
Avian Species of the “Kestrel Fields”

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**A survey of avian species found in the fields south of Parc-nature Cap-St-Jacques
(Pierrefonds).**

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Introduction

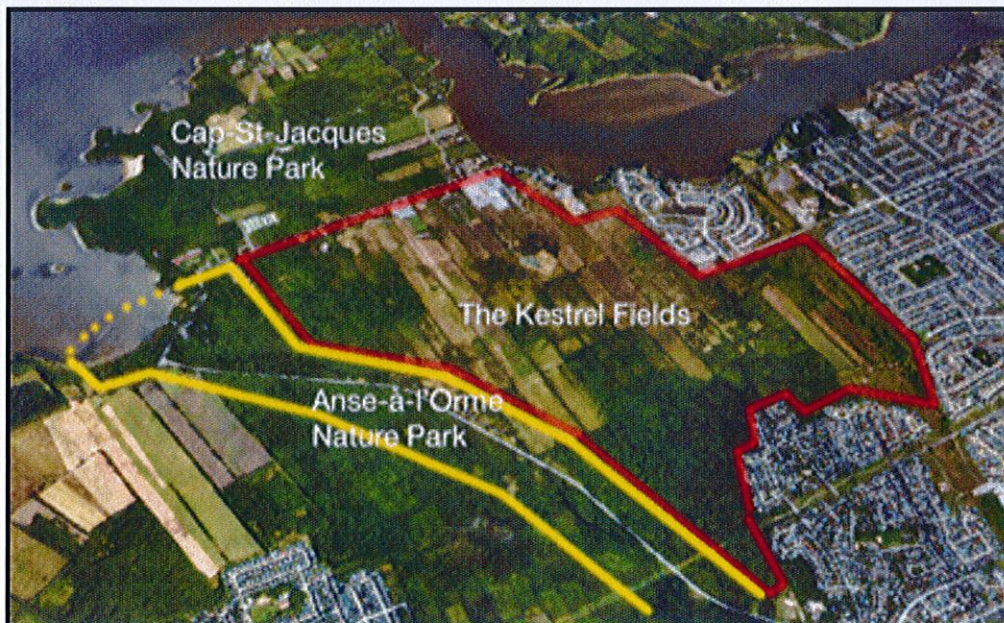
The “Kestrel Fields” is the unofficial name given to a site, estimated to be in the region of 185 hectares in area, of former agricultural and wooded land in the borough of Pierrefonds, Montreal. It is situated south of the Parc-nature Cap-St-Jacques and east of Parc-nature de l’Anse-à-l’Orme. This irreplaceable habitat has been scheduled by the municipal authorities for development - potentially in excess of 5000 houses with associated roads and services.

Such development will remove a site of significant environmental value from the already too small area of undeveloped green-space land on Montreal Island and cause immense and irremediable damage to the fragile biodiversity of this and surrounding open land that together form the Senneville to Ile-Bizard green corridor.

This report looks at the known avian species that are found in the area under threat with the intention of drawing to the attention of decision makers in local government their importance, their vulnerability to development and the harm that will be caused by the proposed schemes. It is hoped that the information herein will help to moderate the intentions of the authorities and developers.

Why The “Kestrel Fields”?

These fields do not have a formal name other than “West Pierrefonds” but they comprise last known location on the island where the American Kestrel, an iconic bird evocative of wild, open spaces, is known to breed and where it can be seen by people like us. Montreal needs more places where Kestrels can live their lives, not fewer.



Location & Context - Green Corridor

The land under threat, the Kestrel Fields, lies in the western part of Pierrefonds and, together with adjacent so-far-undeveloped land comprises an irreplaceable part of the West Island green corridor stretching from the Senneville migratory bird sanctuary (Federally mandated), to the Parc-agricole Bois-de-la-Roche, Anse-à-l'Orme, Angell Woods, Cap-St-Jacques and Ile Bizard as well as the Kestrel Fields themselves.

The following map indicated the relationship of these sectors of the green corridor and clearly shows the huge "bite" that will be removed if this land is lost..



Montreal is not well provided for in terms of undeveloped wildlife habitat and green spaces. The Economist Intelligence Unit (<http://goo.gl/WgZyY6>) conducted a research project, which ranked 27 major Canadian and American cities from best to worse. Montreal came in at #19, in large part because of the paucity of undeveloped land available to citizens.

A study by the McGill University School of Environment (<https://goo.gl/alZogK>) noted that Montreal has only 5% of its land area devoted to green space (12% in Toronto) with a mere 1.2 hectares of green space per 100 inhabitants (3.24 in Toronto and 8 in Ottawa). Clearly a loss of space of the magnitude the Kestrel Fields would represent is hugely undesirable from both the human and the wildlife points of view.

Although not a part of Montreal's network of Nature Parks (<http://goo.gl/je1MTn>) it is considered that the Kestrel Fields are in many ways of equal or greater ecological significance than some of those sites that are so designated. The six city nature parks in total amount to a mere 1300 hectares ... thus losing the Kestrel Fields to development would represent the removal of an area equal to almost 15% of all of the nature park lands in one blow. It is almost exactly equal in size to the loss of the entire Anse-à-l'Orme nature park.

Others, however, will speak more eloquently about these aspects. The purpose of this report is to describe in detail the species that will be lost if this development is permitted to proceed.

Significance of the Fields to the Green Corridor

Too often, when land is wanted for development, it is suggested that the wildlife living there is of little importance and can simply move somewhere else and so will not be harmed. For plants, of course, this is clearly false as they live where they live and cannot uproot themselves. For mammals, birds, amphibians, reptiles and insects the ability to relocate without consequence is rarely the case and frankly, most often is patently untrue. Even when creatures can move elsewhere (or are moved elsewhere) the areas they move to are already lived in by other animals that will fight tooth and nail to protect their territories. Moving animals rarely ends well.

As the map on an earlier page shows, the undeveloped lands of the West Island Green Corridor (WIGC) are each linked to the others. They provide contiguous area of forest and field that creatures use to move through, without undue disturbance. Places where they can claim territory, hunt and graze and breed and live. Places which, once fragmented by development become of less use to them with inevitable loss of biodiversity over the years following disturbance. Continuity of essential habitat is a primary concept in maintaining biodiversity.

Birds are species that particularly benefit from a corridor habitat such as this. There are, of course, resident species and also migratory species that nest here in summer but there are also many, many migratory species that pass through in spring and fall going to and from

their nesting territories further north in the boreal forest. These birds in their migratory journeys follow well established “migration pathways”, one of which passes through the Montreal region. In general birds try to avoid long water crossings and so many enter our area from the south by coming across the relatively narrow channels of water that separate Ile-Perrot from the south shore and then enter the West Island near to the Senneville Migratory bird sanctuary to find the green corridor available for them to follow and hence pass on to Ile-Bizard, thence to Laval and further north to find breeding territory. Fragmenting the WIGC will likely have a significant impact on this seasonal passage of birds.

Apart from contributing to the continuity of the WIGC, the Kestrel Fields also, and most especially, contain a type of habitat type otherwise absent from the corridor. Indeed, otherwise largely absent from the island. Large areas, for example the Arboretum and most of Anse-à-l’Orme are forested and thus provide homes for forest species of animals and plants whereas the Kestrel Fields are grassland fields intermixed with abandoned hedgerows and first-growth succession plant species - essential, and rarely found, features in this region. Thus, there are plants and wildlife living in these fields that will not thrive elsewhere.

These areas also provide space for people living in the area to enjoy - an important factor.

Site description

The Kestrel Fields are a complex of abandoned agricultural fields of some 185 - 200 hectares in extent situated south of Parc nature Cap-St-Jacques and east of Parc nature Anse-à-l’Orme. To the west is a housing subdivision of Pierrefonds and to the south a similarly developed area. On its northern perimeter there is a school, a small cemetery and a number of moderate sized houses along Blvd. Gouin. The western boundary and a considerable part of the southern boundary is formed by a well established area of mixed forest tree species. North-west is the lakeside bay of Anse-à- l’Orme.

The Kestrel Fields themselves are divided into a series of long narrow fields running approximately north to south and separated by scrubby, overgrown hedges, dense in parts and with considerable infiltration by small shrubs and trees. Rough grasses and small shrubs are well established in several of the fields. An area of moderately dense trees and shrubs is found in the centre of the site bordering areas of wetland.

To the east of the central part of the fields and adjacent to a small “airfield” used by model plane enthusiasts is a seasonally wet area of bog filled with Cattail rushes and similar species and surrounded by trees. In all parts of the fields, but especially to the west, small pools and boggy areas form after the spring snow-melt and remain for long periods in most years.

Readers are referred to a paper (Benjamin Domon and Bouchard., 2005) that described secondary succession in abandoned Quebec farmland such as this. See <http://goo.gl/bD56Gi> and to the following photographs giving an overview of the current landscape.



Typical open field with coarse, tussock grasses and small shrubs.

Typical habitat for grassland species such as the Bobolink



Field margin hedges. Considerably overgrown and providing nesting and foraging habit for a wide range of passerine species.

Species Accounts



Area of rough woodland in the centre of the study area with mostly young, mixed species including buckthorn.



Wetland area with dense reed cover and surrounded by shrubs and mostly small trees.

Species Accounts

Data Sources

The species known to be present seasonally or as residents in the Kestrel Fields are those which have been recorded within the past five years. Sources are a combination of personal observations, communicated observations provided by acknowledged local birding experts and, primarily, from peer-reviewed sightings records available in the eBird database maintained by the Laboratory of Ornithology of Cornell University. reference is also made to the Quebec Breeding Bird Atlas.

158 Bird Species

A **total of 158 species** of birds have been seen in the Kestrel Fields and the immediately adjacent habitats of Anse-à-l'Orme and Cap-St-Jacques (there being considerable exchange of species between local sites as they move around in search of nesting territory and food)

These birds include representatives of both forest, grassland and "edge" habitat species as well as wetland species and migratory species that pause here in passage for essential feeding and rest. There are songbirds, raptors, insectivores - in fact representatives of most families of birds. There are even breeding ducks despite it not including lakeshore access.

The birds listed include the following species of particular note:

- ❖ *11 species of national concern (vulnerable or threatened)*
- ❖ *At least 4 additional species that are locally rare or vulnerable*
- ❖ *Perhaps uniquely, all 10 of the species of Owl that occur in this region (of which one in a species of national concern)*
- ❖ *There are breeding individuals of the American Kestrel and the Northern Harrier; iconic raptors for which this is perhaps the last remaining breeding territory on Montreal island.*

These species alone make the preservation of this threatened habitat all the more vitally important.

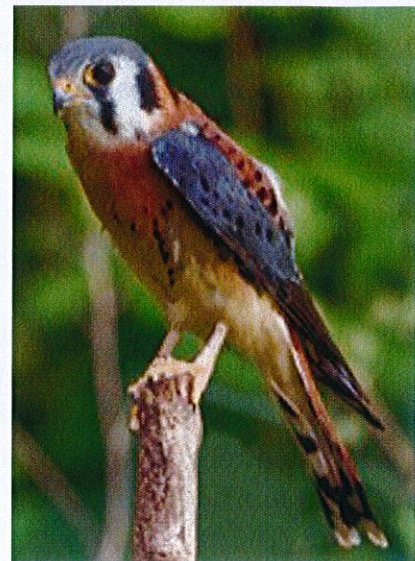
Species of Particular Importance

As has been stated previously, the fields and woodland that comprise the Kestrel Fields are part of a unique and irreplaceable patchwork of linked, undeveloped habitat in the western part of Montreal island and any development will seriously damage the ability of the land to maintain its valuable biodiversity. It is not possible to even marginally intrude on land such as this without having an effect on, for example, the drainage and associated hydrological status, leading to a diminution or loss of the wetland areas and the species of plants and animals that are supported by it.

The following species are of particular importance and/or concern. Some of what follows is adapted from Environment Canada's list of the status of birds in Canada (2011) and other sources.

American Kestrel (*Falco sparverius*)

The American Kestrel is a small falcon that nests in tree cavities adjacent to open habitats, locations that occur in and around this site. It is a secondary cavity-nester, using holes excavated by woodpeckers such as Northern Flickers and Pileated Woodpeckers for nest sites; species which are also present in this location. While many raptors are increasing, the American Kestrel stands out as showing a long-term decline at the national level in Canada. There has been a large, widespread decrease in its population since about 1970 throughout Canada. The causes of this decrease are not well known *but probably relate to habitat loss*. Regeneration of marginal farmland, agricultural intensification and other processes leading to loss of open habitats mixed with trees are reducing suitable habitat for the species.



The species is a candidate wildlife species for assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is thought that these fields and adjacent forest are perhaps the last, or one of the last, habitats in Montreal where these birds can find suitable nesting sites.

This iconic bird has lent its name to this area of concern.

Northern Harrier (*Circus cyaneus*)

The Northern Harrier nests on the ground in densely vegetated wetlands or grasslands such as those present in the Kestrel Fields. The species is well monitored by the Breeding Bird Survey and results indicate significant decreases in population since about 1970. However, trends vary regionally including a possible small increase in the Ontario population. The species is susceptible to pesticide exposure and has also suffered as a result of extensive drainage of wetlands.



Extensive loss of freshwater and estuarine wetlands in the United States threatens wintering birds that spend their summers in Montreal, and intensification of agriculture and building development can adversely affect birds using drier habitats. Increases noted in Ontario's marshes suggest that wetland restoration programs there have been successful and certainly indicate that actions that threaten wetlands should be avoided.

Red-bellied Woodpecker (*Melanerpes carolinus*)

Although a fairly common species south of the US border, the Red-bellied Woodpecker has only appeared in southern Quebec in the last five years with a tiny population settling in the nearby arboretum. Its appearance here is thought to be driven by climate change but its success is entirely dependent on suitable habitat, such as that provided by the Kestrel Fields and adjacent woodland.

Short-eared Owl (*Asio flammeus*)

There has been a large decrease in the population of the Short-eared Owl since about 1970. This ongoing decline, along with declines in the quantity and quality of wintering habitat, led the Committee on the Status of Endangered Wildlife in Canada to assess the species as being of Special Concern.

The most important factor appears to be degradation and *loss of habitat* on the grasslands, wetlands, and coastal marshes used for over-wintering, but also on the grasslands used for breeding. Additional factors may include collisions and habitat fragmentation on the

breeding grounds, possibly as a result of increased linear development (e.g. roads, power-lines, pipelines, seismic lines) supporting industrial activities and which can lead to increased nest predation and changes in prey abundance.

Sightings in the Montreal region are extremely rare with only four known records in the past 30 or so years, one of them in the kestrel Fields/Anse-à-l'Orme site during 2014.

Chimney Swift (*Chaetura pelagica*)

Although unlikely to be breeding in the Kestrel Fields due to a lack of suitable breeding sites observations indicate that these fields are regularly visited for the purpose of feeding from aerial insects rising from the wetlands etc. It is considered that sites such as this are essential contributors to the maintenance of a viable population of these endangered birds.

The Chimney Swift has shown widespread declines across its continental range with a dramatic decrease in Canada relative to about 1970, with an estimated loss of 92% of its population. It is classified as Threatened by the Committee on the Status of Endangered Wildlife in Canada. The Chimney Swift is one of several species of aerial-foraging insectivores showing widespread declines in Canada. Causes of these declines remain unclear, but changes in aerial insect populations have been suggested as one possible common factor as well as landscape changes.

Eastern Wood-Pewee (*Contopus virens*)

Although still a common breeder in the deciduous woodlands of eastern North America, Breeding Bird Survey data for this neotropical migrant show a large, persistent decrease relative to about 1970. The Eastern Wood-Pewee is scheduled for assessment by the Committee on the Status of Endangered Wildlife in Canada.

This bird is an insectivore that will breed in both forest edges and interior, exhibiting a wide range of habitat use. Like the Least Flycatcher, the Eastern Wood-Pewee is likely sensitive to degradation of the forest understory by excessive browsing from white-tailed deer or human-caused interference.

Bank Swallow (*Riparia riparia*)

As its name implies, these birds breed in holes in sandy banks and escarpments and so they are unlikely breeders in the Kestrel Fields but, as aerial insectivores, they do fly over the fields in search of food that would no longer be available were development to happen. The Breeding Bird Survey shows large population fluctuations from about 1970 through the mid-1980s, followed by a steep, persistent decline to the lowest levels on record. The causes of these declines are thought to be related to loss of suitable breeding sites and a decline in insect populations. The Breeding Bird Survey shows large population fluctuations from about 1970 through the mid-1980s, followed by a steep, persistent decline to the lowest levels on record by the current time.

Barn Swallow (*Hirundo rustica*)

Another aerial insectivore with a small breeding population in old agricultural buildings on the western side of the Morgan Arboretum. They range widely in search of food and make use of the Kestrel Fields in that process. BBS data show little change in the population from the 1970s to the late 1980s followed by a steep, persistent decline through the late 2000s. Population declines occur in all Bird Conservation Regions. Causes for the decline are similar to those for Bank Swallows (*q.v.*). Because of this decline, the Committee on the Status of Endangered Wildlife in Canada assessed the Barn Swallow as Threatened in 2011

Wood Thrush (*Hylocichla mustelina*)

A bird of the forest margins to the west and south of the kestrel Fields that is showing a large decrease in numbers since about 1970. Habitat loss and forest fragmentation on both its breeding and wintering grounds in Central America, and maturation of forests in much of its former breeding habitat, are thought to be important causes of its decline. Wood Thrushes are most abundant in mid-successional forests. The recent maturation of these forests across eastern North America may be an important factor in the species' widespread population decline.

Canada Warbler (*Cardellina canadensis*)

This is primarily a Canadian-breeding species has been undergoing a significant long-term, decrease since about 1970. That decrease, which led to the Committee on the Status of Endangered Wildlife in Canada listing of Threatened in 2008, is thought to be due primarily

to loss and degradation of habitat on the breeding grounds. With over 80% of the species' global breeding population, Canada's responsibility for the species is very high.

Grasshopper Sparrow (*Ammodramus savannarum*)

The Grasshopper Sparrow is a relatively uncommon and patchily distributed grassland bird that breeds patchily across southern Canada. The Breeding Bird Survey suggests a large decrease in the population relative to about 1970.

Similar to many other grassland species, the primary reason for the decline in the Grasshopper Sparrow is *habitat loss and degradation*. This species prefers native prairie and grasslands, and has adapted to using planted hayfields and pastures. Despite this adaptability, habitat is being lost, degraded and fragmented by conversion to large-scale agriculture. Agriculture programs that encourage planting grass on marginal cropland in the prairies are particularly helpful to this species. Depending on the type of grassland, light grazing, prescribed burning or delayed mowing are recommended to conserve suitable habitat for the species.

Bobolink (*Dolichonyx oryzivorus*)

The Bobolink is a species of especial concern to Montreal birders because of its iconic status and the fact that the remaining small fields on the island provide some of its last remaining habitat in the region. The birds are ground breeders and need grassland of just the right height - that alone is in short and diminishing supply, but they are also threatened when they do find suitable fields by the fact that most of them are hay fields which farmers usually cut in early July just a couple of weeks before the song birds fledge and leave the nest - thus wiping out a generation.



Although Bobolink populations benefited by large-scale conversion of forest to agriculture in Eastern Canada during the European settlement period, widespread declines since 1970 have raised conservation concerns. The most likely causes of the declines are changes to hayfield management, where harvesting occurs earlier and more frequently during the breeding period, conversion of forage crops to grain crops and habitat fragmentation.

Eastern Meadowlark (*Sturnella magna*)

The Eastern Meadowlark is an uncommon inhabitant of southern and eastern Canada's grasslands, pastures and agricultural cropland edges. Breeding populations in Canada are well monitored by the Breeding Bird Survey which shows a large, ongoing decrease in population from about 1970 to present. Changes in agricultural practices, and abandonment of farms and subsequent regeneration of forests, such as is happening in the Kestrel Fields, are thought to be the main causes of the decline.

Rusty Blackbird (*Euphagus carolinus*)

Since an estimated 86% of the world's Rusty Blackbirds nest in Canada's boreal forests, Canada has a very high responsibility for the species. They are not resident breeding birds in the Kestrel Fields but do make use of them on their annual migration as important feeding and staging grounds.

Appendix

Recorded Bird Species in the Kestrel Fields

Species of birds known to be present (seasonally or resident) in the Kestrel Fields are listed in the following table (next page). Sources for these data have been discussed previously.

Species named in **bold red** are those species that are listed in the Environment Canada Public Registry of Species at Risk as being designated by COSEWIC as vulnerable or threatened. This list can be consulted here.

Species in **bold green** are species of local rarity or concern but not nationally vulnerable.

The species are listed in taxonomic sequence.

Species	Kestrel Fields	Adjacent
Snow Goose (flyover)		X
Canada Goose	X	X
Wood Duck	X	
Gadwall (nesting)	X	
American Black Duck	X	
Mallard	X	
American Wigeon (flyover)	X	
Great Blue Heron	X	X
Great Egret	X	X
Green Heron		X
Turkey Vulture	X	
Osprey	X	X
Bald Eagle (flyover)	X	
Northern Harrier	X	
Sharp-shinned Hawk	X	
Cooper's Hawk	X	
Northern Goshawk		X
Red-shouldered hawk	X	X
Broad-winged Hawk		X
Red-tailed Hawk	X	
Rough-legged Hawk	X	X
Golden Eagle (flyover)	X	X
American Kestrel	X	
Merlin	X	
Peregrine Falcon		X
Virginia Rail		X
Sandhill Crane (flyover)	X	
Greater Yellowlegs	X	

Species	Kestrel Fields	Adjacent
Spotted Sandpiper	X	
Killdeer	X	
Wilson's Snipe	X	X
Ring-billed Gull	X	
Herring Gull		X
Caspian Tern	X	
Rock Pigeon	X	X
Mourning Dove	X	X
Black-billed Cuckoo	X	X
Yellow-billed Cuckoo		X
Eastern Screech-Owl		X
Barred Owl	X	X
Snowy Owl	X	
Northern Hawk Owl	X	
Great Horned Owl	X	
Great Gray Owl	X	
Long-eared Owl	X	
Boreal Owl	X	
Northern saw-whet Owl	X	
Short-eared Owl	X	
Chimney Swift		X
Ruby-throated Hummingbird	X	X
Red-bellied Woodpecker	X	X
Yellow-bellied Sapsucker	X	X
Downy Woodpecker	X	
Hairy Woodpecker	X	
Northern Flicker	X	
Pileated Woodpecker	X	

Species	Kestrel Fields	Adjacent
Eastern Wood-Pewee		X
Yellow-bellied Flycatcher		X
Alder Flycatcher	X	X
Willow Flycatcher	X	X
Least Flycatcher	X	
Eastern Phoebe	X	
Great-crested Flycatcher	X	X
Eastern Kingbird	X	X
Northern Shrike	X	
Blue-headed Vireo		X
Warbling Vireo	X	X
Red-eyed Vireo	X	
Blue Jay	X	
American Crow	X	
Common Raven	X	
Purple Martin	X	
Tree Swallow	X	
Northern Rough-winged Swallow	X	
Bank Swallow	X	
Cliff Swallow	X	
Barn Swallow	X	
Black-capped Chickadee	X	
Red-breasted Nuthatch		X
White-breasted Nuthatch	X	
Brown Creeper		X
House Wren	X	X
Winter Wren	X	X
Marsh Wren		X

Species	Kestrel Fields	Adjacent
Golden-crowned Kinglet	x	
Ruby-crowned Kinglet	x	
Blue-gray Gnatcatcher		x
Eastern Bluebird	x	
Veery	x	
Swainson's Thrush		x
Hermit Thrush	x	x
Wood Thrush		x
American Robin	x	
Gray Catbird	x	
Northern Mockingbird		x
Brown Thrasher	x	
European Starling	x	
American Pipit		x
Bohemian Waxwing	x	x
Cedar Waxwing	x	
Tennessee Warbler	x	x
Orange-crowned Warbler		x
Nashville Warbler		x
Northern Parula	x	
Yellow Warbler	x	x
Chestnut-sided Warbler	x	
Magnolia Warbler		x
Black-throated Blue Warbler		x
Yellow-rumped Warbler	x	
Black-throated Green Warbler		x
Blackburnian Warbler		x
Pine Warbler		x

Species	Kestrel Fields	Adjacent
Palm Warbler		X
Bay-breasted Warbler		X
Blackpoll Warbler		X
Black-and-white Warbler		X
American Redstart	X	X
Ovenbird	X	X
Northern Waterthrush		X
Mourning Warbler		X
Common Yellowthroat	X	
Wilson's Warbler		X
Canada Warbler		X
Yellow-breasted Chat	X	
Scarlet Tanager		X
Eastern Towhee		X
American Tree Sparrow		X
Chipping Sparrow	X	
Clay-colored Sparrow	X	
Vesper Sparrow		X
Savannah Sparrow	X	
Grasshopper Sparrow	X	
Fox Sparrow	X	
Song Sparrow	X	
Lincoln's Sparrow	X	
Swamp Sparrow	X	X
White-throated Sparrow	X	
White-crowned Sparrow	X	
Dark-eyed Junco	X	
Snow Bunting	X	X

Species	Kestrel Fields	Adjacent
Northern Cardinal	X	
Rose-breasted Grosbeak	X	X
Indigo Bunting	X	X
Bobolink	X	X
Red-winged Blackbird	X	
Eastern Meadowlark	X	
Rusty Blackbird	X	
Common Grackle	X	
Brown-headed Cowbird	X	X
Baltimore Oriole	X	X
Pine Grosbeak		X
Purple Finch		X
House Finch	X	X
Common Redpoll	X	
Hoary Redpoll	X	
Pine Siskin		X
American Goldfinch	X	
House Sparrow		X

