

Managing Hay and Pasture to Benefit Grassland Birds



Bobolink

A Preliminary Guide for Carden Landowners



Loggerhead Shrike

Many of Ontario's birds are becoming scarcer, but the species that depend on grasslands for their habitat are at special risk. Populations of Bobolinks, for example, have declined by 88% over the past 40 years. These grassland species depend on hay and pasture fields, together with remnants of native prairies and alvars.

Both Bobolinks and Eastern Meadowlarks are now protected as Threatened species under Ontario's Endangered Species Act. Barn Swallows, which often forage for insects over pastures and hayfields, have the same designation.

Eastern Loggerhead Shrikes and Henslow's Sparrows are classed as Endangered because of their very low populations. Most other grassland birds are also showing significant drops in their numbers.

Why is this happening?

The primary reason is the ongoing loss of livestock grazing in southern Ontario, especially cattle. Over the past decades, vast areas of hay and pasture have been converted to corn and soybeans as farmers struggle to survive. Many other areas of marginal farmland, too stony or shallow for cropland, have been abandoned and allowed to revert to young forest.

Grassland birds historically expanded their populations in eastern North America as settlers cleared the forest. Now that process is reversed as the difficult economics of the beef industry shrinks both the farm base and the area of habitat suitable for these birds. The goal of conservation planners is to stabilize the populations of grassland species to prevent a slide into extinction – a fate that befell Passenger Pigeon, once the province's most abundant bird, over a century ago.

Farmers and other rural landowners play a critical role in managing the habitats of Bobolinks and other grassland birds.

Conservation organizations such as Couchiching Conservancy and Ontario Nature are working with farm groups and individual farmers to develop workable stewardship techniques for grassland birds. Bird Studies Canada has led the development of a draft Recovery Strategy for Bobolinks and Eastern Meadowlarks, and the Ontario Soil and Crop Improvement Association has undertaken several related research projects. The Minister of Natural Resources has established an Advisory Round Table to provide guidance on appropriate actions.

Together, all these activities have provided information to help develop this publication. This guide is labeled “preliminary” because much research remains to be done, especially on which techniques will be most effective. As new information becomes available, this guide will be updated.

Guideline 1: Patches of grassland habitat to be managed for birds should be at least 10 acres (4 hectares) in size, and preferably larger.



Upland Sandpiper

Some grassland birds such as Bobolinks and Upland Sandpipers are “area sensitive”, which means they won’t nest in small fields. Square fields are better than long narrow patches, which have a large amount of edge with adjacent woodlands or other habitats. These edges provide travel routes for predators such as foxes or skunks. Note that several fields together can make up a habitat patch of suitable size, so long as the fencerows are not heavily wooded.

Guideline 2: Seeding mixtures should contain a mix of between 60% to 80% grasses, including at least three species of varying heights.

To provide optimum habitat for birds, alfalfa should not comprise more than 25% of the seed mixture, and fescue grasses should be avoided. In many hayfields, alfalfa dies out partially after several years, improving the habitat for grassland birds.

Guideline 3: If hayfields are cut before July 15th, try to minimize bird mortality.

Most hayfields are harvested during the month of June, when nutrient and protein levels are at a peak. Nests with eggs or young are often crushed by machinery or exposed to predation by gulls or crows; for example,



Bobolink and nest

Bobolink nests suffer 96% mortality during hay cutting. Some rural landowners may choose to delay haying dates, and some hay for cow-calf operators may also be cut late.

In addition, farmers can help to minimize bird mortality by:

- **Scouting where grassland birds occur.** Bobolinks are especially obvious, since the males often hover above nesting areas, voicing their distinctive rollicking songs. This species nests in loose colonies, but note that the adults often disappear into long grass some distance from their nests to fool predators, so it is difficult to know the exact location of their nests.
- **Being aware of fledging dates.** When young birds are able to fly, (watch for them being fed by adults), they can escape to nearby cover and the field is safe to cut. This fledging date

varies with spring weather, but can be as early as mid-June or as late as mid-July.

- If a farm has several hayfields, **cutting the field with Bobolinks last** gives them their best chance to fledge.
- Cutting 6-10 swaths around the perimeter of large fields and **leaving the interior for later cutting** can be helpful, since grassland birds tend to avoid the area within 100 metres of the field edge when choosing nest sites.

Guideline 4: Rotate livestock between fields to maintain 50% of pasture area as longer grass during the bird nesting season.



Eastern Meadowlark

Light to moderate livestock grazing is beneficial to maintain a diversity of grassland birds. Rotational grazing, which cycles livestock into different compartments several times over the grazing season, is recommended as a management measure to increase livestock productivity.

This rotational grazing can also be beneficial for grassland birds provided that grasses are not grazed below four inches (8-10 cm) in height, and that half of the pasture area is maintained at longer

heights (12 inches or 30 cm or more) during the May-June nesting season.

Intensive grazing systems which crop pastures very short, whether rotational or not, are detrimental to nesting birds.

Guideline 5: Use late summer mowing or spring burning to restore grassland habitats by removing woody vegetation.

The invasion of woody shrubs or young trees into old fields or meadows makes these habitats no longer suitable for grassland birds. Even a heavy growth of Goldenrods and other tall herbaceous species crowding out grass cover reduces the habitat value of these fields. Late summer mowing (between August 1 and September 15) with a “brush hog” or similar equipment promotes the return of grasses, especially if combined with over-seeding with suitable grass mixtures. This treatment may initially need to be repeated for several years, and then at least every 3 to 4 years to maintain the grassland.

In some places, controlled burning can be used to kill woody vegetation, although expert assistance is needed for this activity. Spring burns typically favour the growth of grasses, while fall burns favour forbs such as Goldenrods that are less desirable.

Guideline 6: Planting of tallgrass prairie species can benefit grassland birds.

Planting of suitable areas with native prairie species such as Switchgrass and Big Bluestem is being tested across southern Ontario as a marketable source of biomass for fuel or other commercial uses. These plantings also have considerable ecological benefits, including good-quality habitat for grassland birds since they are not harvested until autumn. Note that another potential biomass species, the non-native *Miscanthus* grass, does not appear suitable for most birds.



Northern Harrier



Upland Sandpiper

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The Couchiching Conservancy,
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with financial support from
the Ministry of Natural Resources
Species at Risk Stewardship Fund
and the Schad Foundation.

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