



# Christmas Bird Count Canadian Compiler Manual

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## INTRODUCTION

The Christmas Bird Count, started by Frank Chapman along with 26 other conservationists, was a way of promoting conservation by counting, rather than hunting, birds on Christmas Day of 1900. Now in its second century, it has evolved into far more than just another holiday tradition. The CBC is, to quote Geoff LeBaron, the Audubon CBC Director, “increasingly accepted by ornithologists and conservationists alike as the best, if not only, tool available for assessing the long-term trends in the early winter bird populations of North America.”

With the cumulative historical CBC data now online, there are many thousands of individual counts from December 25, 1900 to the present available for perusal and scientific research. Historical CBC results by count or by species can be found at the Audubon website <http://netapp.audubon.org/cbcobservation/>.

## THE BASICS

- *Circle:* A count must be entirely within a 24 kilometre (15-mile) diameter circle.
- *Centre Point:* The same centre point should be used each year.
- *Circle Overlap:* Circles should not overlap neighbouring counts.
- *Count Period:* Your count needs to be conducted within the official count period, between December 14 and January 5, inclusive.
- *Count Day:* Your count must be conducted within one 24-hour calendar day.
- *Birds outside the circle* seen by an observer standing in the circle should not be included in your census data.
- *Count Hours & Observers:* Counts should have a minimum of 8 hours coverage, either by one party or cumulative by a number of parties.
- *ID by Voice:* Birds may be identified by voice, but specimens or tracks are *cw* (count week) birds (unless you can document the fact that the specimen/track wasn't present in the area earlier than the count day).
- *Linear pelagic CBCs* are allowed, if the boat follows the same transect or covers the same area each season.

Bird Studies Canada requests that each CBC circle maintain one point of contact for emailing of count materials, receipt of update emails on the CBC, and data entry of the count results. This primary circle contact needs to provide their name, address, email, and phone number to the Bird Studies Canada office upon creation of the circle. An email address is required for this primary contact. This one primary compiler may also designate other secondary compilers to receive emails, but only one main contact per circle can be maintained for other reasons.

## ROLE OF THE COMPILER

(Check out *The Art of the Christmas Bird Count* by Alan Contreras at <http://home.pacifier.com/~mpatters/cbc/acbc.html>)

*Organizing/recruiting participants, including feeder-watchers:* Remind previous participants and start recruiting new ones in early November. Place notices in local birding or conservation newsletters, or announcements in local newspapers. Circulate flyers, or send postcards to those you think might be interested. Put up posters in gathering places.

*What new CBC volunteers need to know:* Compilers should reiterate to past participants, and communicate to new participants, reminders such as how much time they may be spending in the field, what to wear, the need to bring their own binoculars, the need for food and water, sturdy footwear, rules of counting, etc. Also, anyone involved in the CBC can have their photos taken during a CBC considered for use in the summary reports published by the program partners Audubon and Bird Studies Canada. We're always looking for photos! If anyone wishes to submit a photo, rare or not, to be considered for the online summaries, please submit it to the CBC coordinator with details on the photographer's name, phone, email, species, date of photo, and name of the CBC.

*Scheduling count:* It's best to schedule your count during the same weekend of the count period annually. This helps observers plan their activities well in advance and enhances the value of your data.

*Compiler contact information:* Compilers should update their contact information on the Bird Studies Canada “Find a count near you” website. To do this, go to <http://www.birdscanada.org/volunteer/cbc/entry.jsp> and enter the appropriate circle code and password provided by the CBC coordinator. Compiler changes can also be entered through this site, but please notify the coordinator of any compiler changes as well.

*Area leaders and new participants:* Area leaders should be familiar with all local birds. New participants joining the count should be paired with experienced birders, if possible.

*Designated census route:* Each group (party) should run a census-style route where they cover the route in-depth, counting every bird encountered. No other group should cover that area—we need to ensure that no double-counting occurs.

*Counting when retracing census route:* If a group needs to retrace their path along a census route, birds *should not be recounted*. However, if other species or new individuals of the same species are encountered, they should be included in the census results. For instance, if you walk down a trail and see 10 robins on the way out, then retrace your steps, seeing 15 robins and a crow on the way back, your tally would be 15 robins and 1 crow.

*Feeder watchers:* Feeder watchers should look for the maximum number of each species visible (or within earshot) at any one time as their maximum count. They should not keep adding chickadees for their entire watch period.

*Large roost counts:* For counts where large roosts are within the circle, an observer experienced with estimating large numbers of birds should census that roost in the morning or evening. With very few exceptions, no other individuals of that species counted by other observers during the day should be included in the final tally.

*Online data:* All count data are entered online at the Audubon website <http://netapp.audubon.org/aap/application/cbc>. Access to the data entry site is controlled by the CBC coordinator; please contact [cbc@birdscanada.org](mailto:cbc@birdscanada.org) for details.

## **TIMELINE AND DEADLINES FOR EACH CBC**

- All counts must be run within the “Official Count Period,” which runs from December 14 through January 5 (inclusive) each season.
- Online data entry should be complete by February 15 each year. Data entry access will be closed as of February 16 each year.
- Regional Editing process takes place from February 1 through March 31 each year.

## **GUIDELINES FOR SCOUTING**

**Scouting is not a required part of the preparation for any Christmas Bird Count. However, if one goal of your group is to get the highest species total each season, pre-count scouting can make or break that effort. The early winter bird season is quite variable from year to year, and a bit of time over the week or so before your official count date will save valuable time (and potentially frustration) for your field parties on count day.**

- *The timing on routes:* While your field parties probably tend to follow the same route in their section of the circle each season, scouting beforehand can provide them with tips about finding reclusive, crepuscular (dusk-loving), or nocturnal birds. In addition, if you learn before count day that a particular marsh or lake is completely frozen or dry (and thus not worth a visit), that could save your participants valuable time on their busy day.
- *Road conditions:* As with the Breeding Bird Survey, it’s best to make a dry run through all your count’s areas prior to your CBC to ensure that no construction areas or bridge outages will hamper your participants’ access to their assigned areas.
- *Rarities:* Scouting before the count day may turn up rare, out of range, or out of season species. These could well be your ‘best birds’ during count day, and obviously you’ll want to alert your field parties to their presence if any rarities turn up.
- *Tricky identifications:* Scouting may result in the location of difficult-to-identify birds that could otherwise go unlisted if they are only seen on count day. Sorting these species out in advance (some shorebirds, gulls, flycatchers, or sparrows for example) can ensure that observers familiar with the species assist with the

identification, and will help supply the details that will probably be necessary to satisfy your CBC Regional Editor.

- *How and where to scout:* The weekend before, or during the week leading up to your count, ideally all your routes should be pre-run. Thickets, marshes, and congregations of birds should be checked for birds of note, and any logistical difficulties uncovered, or good birds found, should be reported to your party leaders and observers. Many times some of your regular observers will be anxious to scout their areas in advance, so don't feel you have to do all the scouting on your own time.
- *Owling:* Scouting for nocturnal species prior to your count day can be especially helpful to your observers. The CBC period is the time when many species of owls are defining their territorial boundaries. Driving your routes at dusk or dawn may uncover specific locations where owls may be quickly seen or heard by your observers on count day.

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## DETAILS ON RECORDING CBC INFORMATION

### WEATHER AND EFFORT

#### Units

Measurements can be in either metric or English units.

#### Date & Time

**Count Date:** Date must be between December 14 and January 5, inclusive.

**Start and End Times:** You must specify at least one start time and one end time. If your count times are discontinuous, you can specify additional times by using additional rows.

For example: If your nighttime and daytime hours are discontinuous, give both sets.

Start time 1 and End time 1:	1:15 a.m. to 3:00 a.m.
Start time 2 and End time 2:	8:00 a.m. to 4:30 p.m.

#### Weather

**Online Weather Data:** For many towns and cities, weather data (except snow depth) can be found after the count day on the Environment Canada website (<http://climate.weather.gc.ca/>).

**Temperature:** Indicate the minimum and maximum temperatures of the day to the nearest degree.

**Wind Direction:** If there is little to no wind, select Calm for Wind Direction. In case of fluctuating wind patterns, select Variable.

**Wind Velocity:** For Wind Velocity, report representative values rather than rare extremes. You will need to use your best judgment as to what is representative. For example, if wind velocity was generally in the 5 to 15 kph range but very infrequent gusts of 30 kph occurred, report Wind Velocity, Minimum as 5 kph and Wind Velocity, Maximum as 15 kph.

**Snow Depth:** Minimum and Maximum should be reported to the nearest centimetre. Both should be reported as 0 if there was no snow. Report representative values rather than rare extremes. For example, if snow depth was typically between 4 and 8 cm with occasional 1-metre snow drifts in gullies and bare spots on ridge tops, report Snow Depth, Minimum as 4 cm and Snow Depth, Maximum as 8 cm. If snow depth increases with elevation, report the representative minimum depth at low elevation and the representative maximum depth at high elevation. If snow depth decreases with elevation, do the reverse.

**Still/Moving Water:** Ice Coverage, Open and Moving Water should be set by these guidelines: Open= 100% water, Partly Frozen = more water than ice, Partly Open = more ice than water, Frozen = 100% ice.

### **a.m. and p.m. Conditions**

**Cloud Cover:** For Cloud Cover, a.m. or p.m., select the condition that was true most of the time. Local Fog means that only portions of the count circle had fog for most of the period, while Foggy means the entire circle had fog. Clear = 0-15% clouds, Partly Cloudy = 15-33% clouds, Partly Clear = 33-66% clouds, Cloudy = 66-100% clouds.

**Rain/Snow-a.m./p.m.:** For a.m./p.m. Rain/Snow, check all conditions that were true. For example, if the morning started with drizzle that developed into heavy rain, the "Rain" boxes should have both "light" and "heavy" checked for the a.m.

### **Observers**

Observers in the field during daylight are counted separately from nocturnal birders and those observing at feeders. When reporting the minimum and maximum number of parties, remember these include only parties in the field during daylight hours.

**In Field** - Total Number and Minimum/Maximum Number of Parties: To determine the number of daylight parties, use the number of parties that you began the day with as your basic number. If parties further split up during the day, the maximum number in the field at any given time of the day should be reported, and the basic number becomes the minimum.

Example: Count Frozentoos, Yukon starts the day with three parties. Later, two of these split into two parties each. The compiler records this as Minimum Number of Parties (daylight) = 3 and Maximum Number of Parties (daylight) = 5.

Frozentoos, YT also had a group of counters out owling from 4:45 a.m. to 6 a.m., but this party is not included in the Minimum/Maximum Number of Parties.

**At Feeder** - Total Number: Example would be of 4 people feeder-watching for several hours during the day as well, but again, this is not recorded in the daylight party number (it is recorded as observers At Feeders, Total Number).

### **Party Hours and Distance**

(excludes viewing at feeders and nocturnal birding)

Record a value for all hours and distance fields except for those associated with By Other Transportation. If appropriate, enter a 0 for distance. For example, an owling party may spend 1/2 hour in one spot – resulting in 1/2 hour and 0 miles owling.

Party hours and distance (Total Party, By Foot, By Car, and By Other Transportation) are reported excluding feeder hours and nocturnal birding hours and distance. Please round all hours to the nearest quarter-hour, and all distances to the nearest quarter-mile or half-kilometre.

**Total Party Hours and Distance:** Totals for Party Hours and Party Miles are calculated automatically on the website.

### **By Other Transportation**

For party hours and distance By Other Transportation, you are given a limited choice of methods of transportation. If the exact method is not listed, please select the best approximation.

NOTE: It would be unrealistic (and indeed the online data entry system will not allow you) to report any more Total Party Hours than the Maximum Number of Parties (daylight) times 8, since 8 is the approximate maximum number of daylight hours in December and January.

Compilers should make sure to get the breakdown of hours and distance covered by car, foot, and other means of transportation (boat, bicycle, skis, etc.) from the party leaders. This is greatly facilitated if each area leader is given a form with a bird checklist on one side and an effort form on the other.

*NOTE:* Take into account that for a party on foot, it is difficult to walk and bird much more than 2 km per hour.

### Other Time and Distance

**At Feeders:** The number of hours is obtained by totaling the hours spent at feeders by feeder-watchers taking part in your count. Time spent observing feeders by parties afield should not be included here – they should be included in your field party totals. Hours should be rounded to the nearest quarter hour.

**Nocturnal Birding ("owling"):** For nocturnal birding, report the number of hours spent by all parties in the field during non-daylight hours, rounded to the nearest quarter-hour and for the distance, total up the distance (by foot, car, or other transportation) traveled by those parties, and round to the nearest quarter-mile or half-kilometre.

### Recording Checklist Data

For each species seen, record the number observed on count day, or enter cw if the species was observed during count week only. The count week runs from three days before to three days after the count day. The count week can therefore extend outside the official count period; for example, if your count is run on December 14, the first day of the period, your count week is still from three days before to three days after your count (December 11 through 17).

Please remember that, for birds coming to feeders, it is the highest number of individuals seen and heard at one time that should contribute to the total number for that species.

**Other Flags:** The US (unusual) flag is for species that are out of range or seasonal or are difficult to identify. A guideline for this in long-standing counts is that any species seen less often than once every four years should be considered unusual. The HC (high count) flag is if the number of birds observed is an unusually high count. A guideline for this in long-standing counts is that any record high count, or count very close to a record high, should be considered as HC. Similarly, the LC (low count) flag is for unusually low numbers.

### Total Number of Species

The total number of species that will be recorded equals the number of AOU-listed ('real') species observed on count day plus any generic or *sp.* forms not represented within the list. For example, *loon sp.* counts in your total only if no other loons were identified to the species on count day. Species such as Dark-eyed Junco or Northern Flicker only count once in your species total, even if two or more forms were identified on count day.

### REPORTING UNUSUAL SPECIES

Species flagged as unusual ("US") on the count must be documented in appropriate fashion. The amount and type of documentation will vary depending on the rarity of the sighting. For instance, a species that is regular in winter in the general area of the count, but for some reason is not seen regularly on the count itself, might be simply noted as such, whereas a true rarity, especially one that is difficult to identify, will require more extensive documentation.

Any species that is not expected in your area in winter should be well documented. **Note: this includes species that are common in your area in summer.** Please use the standard CBC rare bird documentation form if possible; if not, at least use it as a guide as to what details are important. The most important details are those concerning the identification of the bird in question—what features were seen that clinched the identification, and other possible species that were considered, and why they were rejected. Ancillary details such as weather, distance, equipment, lighting, experience etc. are good as well, but should not form the bulk of the report—editors will simply want to know why this bird was identified as the species reported. All reports must include the name and phone number of the person who is the contact for the report. This could be a compiler or it could be a participant who observed the species.

Documentation of all rare bird/unusual species must be submitted directly to the regional editor. If you have received written reports from observers documenting species that they observed on count day, and especially if you have photographs or sketches accompanying the report, it is best to mail those original documentations directly to the regional editor. **Digital photographs, videos, or audio recordings are highly recommended**; please email these directly to the regional editor with a copy to the CBC coordinator, if possible.

Rare species reported with inadequate documentation will usually be deleted from tallies by the regional editors or labeled with the dreaded “ND” (no details).

## **SAFETY GUIDELINES**

The Christmas Bird Count should be a fun and enjoyable experience, but safety should *always* come first. Conducting your CBC in a safe manner is your responsibility, and if you are ever concerned about your safety, do not survey. Keep the following safety guidelines in mind for your count:

### **GENERAL SAFETY TIPS**

Bring a cell phone (make sure it's charged!)  
Tell a friend or relative where you are going and when you will return.  
Bring a first aid kit.  
Bring more food and water than you think you will need.  
Bring a partner!

### **CAR SAFETY**

Ensure your car is in good working condition and has a full gas tank.  
Decide if your car needs snow tires or chains.  
Bring a winter emergency car kit. For information on what goes in a car emergency kit and what to do if you get stuck in the snow, see: <https://www.getprepared.gc.ca/cnt/rsrscs/sfttps/tp201012-en.aspx>.  
Make sure you have your spare tire, jack, and tire repair kit (and ensure you know how to use them!)

### **ROAD CONDITIONS**

Check the forecast for road conditions and visibility before you leave home.  
Do not continue your count if road conditions are hazardous (e.g., icy roads, blizzard, etc). Use your judgment.

### **TRAFFIC HAZARDS**

Follow all traffic regulations and laws.  
If stopping on the roadside, pull off the road completely in a safe location and put on flashing hazard lights.  
Wear a fluorescent safety vest if surveying along roadsides. Always step off the road if another car is approaching.  
While driving, only the passenger should handle any tech equipment (gps locations, texts, phone calls, etc.)