

Grassland Breeding Bird Grid Summary

By: Jon Van Arragon
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The Beaverhill Bird Observatory conducts two breeding bird surveys: a forest breeding bird grid and a grassland breeding bird grid. The grassland breeding bird grid is an 8 x 10 grid of points 50m apart arranged throughout grassland habitat that is grassland interspersed with willow thickets, aspen poplar forest, and wetlands. I was responsible for surveying this grid from June 20 to July 6, starting at sunrise each day and continuing for roughly 3 hours until all points had been surveyed. At each point, the position of singing birds was recorded; counter-singing events in which 2 birds sang simultaneously or in quick succession were also noted. Recorded data was then transferred onto a map of the breeding bird grid, with each species getting its own map. After 6 surveys had been completed, approximate territory boundary lines were drawn based on groupings of detections and counter-singing events (as well as any other territorial behaviors observed). Territory maps were created for 11 species that were observed frequently throughout the surveys.

The two most frequently detected species on the breeding bird surveys were the Clay-colored Sparrow, with 32 territories and LeConte's Sparrows with 31 territories. Other common species included Yellow Warblers (24 territories), Common Yellowthroats (24 territories), Red-winged Blackbirds (20 territories), and Nelson's Sparrows (19 territories). Territories were also identified for Least Flycatchers (15 territories), Sedge Wrens (12 territories), Savannah Sparrows (8 territories), House Wrens (4 territories), and Song Sparrows (3 territories).

The abundance of territories for various species tended to follow the distribution of one of more habitat types. Clay-colored Sparrows had the highest concentration of territories in semi-open grassland habitat with scattered willows and shrubs, while LeConte's Sparrows favored more open patches of grassland. Nelson's Sparrows were most abundant where the grassland was damp or flooded, LeConte's Sparrows were present in this same habitat but in lower numbers. Sedge Wrens occupied the same habitat as LeConte's Sparrows and Nelson's Sparrows. Savannah Sparrows were present in both drier and flooded sections of grassland but were not abundant overall. Yellow Warblers were observed mainly in willow thickets and forest edges; Common Yellowthroats occupied willow thickets as well but favored more open areas. Least Flycatchers were found entirely in forested sections of the grid, Song Sparrows were also observed in forested areas but most commonly along the forest edge or adjacent to a marsh. The majority of Red-winged Blackbird territories were located in the cattail marshes in Sora Pond, the remaining territories were also at sites with cattails present. House Wrens did not adhere to any one habitat type; they were mainly observed defending territories in the forest as well as in willow thickets and shrubs, some individuals were recorded in shrubs surrounded by grassland, but these were assumed to be birds venturing out to forage rather than territorial ones.

The density of territories varied between species and habitat types. Red-winged Blackbirds showed the highest territory density per area, the territories concentrated in Sora Pond were difficult to differentiate due to the high number of territorial birds present with insignificant distance between them. Sedge Wrens had the most dispersed territories, counter-singing events were infrequent due to the distance between singing birds. In general, species that frequent forested areas had smaller territory areas than species that frequented the open grassland.