



**STATUS: HIGH
CONSERVATION
PRIORITY IN IOWA**

Grasshopper Sparrow *Ammodramus savannarum*

Introduction

A small, inconspicuous grassland bird, the Grasshopper Sparrow is named for its insect-like buzzy song, and due to its elusive habits and ability to hide in grasses, it is easily overlooked, even in its preferred habitat. Interestingly, this is one of the few North American sparrows that will sing two completely different songs.

In the breeding season this flat-headed, short-tailed sparrow is often found in the same habitats as the Savannah Sparrow, but generally selects more open sites with greater amounts of bare ground. This is probably because it forages exclusively on the ground.

Grasshopper Sparrows are distributed all across Iowa, and because of long-term population declines, it is listed as a species of high conservation priority by the Iowa IBA Program, and is the only sparrow so listed.

Although the Grasshopper Sparrow appears to have a wide distribution across much of temperate North America, it is often locally distributed and even uncommon to rare throughout parts of its range. Many populations in the U.S. have experienced long-term declines since the early part of the 20th century, owing mostly to loss and conversion of prairies and grasslands to row-crops and other land uses that are incompatible with populations of wild birds.



Habitat Preferences

Grasshopper Sparrows generally occupy intermediate grassland habitat, preferring drier, sparser sites in lush tallgrass prairies and eastern grasslands, and thicker, brushier sites in shortgrass prairies in more western grasslands.

In Iowa, it tends to prefer moderately open grasslands and pastures with patchy bare ground; and selects different components of vegetation, depending on the type of grassland or pasture. This species tends to avoid areas with extensive shrub cover.

Henslow's Sparrow (a threatened species on the Iowa IBA list), and the Bobolink (a species of high conservation priority on the Iowa IBA list) usually occupy sites with thicker vegetation and more litter than Grasshopper Sparrows.

Feeding Habits

Foraging is done while hopping or running on the ground, picking up items from the soil or from plant stems; and unlike some sparrows, this species almost always forages individually.

The diet of Grasshopper Sparrows consists mostly of insects and seeds. During the summer breeding season it mostly feeds on insects, including many grasshoppers, but also beetles, caterpillars, ants, true bugs, and many others. This species also feeds on spiders, snails, centipedes and earthworms.

Seeds are also an important component of the diet, and probably more so in fall and winter, and includes weeds and grasses as well as waste grains.

Breeding Biology

Most Grasshopper Sparrows return to Iowa from wintering areas in the southern and southeastern portions of the U.S. by early May. And a fair amount of site fidelity has been noted. Iowa data from a few decades ago indicates that nesting takes place in

pastures, fallow fields, grassed waterways, and grasslands, alfalfa field and clover fields when the cover is low in height.

Male Grasshopper Sparrows sing from a low perch, and sometimes sing at night, to defend their territory. In courtship, males sometimes sing in flight. This species may nest in small colonies, and numbers in a given area often change dramatically from one year to the next.

Nests are probably built by the female, and are well hidden at the base of weeds, small shrubs, or clumps of grass, and are often placed in a slight depression. The eggs are usually 4 to 5 in number, but may range from 3 to 6. Incubation is by the female only, and lasts for about 11 to 12 days. Both parents feed the nestlings, and the young leave the nest at about 9 days of age.

In general, the breeding season is protracted; and depending on favorable weather, this species can produce 2 or more broods annually.

Concerns and Limiting Factors

Habitat loss, fragmentation, and degradation are the primary reasons for Grasshopper Sparrow declines across the U.S. and in Iowa. The reason is quite simple: since the beginning of the twentieth century, more than 99% of native prairie has been converted to intensive agriculture.

Most research on Grasshopper Sparrows is conducted during the breeding season and suggests that reproductive success is low and that populations are not self-sustaining. Meaningful conservation requires better information about populations that function as sources versus sinks; and understanding the underlying reasons for differences in reproductive success is critical to effective habitat management in the future.

Habitat Management Recommendations

Three primary management techniques have been used and are recommended for this species: prescribed burning, grazing, and mowing. Each has different impacts depending on the type of grassland ecosystem it is used in. In Iowa's agricultural areas, roadsides and grassed waterways provide breeding habitat for Grasshopper Sparrows and numerous other grassland birds, although reproductive success in these landscapes is generally low.

Early-season mowing of hayfields and other agricultural lands is generally responsible for major nest failure of grassland birds, including Grasshopper Sparrows. In general, contemporary farming practices mean cutting hayfields more frequently, and the first cuttings occur 1 to 3 weeks earlier in spring than they did 50 years ago. These practices have had significant negative impacts on the nesting success of many, if not all, grassland birds. Deferred mowing on publicly owned lands would provide improved breeding opportunities. In addition, incentives to encourage farmers to defer mowing should be developed.

In tallgrass prairie and eastern hayfields, light to moderate grazing is generally beneficial to Grasshopper Sparrow, whereas grazing on drier grasslands or shortgrass prairie is detrimental, even though intensive grazing has been an important disturbance factor for building and sustaining the shortgrass-prairie ecosystem.

Population declines of Grasshopper Sparrow and many other grassland birds have been recognized as a national, regional and state conservation priority.

The primary conservation strategies being used in Iowa are 1) establishment of larger grassland Bird Conservation Areas (BCAs) along with smaller IBAs; and, 2) following

the recommended grassland management practices described in Part 3 of this writing. If widely implemented, such practices have potential to benefit Grasshopper Sparrows, which appear to be habitat-limited.

While CRP initiatives were not specifically intended to benefit this species, CRP has provided relatively large acreages of undisturbed grassland habitat, and Grasshopper Sparrows have colonized these fields. In other cases, four-to-six-year rotations of mowing, pasturing, and burning, when done correctly, may be beneficial.

For small acreages, one needs to understand and follow the sections on Grassland Management for Birds, and Recommended Grassland Management Practices, as provided in Part 3.