussion

The number of species observed this year at Lawton continues the trend of increasing numbers of species utilizing Lawton's habitats. Although several factors, including the variability in data generated from point counts and year-to-year fluctuations in the abundance of some species, may contribute to the number of species observed at Lawton in any given

year, the consistent increasing trend is still a positive sign and confirms the conservation value of the area. Eastern Bluebirds *Sialis sialis* were observed for the first time, utilizing nest boxes installed near Stations 1 and 2. During the course of the survey, we were able to confirm that a mating pair using the box near Station 1 fledged 2 young, possibly during the 2nd or 3rd week of June. Several species observed during this year's survey are regulars at Lawton Farm: eleven species, including 4 shrubland species (Common Yellowthroat *Geothlypis trichas*, Eastern Towhee, Gray Catbird, Northern Cardinal *Cardinalis cardinalis*), were observed during each of the 8 surveys conducted since 2012.

We recorded Bobolinks only in Field 1 this year, but with similar abundance to past surveys. From 2016 – 2019, we recorded on average about 12 individual Bobolinks per survey event, and of these 12 about 35% were singing. Singing males are assumed to be defending nesting territory and can be considered a surrogate for a breeding pair, resulting in an average of 4 breeding pairs within the survey segment. The survey segment itself includes about 0.9 ha of the field, which is about 10% of the total area of the field. If we assume breeding pairs are uniformly distributed throughout the entire field, we could estimate about 40 breeding pairs of Bobolinks at Lawton Farm based on our point count data. This would be about twice that predicted based on a minimum breeding habitat area requirement for Bobolinks of 0.49 ha (Dechant et al. 1999), or about 18 breeding pairs for Field 1. The difference may result from our assumption of uniform distribution being incorrect, or perhaps food resources are sufficiently abundant and nesting conditions favorable enough to support additional breeding pairs and effectively lower the minimum area requirement. Either way we can conclude that Lawton Farm provides important breeding habitat for Bobolinks, a species of conservation concern in Rhode Island.

Total abundance increased across all sites in 2019. The total number observed, 304 individuals, was a 35% increase over that observed in 2018 and represented the highest total to date. Again, a number of factors, many of which not directly tied to the Lawton Farm habitats, can influence bird abundance, but the increasing numbers observed are at least indicative that the habitats continue to be utilized for both breeding and foraging.

The current series of annual surveys was started to observe potential changes in shrubland bird use of Lawton Farm habitats after several management actions were taken in the earlier part of the decade to increase shrub habitat, particularly near our sites 2 and 3 (i.e., Fields 3 and 4). Results over the last several surveys point to the success of these actions, and the increased use of fields 3 and 4 as shrub vegetation becomes more prominent. This year we again observed an increase in shrubland bird species utilizing these areas, and over the years (2012-2019) 24 unique shrubland species have been reported. This represents more than half of the identified 41 shrubland bird species in New England and is important because many of these species are declining as a result of regional losses in shrubland habitat (Schlossberg and King 2012). Although relatively small, the shrubland habitats at Lawton Farm continue to contribute to the local conservation of shrubland bird species.

Literature Cited

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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.

		Guild	Lawton 1	Lawton 2	Lawton 3
American Crow	AMCR	W	1	0	1
American Goldfinch	AMGO	S	1	0	1
American Robin	AMRO	W	1	1	1
Barn Swallow	BASW	O	1	0	1
Black-capped Chickadee	BCCH	F	0	1	1
Blue Jay	BLJA	W	1	1	1
Blue-winged Warbler	BWWA	S	0	1	1
Bobolink	BOBO	G	1	0	0
Brown-headed Cowbird	BHCO	W	1	0	0
Brown Thrasher	BRTH	S	0	0	1
Canada Goose	CAGO	O	0	0	1
Carolina Wren	CAWR	S	0	1	0
Cedar Waxwing	CEWA	S	1	1	1
Chipping Sparrow	CHSP	W	0	1	1
Common Grackle	COGR	O	1	0	1
Common Yellowthroat	COYE	S	1	1	0
Eastern Bluebird	EABL	O	1	1	0
Eastern Kingbird	EAKI	O	1	1	0
Eastern Phoebe	EAPH	W	1	1	1
Eastern Towhee	EATO	S	0	1	1
Eastern Wood-Pewee	EWPE	F	0	0	1
Field Sparrow	FISP	S	0	1	1
Gray Catbird	GRCA	S	1	1	1
Great Crested Flycatcher	GCFL	F	0	1	1
House Finch	HOFI	O	0	0	1
House Wren	HOWR	S	0	1	0
Indigo Bunting	INBU	S	0	1	1
Mourning Dove	MODO	O	1	1	1
Northern Cardinal	NOCA	S	1	0	1
Northern Flicker	NOFL	F	1	0	1
Northern Mockingbird	NOMO	S	0	1	1
Ovenbird	OVEN	F	0	1	1
Palm Warbler	PAWA	S	0	1	0
Prairie Warbler	PRWA	S	0	1	1
Red-eyed Vireo	REVI	F	0	1	1
Red-winged Blackbird	RWBL	O	1	0	0
Rose-breasted Grosbeak	RBGR	F	1	1	0
Ruby-throated Hummingbird	RTHU	S	0	1	1
Song Sparrow	SOSP	S	1	1	1
Tree Swallow	TRSW	O	1	1	1
Tufted Titmouse	TUTI	F	0	1	1
White-breasted Nuthatch	WBNU	F	0	1	0
Willow Flycatcher	WIFL	S	0	1	0
Yellow Warbler	YEWA	S	1	1	0

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 2019. 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".