Howard County Bird Club

A Chapter of the Maryland Ornithological Society

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Meadow Management Best Practices for Grassland Birds

Grassland birds prey on insects and rodents that damage crops or carry diseases such as Lyme and other tick-borne illnesses. They share their habitat with bees and butterflies that pollinate fruits, vegetables, hay, and other crops.

Statement of the Problem: Grassland birds have suffered the biggest bird declines of any terrestrial biome since 1970. Losses have occurred due to habitat conversion (e.g., to agriculture), ill-timed mowing during breeding season, tree and shrub encroachment, and pesticide applications. This information paper is directed toward mainly non-agricultural county grasslands but can inform less detrimental practices for interested farmers. We acknowledge that farmers must harvest their hay for instance at specific peak times for nutrients that are often during grassland bird breeding dates.

These "Best Management Practices" have been developed by wildlife biologists at the U.S. Fish & Wildlife Service, Audubon, and other grassland bird experts. They should be used to guide habitat management on existing grasslands or habitat to be converted into grassland. The goal is to provide and maintain the open, grassy conditions necessary for successful breeding and/or wintering by grassland birds. Activities should be timed to avoid disturbing nesting birds.

Different Birds, Different Requirements

Grassland birds thrive on large, open grasslands as these habitats provide the wide-open treeless spaces they need to nest and reproduce. Providing the correct mix of grass height, plant species, and thatch depth benefits the greatest diversity of species. For example, Upland Sandpipers, a threatened species in much of the Northeast U.S., require very short grasses while some sparrows require taller vegetation with a mix of forbs. Bobolinks and Savannah Sparrows have less stringent habitat requirements.

1. Remove or thin hedgerows – this is one of the best actions a landowner can take to improve conditions for grassland birds, as it increases the size of the grasslands. Although trees and shrubs benefit wildlife in other habitats, they generally decrease nesting opportunity and productivity in grasslands, especially when forming thickets or hedgerows. In addition, many of the woody plants that colonize grasslands are aggressive invasive species, such as European buckthorn, multiflora rose, Russian olive, and black locust.

2) Remove woody vegetation within the field – removal and clearing may be done anytime outside the nesting season (April 15 to August 15). If a narrow edge of woody vegetation separates the field from adjacent open habitats, it should be considered within the field boundaries when feasible, and removed. Areas where hedgerows were removed should be periodically cut when woody vegetation starts to re-grow.

3) Mowing outside of breeding season-THIS IS THE MOST IMPORTANT PRACTICE– operation of any mechanized equipment or vehicles or other disturbance of grassland birds or their habitat should be prohibited within the field during the grassland bird breeding season (23 April to 15 August) or wintering season (1 November to 1 March) except as necessary to control invasive species.

The following mowing/haying dates are ranked in order of value to breeding grassland birds from highest to lowest:

1. After 15 August only.
2. Once before 20 May, and once after 15 August.

The following options will allow only limited successful breeding:
1. Once before 1 June.
2. After 20 July only.

When you mow, how to mow less destructively: Large fields should be divided in thirds and one third should be mowed each year to provide a diverse mix of grass heights and densities beneficial to most grassland bird species. For example, for a 300-acre field mow a different 100 acres each year on a 3-year rotation. If you must enter the fields during nesting season it's best to drive slowly on designated paths, staying close to tree or shrub lines. Limiting the frequency, speed, and duration of these trips will greatly reduce disturbance to nesting birds.

4) Thatch – thatch, the litter left over after grasses have been mowed, is used by grassland birds to build their nests; leaving a depth of three or four inches is ideal. Thatch also provides cover for voles and moles, thereby benefiting grassland raptors such as the Short-eared Owl and the Northern Harrier, which survive the winter by preying on these small mammals. Thatch returns nutrients to the soil, but excessive amounts of thatch can smother the growth of new grasses.

5) Management and Removal of invasive or undesirable plant species – initial brush-hogging and cutting of the fields if they have not been under agricultural production will be necessary and will favor grasses.

Sources:

1. Best Practices for Grassland Birds: https://www.grasslandbirdtrust.org/conservation/land-management-practices/
2. Managing Habitat for Grassland Birds: https://ny.audubon.org/conservation/managing-habitat-grassland-birds#:~:text=Control%20shrubs%20and%20woody%20vegetation,more%20difficult%20and%20more%20expensive.
3. Maryland & DC Breeding Bird Atlas 3 Nesting and Migration Timeline: https://is-ebird-wordpress-prod-s3.s3.amazonaws.com/wp-content/uploads/sites/80/2020/06/FORM_BreedingTimeline_Taxa.pdf
4. Hayfield Management and Grassland Bird Conservation: https://www.nyfoa.org/application/files/6314/7948/6092/HayfieldsGrassland_Birds_3MB.pdf

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