

Monitoring bird populations at IBAs with eBird: The IBA Canada protocol

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BIRD STUDIES
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Background

The Important Bird Areas (IBA) Program is a global initiative of BirdLife International in which more than 100 countries participate. It is a science-based program to identify, conserve, and monitor a network of sites that provide essential habitat for bird populations. In Canada and the United States, eBird is helping to update the population data for Important Bird Areas, either by design (e.g., IBA Caretakers in Canada are explicitly asked to enter their bird data on eBird) or incidentally (e.g., birders enter their data, not realizing that they are within an IBA). In either case, these data form a valuable resource for the IBA Programs in North America as they are incorporated into the various tools and visualizations available via the eBird portal (e.g., bar charts, high counts, species lists, etc.) and ultimately help to ensure our knowledge of and conservation planning for individual IBAs. It is certain that eBird will increasingly be used for IBA monitoring, not just in North America, but perhaps globally. At this early stage, there is an opportunity to increase the value of the eBird reports to derive better bird population estimates at individual IBAs.

Why do we need a special protocol for IBA monitoring in eBird?

Two main limitations currently preclude the use of eBird for IBA monitoring:

1. Because most IBAs are large, single checklists typically cover only a small portion of the total area and therefore provide only a partial count of the total number of birds present at a given time within an IBA.
2. Even in cases where multiple checklists do exist for an IBA and do cover a larger proportion of the area, there is no reliable way to combine them (i.e., checklists may overlap one another or otherwise count the same birds multiple times) to arrive at a count total for the IBA.

This document describes how to overcome these limitations through i) coordination of monitoring efforts, and ii) specific procedures for recording bird observations in eBird using the IBA Canada protocol.

What is the IBA Canada protocol?

The IBA Canada protocol is very similar in many respects to the way Christmas Bird Counts are conducted. Whether you are monitoring birds on your own, or as part of a coordinated group, the idea is obtain an overall estimate of the number of birds within an IBA on a given day, while minimizing double-counting of individual birds. Like the Christmas Bird Count, large IBAs can be divided into manageable sectors and surveyed in a coordinated manner to accomplish this (see detailed recommendations below). There are no specific rules about how often and at what time of year the IBA protocol should be used, as these will be largely driven by the situation at individual sites (e.g., peak

shorebird migration season, peak waterfowl migration, breeding season), but also practical considerations (when people are available to perform the counts).

The way you report your data on eBird is the same as general eBirding, with only a few minor differences. The primary difference is in the way birds are counted in the field and tallied on your data forms (see *Reporting your data to eBird* below).

Specific Guidelines

Please follow these guidelines as closely as possible when using this protocol and reporting your data on eBird:

1. **All checklists for a single inventory should be submitted for the same date.** Later on, our automated database tools will extract all observations from the same date and IBA that use the IBA protocol and will calculate the total number of individuals for each species on a given day.
2. You are encouraged to submit **distinct eBird checklists for different locations** within the IBA, but should **avoid reporting the same individual birds**. Some double-counting will be unavoidable, but the idea is to come up with the best estimate possible. This is particularly important for congregatory species that are likely to move around in large flocks, such as seabirds, waterfowl and shorebirds. It will require that:
 - a. You should exclude birds that you have reported on earlier checklists (e.g. distant birds that were seen and counted earlier, or that may have moved among sites). If you have some reason to believe that the large group you are seeing is the same as the one you counted earlier, you should only report them once. For instance, you visit site #1 and see a group of ~1,000 Semipalmated Sandpipers, which you see fly to the east towards your next site #2. As you arrive to site #2, you then see around ~3,000 individuals. If you have reason to believe that some of the birds from site #2 are those that you saw earlier at #1, you would report 1,000 birds at site #1, but only 2,000 at site #2 (only the additional ones). Note that if there are species that you have detected at a specific location, but for which all individuals have already been reported on another checklist because of double-counting rules, we encourage you to report them using an “X” rather than leaving them out of your checklist entirely. The X is used in place of a count to indicate that you have detected a species, but no individuals will be computed in the overall total for the IBA.
 - b. You should coordinate your count efforts with other parties that are surveying the IBA on that day and monitor distinct areas; if possible in a way to minimize the chance of double-counting. This may require that if parties are monitoring sites where birds are likely to be shared, they could agree to visit those sites at a specific time of day in order to minimize the risks that bird flocks will move from one party’s area to the next. We recommend that parties also compare notes at the end of the day to try to determine whether they are likely double-counting the same individuals. If so, the party that saw

the birds first could report them on their checklist, while the other party could report only the additional birds (make a note in the species comments explaining that you excluded some individuals (give the number) and the rationale for doing so). Comparing of notes will be particularly useful for large birds that can be identified at a distance. For instance, if you saw a large group of Sandhill Cranes flying in the distance in the other party's territory, you will only be able to determine whether they have already been counted after discussing with the other party.

- c. Coordinated surveys of IBAs that involve many participants are normally handled by the local IBA Caretaker/Caretaker group and/or the regional IBA Coordinator (see www.ibacanada.org for a list of contacts). If you still require additional guidance, the national IBA program coordinator at Bird Studies Canada may be able to help (iba@birdscanada.org).
3. **Only birds located within the boundaries of an IBA** should be recorded on checklists using the IBA protocol. We also encourage you to report your sightings using one of the pre-defined eBird hotspots, rather than create your own personal sites, if possible. If you would like to suggest new hotspots for areas that you are monitoring, you can do so by checking the option "Suggest as a Birding HotSpot" when you create your new site, or go to "Manage my locations" under the My eBird section, check off the site, and then use the drop-down list (at the top of the screen) to suggest personal sites as Hotspots. Contact the IBA program coordinator at Bird Studies Canada if you would like help or have questions about hotspots.
4. **Ensure that you are covering the entire IBA** or at least most of the area where the target species are found. Again, the idea is to obtain a best estimate of the total number of birds present, and this won't be possible if you only visit a small portion of the IBA. If you are not conducting a thorough inventory of the IBA please enter your data using one of the regular eBird protocols.

Again, for those who participate in the Christmas Bird Count, the above procedure should sound familiar in principle. Important to note, however, is that individuals are also welcome to use the protocol (one need not be part of a complex blitz effort) provided the guidelines are followed. In these cases, it is important to communicate with the local IBA Caretaker or the provincial IBA coordinator to ensure that someone else didn't have the same idea as you on the same date.

Reporting your data to eBird

When you are ready to submit your data to eBird, go to the main eBird Canada portal at <http://ebird.ca/>. If you do not already have an eBird account, you will need to sign up for one. **Only one observer per party should report the observations using the IBA protocol!** If other observers of the party would also like to have their observations entered in eBird under their name, the person reporting the data under the IBA protocol can *share* the checklist(s) with the other observers (the reporter will need the other observers' eBird usernames or email addresses for sharing).

To submit observations, click on “Submit Observations”. At step 1, select one of the methods to identify your site (from a pre-defined list, or from a map). Each location surveyed is entered as a separate checklist. For instance, if your party visited 5 different locations during the day, you would report at least 5 checklists, in addition to observations made while traveling between these locations. The “summing up” of the total number of individuals for the IBA is handled later by the data management system. The fact that you have used the IBA Canada protocol allows us to make these calculations with confidence that double-counting of individual birds was minimized.

At step 2, enter the observation date, and use the drop-down list to view the list of *Other protocols* under Observation type. This is where you can pick the **IBA Canada protocol**.

The screenshot shows a web form for entering an observation. At the top, there is a field for "Observation Date:" with a calendar icon and a star indicating it is required. The date is set to April 29, 2014. Below this is the "Observation Type:" section, also marked as required. It contains four radio button options: "Traveling", "Stationary", "Incidental", and "Other". The "Other" option is selected, and a dropdown menu is open below it, listing several protocols: "Choose...", "Choose...", "Area", "eBird Pelagic Protocol", "Random", "Nocturnal Flight Call Count", "Rusty Blackbird Spring Migration Blitz", and "IBA Canada (protocol)". The "IBA Canada (protocol)" option is highlighted in blue. To the right of the "Other" section are three "More Info..." links. At the bottom right of the form is a green "Continue" button with a right-pointing arrow.

After you select the IBA Canada protocol, you will have the option of entering the Start Time, the Duration, the Distance, the Area searched and the Party Size. All of these fields (with the exception of Area searched) are required. For all of these, if you do not know the exact value, please use your best estimate.

At step 3, you can report the individual count of each species as you would normally in eBird as they apply to each unique location surveyed within the IBA, **but remembering that your count must exclude any birds that are already reported on another checklist (by your party or another)**. For high counts, it is a good idea to document how the count was made (e.g., counted estimated groups of 100; exact count). Before submitting the checklist you must answer yes or no to the question, “Are you submitting a complete checklist of all the birds you were able to identify?” You should always answer 'Yes' to this question unless you are purposefully excluding some species (e.g., European Starlings) from your checklist.

Troubleshooting and tips

1. **Submitting data directly from the field.** If you have a smart phone running Android or i OS, you can purchase Birdlog to enter eBird checklists in the field. Enter the checklist as you normally would and use the “travelling” protocol when in the field. Once you finish up your surveys you’ll

have to log in to eBird on a computer and change the portal to eBird Canada (see the next entry, below) and then change the protocol to the IBA Canada Protocol.

2. **IBA Canada Protocol doesn't show up as an option.** This happens if you aren't visiting eBird using the eBird Canada portal (www.ebird.ca).
 - a. If you haven't submitted your checklist yet, try typing www.ebird.ca into the address bar of your web browser and re-starting the checklist. If you still don't see IBA Canada Protocol as an option under the list of "other" protocols then contact Bird Studies Canada for assistance.
 - b. If you have already submitted your checklist using Birdlog or through another portal (e.g. www.ebird.org) you'll have to first switch the checklist so it is in the eBird Canada Portal. To do that, open up your checklist and click the "Change Portal" button which appears at the bottom of the right-hand margin. Select "eBird Canada" from the dropdown menu and then click the green "Change Portal" button (if you don't see eBird Canada in the list, that means the checklist is already in the eBird Canada portal). Once you have changed your checklist to eBird Canada you can then change your protocol to the IBA Canada protocol by clicking the "edit data and effort" button to the right of the date and then selecting the correct option.