

WHAT YOU CAN DO

If you operate a dairy farm:

- Complete first harvest of hay and apply manure, by June 1.
- Delay second harvest of hay for 65 days after that.

Haying in May increases the probability that birds use a field after haying, and a 65-day interval provides sufficient time to successfully reproduce between harvests.

If you operate a farm with mixed uses:

- Use same guidelines as for dairy farms if possible.
- Remove hay bales immediately after harvest.
- If parcel is hayed in sections, cut the outside edges first.

Fields cut between June 21 and July 15 for horse, heifer or beef cow hay can still be high-quality bird habitat; however, each week that hay cutting is delayed allows more offspring to survive. Grassland birds generally avoid nesting on the edges of fields.



Eastern meadowlarks build domed nests.



In the Northeast, harriers are easily identified from other hawks by their white rump patch.

If you own a single parcel with meadows, or can coordinate management of your meadows with others nearby, or are associated with conserved open space meadows:

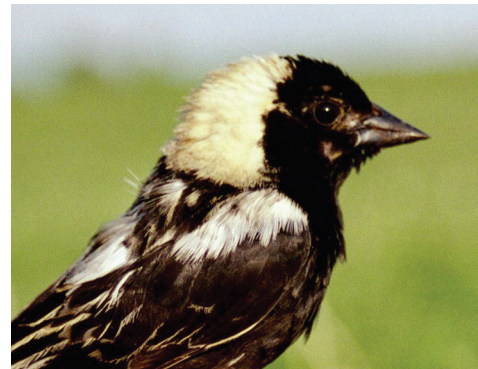
- Hay or brushhog only after August 1, and not before.
- Pick up the grass at least every other year.
- Plan development activities to avoid fragmenting the grassland habitat either within the parcel or breaking the connections to adjacent meadows.

These fields are potentially the very best habitats for grassland birds. Unfortunately, they are at a high risk of fragmentation by development and by succession to shrubland and forest. Bird-friendly management practices are relatively easy to implement. When these meadows are maintained as contiguous fields, birds have the highest reproductive success and year-to-year survival. Additionally, these areas are a refuge for birds which have been displaced from fields hayed early in the summer.

Produced by Noah Perlut (Wildlife Consultant), Linda Hamilton (and other members of the Significant Wildlife Habitat Map Update Project), and Carol Hanley (Hanley Design) for Charlotte Conservation Commission, with support from Audubon Vermont. Photos by Noah Perlut, Allan Strong (upland sandpiper), Gordon Ellmers (harrier). For more information, contact Noah Perlut at grasslandbirds@gmail.com. Town of Charlotte, VT. 2008.

Grassland Birds in Charlotte

OUR ROLE IN THEIR FUTURE



The female bobolink (above) and the male (center) have different plumage. Although adults eat both insects and seeds, they feed nestlings a diet entirely composed of insects.

GRASSLAND BIRDS are specialists, dependent on grassland habitats (hayfields, pastures, fallow fields, beaver meadows, and native prairies) to successfully feed, roost, and raise young. In Vermont, common grassland birds include the bobolink, meadowlark, Savannah sparrow, and northern harrier (marsh hawk). Less common species include the upland sandpiper, grasshopper sparrow, sedge wren, horned lark, vesper sparrow, and short-eared owl. Because they have such specific habitat needs, grassland birds have developed complex behaviors, including extraordinary migrations (bobolinks migrate 6,200 miles between North and South America twice each year), and unusual mating systems (an individual male Savannah sparrow can support multiple females on his territory).

First evolved in North American midwestern prairies, grassland birds have lost most of their original breeding habitat to row crops and urban development. Although the Northeast was historically forested, 19th century settlement and forest clearing created vast grasslands, and this allowed grassland birds to expand their breeding range into our area. This rich bird group now helps define the character of Vermont's agricultural landscape. Unlike many other Vermont towns, much of Charlotte's landscape remains unforested and undeveloped today. This gives us a special opportunity to provide safe haven for grassland birds through bird-friendly management practices in our pastures, hayfields, and grassy residential areas. This brochure provides simple guidelines for including grassland habitat conservation when managing land for agriculture or open space.

The Need for Conservation Action

Grassland birds are declining faster than any other bird group in North America. In Vermont, between 1966 and 2005 grasshopper sparrows declined by 8% per year, bobolinks and meadowlarks by 3% per year, and Savannah sparrows by 0.25% per year. There are now 94% fewer grasshopper sparrows, 69% fewer bobolinks and meadowlarks, and 9% fewer Savannah sparrows breeding in Vermont. Why?

First, Vermont has largely reforested, thereby decreasing the amount of available breeding habitat. Second, the processes of hayfield management have changed since the 1960s; hay is now cut earlier and more frequently. In the 1960s haying began in early July. Today, haying begins in late May in order to capture the higher protein content and thus increase dairy cow production. Hayfields that are cut early are cut more frequently, often in 35-40 day intervals.

These changes significantly affect breeding birds. As ground-nesters, their nests are directly exposed to haying machinery. As a result, 100% of nests active at the time of haying fail—80% destroyed by the machinery and 20% eaten by gulls, crows, and mammals. Although adult birds are not usually killed by haying machinery, the common 35-40 day interval between cuts is too short for them to reproduce between harvests.

Savannah sparrows lay four eggs; females incubate for 10 days and both the male and female feed nestlings for another 10 days. Nestlings walk out of the nest and cannot fly for at least one week after fledging.

What Charlotters Can Do

Because these birds are migratory, the current serious decline in their populations calls for education and conservation action at the national, regional, and local scale. Charlotters' informed grassland management practices are essential to these birds' future success. Timely mowing and grazing maintain high-quality grassland habitat, since without these disturbances hayfields and pastures quickly turn to shrub habitat. When grassland converts to shrubland, the birds are displaced.

In 2005, Charlotte had 11,341 acres of open (non-water) habitat—93% of which was hay, fallow fields, pasture, and large yards. While Charlotte property owners have a range of land management objectives, incorporating bird-friendly practices can be compatible with many of these goals. The types of grassland present today in Charlotte fall into three general categories: hayfield and pastures for dairy or for mixed-use farms, and meadows which are mowed primarily to keep them open.

This brochure gives both general and specific guidelines for bird-friendly practices which can help maintain or increase reproductive success of grassland birds. For more information or to explore the application of these recommendations to your land, see the section on Management Consulting and Landowner Incentives.



Basic Guidelines for Bird-Friendly Land Management

- **Hay as late as possible.**

The timing of haying influences the number of offspring a bird can produce as well as the probability that adult birds survive to the following year.

- **Pick up cut grass annually or biannually.**

In spring, grassland birds are most attracted to fields that do not have previous years' cut grass, which suppresses early regrowth.

- **Keep open land open.**

If neighboring land is also open, the number of birds that use a field increases. Open habitat includes grass, wetland, and row crops; and even if birds do not breed in these areas, they may use them to rest and feed during migration.

- **Plan roads, driveways, houses, and barns along edges to decrease habitat fragmentation.**

Grassland birds prefer larger, contiguous hayfields and pastures. In general, 20-acre or larger fields have more birds; however, smaller fields can also be important. An 8-acre hayfield adjacent to a 10-acre pasture can accommodate birds.

- **Plan plowing, seeding, and rotation with a long-term view.**

Adult birds who survive the winter generally return to the same fields each year, unless for example the field has been reseeded, which will displace the birds for 3 to 5 years.

- **Maximize the length of pasture rotation.**

Although pasture size and grazing intensity varies significantly, in general, fewer birds use pastures than hayfields. However, some specialized species such as grasshopper sparrows prefer to breed in pastures.

Management Consulting and Landowner Incentives

Economics and professional advice are important factors influencing land management decisions.

Vermont's Natural Resource Conservation Service (NRCS) offers two programs to offset costs associated with combining agricultural production, open-space conservation, and bird-friendly land management:

- A late-haying cost share program through the Wildlife Habitat Incentives Program (WHIP).
- A \$100/acre payment for intensively managed fields when the guidelines for farms described in this brochure are followed.

Contact the NRCS Chittenden County Office at 802 865-7895 or go to www.vt.nrcs.usda.gov.

Audubon Vermont also helps landowners develop long-term bird-friendly land management strategies. Contact the Huntington, VT office at 802 434-3068 or go to www.vt.audubon.org.



Upland sandpipers are one of the few shorebird species that breed in grasslands rather than near water.