

Monitoring Grassland Birds

Introduction

Effective management of any bird community requires 1) baseline information of the occurrence and abundance of each species, and 2) monitoring the population to evaluate the efficacy of management and adapt practices as needed. The recommended protocol to count birds provides a means for conducting relatively simple bird surveys on upland grasslands to satisfy these objectives. This protocol is designed for upland grass-dominated fields that do not have standing water or saturated soils during the spring or summer.

The protocol can be carried out by citizen scientists with birding skills ranging from beginner to advanced. It can be learned easily, and can save on resources compared to relying on professional biologists to conduct bird counts. The relative ease of the protocol provides an opportunity to engage landowners and other town residents in both the collection of meaningful scientific data, and in the care of municipal and privately-held lands.

Bird Count Protocol

An *area search* is a relatively simple method widely used to obtain counts of individuals for one or more bird species. It can be adopted by observers of various skill levels, especially in less diverse habitats, and across sites of different sizes and shapes. To conduct an area search, the observer walks the site of interest and records all birds seen and heard, and records the time they spend doing the search. The method can under-detect birds compared to more rigorous methods, and therefore underestimate numbers of birds. This problem can be reduced, however, by conducting surveys on multiple dates and by spending more time surveying a site to increase detections of birds. Another way to increase accuracy and detection is to plot bird locations plus their movements on a rudimentary map during the survey, which helps the observer to keep track of birds already seen, and helps to prevent recording the same bird twice (also known as “spot mapping”).

The more times an observer visits a field, the more confident they will become about where the birds are and how many there are. Mapping the birds’ locations gives the observer a sense of where territories have been established.

INSTRUCTIONS FOR GRASSLAND BIRD COUNTS

Dates to count

Do at least 2 counts in a season: once during the second half of May, once during the first two weeks of June. If you can do another count near the end of June, that is ideal. If you feel confident discerning juveniles from adults and there are Bobolinks at the site, you are strongly encouraged to also count ~6 -12 July to obtain the best estimate of reproductive success.

Time of day to count

Anytime within 4 hours of sunrise - between about 5 and 9am. The earlier the better if you're near roads, as traffic noise can prevent you from detecting birds.

Weather for a count

Do your counts only on mornings with good visibility, little or no precipitation, and light winds. Occasional light drizzle or a very brief shower is okay, but do not survey if there is fog, a steady drizzle, or prolonged rain. Wind should be less than 8 mph. A good guideline is if the tips of small twigs are swaying constantly, it is too windy.

Species to record

Record all species encountered within the field. You have the option of also recording species outside of the field, but this is recommended only for very experienced birders, as it distracts from detecting the grassland-dependent species using the field. Be sure you can tell the difference between a female Bobolink and a female Red-winged Blackbird, including their sounds. If you are uncertain about identification of a bird, record it as "unknown" (it will not be entered in eBird), and ask a birder to join you for the next survey to help you hone your identification skills. This happens to the best of birders!

Preparation

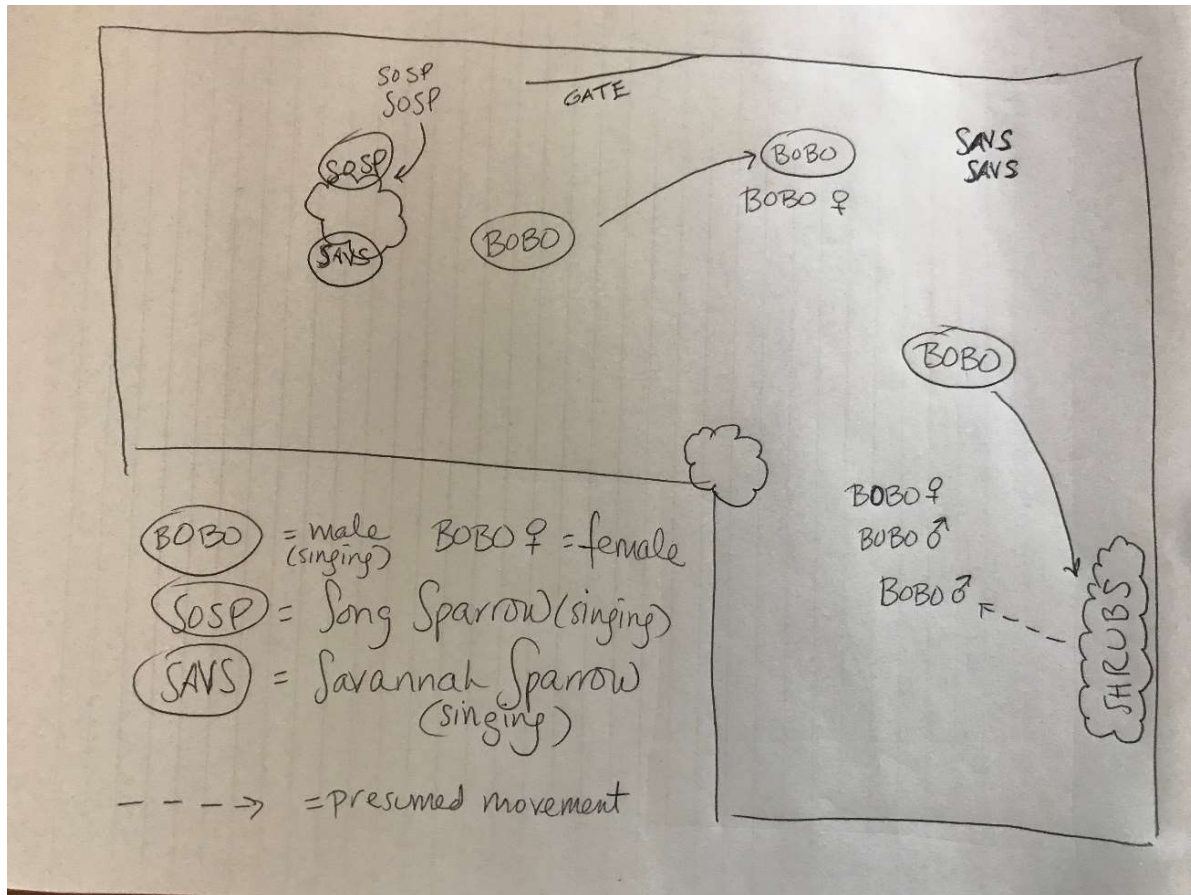
Do your homework and if you need to, bird with other birders. It's critical that you correctly identify the bird species. Luckily, in grasslands there aren't that many species to learn. However, when you're first learning to identify birds, female red-winged blackbirds can look like female Bobolinks, and Savannah Sparrows can be easily confused with Song Sparrows. There are many online resources with pictures and songs to review before you go out. But they may not prepare you for every scenario. What if you see a little brown bird take off from the grass, and all you see is the back of it as it flies away, and never get a good look? This happens a

lot! If this type of scenario poses a challenge, we encourage you to go in the field with experienced birders. This is the best and fastest way to advance your identification skills. In just a morning or two your skills and confidence will improve dramatically. Also, do not hesitate to follow a bird, flushing it from where it landed, to get a second look. Doing this *once* will not negatively affect the bird. There are citizen scientists who have volunteered to help people out with learning to identify and count the birds, so please let us know if you'd like one to go out with you.

Counting the birds

1. ***Make a map.*** Before you start your survey, draw a rudimentary map of the field (using the whole sheet), just for your own use, with basic landmarks and an outline. Nothing fancy! A big rectangle with the tree that's near one end, or a gate that's noticeable – that's adequate.
2. ***Walk the entire field.*** The beauty of this method is that you can walk wherever you want, and if there's more bird activity in a certain part of the field, or if you need to get closer to a bird to identify it, you can walk around wherever you need and spend as much time as you need to detect all the birds. Sometimes the majority of bird activity is more concentrated in one part of a field, so you would probably spend more time there and cover it more thoroughly. In general, and depending on the size and shape of the field, you could be systematic and walk back and forth across the shorter length of the field, in ~50-yard intervals.
3. ***Plot each bird.*** As you walk, record on your map all the birds you see OR hear. You need only place each bird encountered in its general location. Use an abbreviation of the species name (e.g., BOBO for Bobolink and SAVS for Savannah Sparrow - whatever works for you) and when possible, indicate sex. If you see a bird move, draw an arrow to the spot it moved to. Mapping the locations and movements of every bird helps you to know when you're seeing a new bird and when you're seeing one you already recorded. By the end of your count, you'll have a "map" of where all the birds were found – like the one below. Be sure to note any evidence of nesting (see the data sheet). Especially for smaller fields, once you get used to doing the counts, you may not even need the map and can instead enter your observations right onto the data sheet or into the eBird app.
4. ***Enter your data.*** When you get home, transfer the information from your map onto a data sheet. Then **enter your observations in eBird following the instructions provided**, while it is fresh in your mind. Don't wait. Not only for your memory's sake, but because anyone coordinating the efforts may be looking to see if bird counts are completed, and you may get a call asking where are your data. Make it easier on yourself and them, and take the 5-10 minutes to get it in.

Below is a sample (and rather simple) bird map from a site visit. If you spend any amount of time on your field, there will probably be more movements and more birds. From this map, the tally to enter into eBird would be 5 Bobolink (3 males, 2 females), 3 Savannah Sparrows (1 was singing), and 2 Song Sparrows (1 was singing). A dashed line was used to show an assumed but not witnessed movement of a bird.



A final note: *How to avoid stepping on nests*

Grassland birds nest on the ground, and they are very well concealed and extremely difficult to find. You would rarely if ever be able to just look down and see one. So, how to avoid stepping on them? This can be a big concern, especially for people who are first learning to monitor grassland birds. But all that is needed is a little bit of awareness.

The key is to be aware of any birds flushing within 5 yards of you. They may be near or on a nest, or they may have jumped off the nest, run along on the ground for 1-4 yards, and then flown, just to throw you off of the true nest location. If you flush a bird this close, back off and avoid the immediate area. If a bird flushes right in front of you or practically under your feet, then you've almost certainly come very close to a nest. The nest may be right in front of you, or you may have stepped over it or right next to it, and it could even be a yard or so behind you. When flushes are this close, try not to put your foot down until you've first searched the spot to make sure there's no nest there. Continue that process (look, then step) for each step you take until you're a few yards away.

Even when there is no flush (the bird may not be at the nest at the time), the behavior of the birds may tell you that you're in the vicinity of a nest or young fledglings that can't fly yet. Sometimes one or both adults will remain 10-15 yards from you and call frequently, indicating they have a nest or chicks somewhere nearby. They won't be perched and calling right next to the nest or nestlings. It just means the nest is somewhere within 20 yards or so. Record your observations on your map and be on your way, avoiding the area.

Please note that looking for a nest will dramatically *increase* your chance of stepping on it, and at the least will interrupt the adults from incubation or feeding. Even trained biologists can find it very difficult! We strongly encourage you not to attempt searches. If you happen to see one, allow yourself a few seconds to appreciate it (how can you not?) *without moving the vegetation around it*, and clear out of the area.

Thank you for providing grassland birds with the habitat they need, and helping us to document their success! Please don't hesitate to ask questions.