



## Guide For Point Counters



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The Manitoba Breeding Bird Atlas is a cooperative project involving provincial and federal governments, non-government organizations, other organizations and citizens. Primary project management is through a partnership of Bird Studies Canada, Environment Canada, Manitoba Conservation, Nature Manitoba, Nature Conservancy Canada, The Manitoba Museum and Manitoba Hydro.

A very special thanks to the volunteers of the Manitoba Breeding Bird Atlas! The foundation of this project is the enthusiasm of our volunteer atlasers who collectively spend thousands of hours documenting evidence on breeding birds in Manitoba. Without your contribution, a project of this magnitude would not be possible.

**THANK YOU TO ALL OUR SUPPORTERS!**



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## GETTING STARTED

All the information you need to register and get started is provided in the “**Guide For Atlasers**”. All participants should read the “**Guide For Atlasers**” for general information on how to participate in this project. To register, go to [www.birdatlas.mb.ca](http://www.birdatlas.mb.ca) or call us at 204-945-6816 or 204-945-7758 or toll free at 1-800-214-6497 and ask for the Manitoba Breeding Bird Atlas. You will be given a unique Atlasser Number that you will use each time you record data, access materials or enter data on the website (if you enter data online).

The “**Guide For Point Counters**” contains information on atlas point counts for those who are willing and able to do them in addition to general atlassing. Volunteers who do not wish to do point counts do not need to read this “**Guide For Point Counters**”. If you intend to conduct point counts, please read the “**Guide For Atlasers**” before reading this document.

## POINT COUNTS

### What Is a Point Count?

Regular atlassing gives the distribution of our Manitoba breeding birds (i.e., where they are

breeding). Our abundance estimates provide a rough measure of how many birds are in each place. A more precise way to determine abundance involves using your ears and eyes in something called a point-count survey.

Doing a point-count survey is as simple as standing in one pre-determined place (usually on a roadside) for five minutes and recording all the birds that you hear or see. The more difficult part is learning the songs and calls of birds. The majority of birds are usually heard rather than seen, especially in forested sites, so people who do point counts need to know the songs and calls of all the landbird species in their square. Since many people are not experienced in bird identification by songs and calls, doing point counts is completely optional for atlases. However, we encourage all atlases who know most Manitoba birds by song to try doing at least a few. Even if you can’t do them in the first year of atlassing, you may find that with study of bird songs and more time in the field, you will be able to do point counts before the end of the five-year atlas period. If you find that you don’t know more than three birds per point count, we ask that you not submit your data and continue learning. Appendix E of the **Guide For Atlasers** lists some training materials that may help you on your way to becoming a top-notch point counter! The best way to learn is to go out in the field with somebody who knows their songs and calls and to learn from them.

## **How Many Point Counts Should I do, and Where Should I Do Them?**

We are aiming to do at least 15 point counts per square over the five-year period. Inform your Regional coordinator (RC) if you want to undertake point counts. If you try point counts and later find that you are not able to continue for whatever reason, be sure to let your RC know right away so the point counts in the square can be reassigned. Once 15 point counts have been completed in your square(s) and your square(s) is (are) adequately covered with regular atlassing, please consider helping out elsewhere in your region or in other regions with fewer atlassers. Some RCs may be forming special teams of people to ensure that sufficient point counts are done in their region. If you're interested in this, let your RC know.

Your square map shows up to 30 randomly located points on roadsides in your square, from which you choose the first 15 suitable points. However, in some cases, stations may be on busy roads or in other locations unsuited to point counts. You should eliminate these from consideration and add locations with higher numbers to make up your total. For example, if your initial set of points is 1-15, but stations 5 and 13 are unsuitable, add numbers 16 and 17 to make up your total to 15. Remember that some locations which are unsuitable for much of the day may be fine in the early morning, especially on weekends, before traffic noise builds up.

Although there are up to 30 point count locations marked on your map, it is important to follow the procedure given here to ensure that count stations are randomly distributed, and not biased towards especially productive habitats or a particular portion of the square. The extra stations on the maps are provided to ensure there are enough to replace unsuitable stations, and because some atlassers may wish to do more than the minimum number. If you decide to do extra stations, use the same procedure as above to choose them (e.g. if you decide to do 20 instead of 15, select stations 1-20 first and then replace as needed). However, we would prefer if after the completion of 15 point counts in one square you consult your regional coordinator and do point counts in another square.

Once you have selected your stations, you can cover them in any sequence that seems efficient. It isn't necessary to do all the point counts at once or in the same year. In fact, we would prefer to have them spread out throughout June and the first week of July and over years to record as many species as possible, as different species are detectable at different times.

The ability to detect certain species can differ from person to person. Therefore, invite other point counters to do point counts in your square and return the favor by offering to do counts for your neighbours, or in squares that need more attention. Contact your RC or consult the website to find out which squares need help. For example, you could do five counts in your square and five in each of two other neighbours' squares, and they could do the same.

## **Off-road Point Counts**

Although point counts along roads are very useful, they have been shown to be ineffective in picking up some species. For this reason it is advantageous to do some point counts away from roads. Off-road counts are to be done in target habitats. The Square Summary Sheets show how many off-road points to put in each habitat type. The atlasser may choose the location of the points within each habitat type. Please select these locations ahead of time so you are not tempted to put in a station simply because there is an interesting bird in a particular spot. Make sure all points are at least 300 m apart and 100 m from an adjacent habitat type. You should try to select point counts throughout the square as access allows (and as safety allows), and to sample the habitats proportionately to their availability in the square. Off-road point counts are included in the total number of counts, e.g. if you do three off-road point counts in a square you should do 12 on-road counts to reach your total of 15 points.

## **How to Do a Point Count**

Before heading into the field, be sure you have point count forms. The point count forms will be read by computer, so they must be filled in neatly. It is best to transcribe data from your field form to a clean form that will be submitted

for scanning. You can also enter the data online directly from the field form via the website. Initially these forms may seem awkward to use in the field, but they help remind you of the data that must be recorded, and will save a lot of time in not having to write species names into a field notebook. If you use a notebook, be sure to record date, time, square number, point location, and habitat (for off-road points) as we cannot process your data without them.

Once you arrive at your point count station, make sure the weather is suitable for doing a point count before proceeding. Do not do a point count if it is rainy, misty, or foggy, if it is below freezing, or if it is windy (see Table 1 for the wind conditions suitable for counting). For designated roadside point counts, record the point count number from your square map. Double check that you are as close as possible to the location marked on the map. For off-road point counts, record the UTM location and habitat type, or mark the location on your map as closely as possible for later look-up of the UTM coordinates.

The point count consists of standing quietly at a specific point and counting all birds seen and heard during a 5-minute period. Wait about a minute after arrival at the location for the birds to settle down to your presence. During the point count you should turn occasionally to look in all directions, but you should stand at the same spot throughout the count.

The 5-minute period should be adhered to exactly (to the second). We recommend using a digital watch or an egg timer that can be set to beep after 5 minutes. A watch with a second hand is less satisfactory because it requires frequent checking, which distracts from your birding, and you are more likely to exceed 5 minutes by mistake.

**Do not add ANY species discovered after five minutes.** While it may be tempting to add a new species to your point count list that was detected seconds after the end of the count, please do not succumb. Point counts are certain to miss some species, and their absence is an indicator that those species may be relatively uncommon in your area. You may record other species after

five minutes on the casual observation or breeding evidence form.

Near the top of the point count form, **fill in the “designated number” for each predetermined roadside point count (i.e. numbers on the map).** For “off-road” counts, complete the UTM Easting and Northing coordinates precise to at least 100 m (see Section on “Determining UTM Eastings and Northings” in the “Guide For Atlassers”). Fill in the appropriate circle to indicate how you determined UTM coordinates (i.e., choose one; GPS, Survey square map, or Web conversion tool). **It is very important that you only enter the designated point count numbers on the form and do so ONLY if you completed your count at the designated location** (or within a very close distance to your point, i.e. within 50m). **Do not fill in the designated number if you did a point-count at station not assigned on your map.** Remember to complete the habitat section for off-road stations according to the appropriate codes (see “How to Record Habitat for Off-road Point Counts” on page 4 and Table 2).

Under the ‘No.’ column, record the numbers of **every bird** you see or hear, even if it is very far away. However, if the same individual bird is seen or heard at more than one point count station, do not record it at both. Record it only for the station at which it was first observed. Include fledged young and birds flying over the point count station, regardless of distance. This includes birds that you don’t think are breeding in the square. If you encounter a flock too large for counting all individuals, simply estimate the number of birds. We suggest counting off groups of 5, 10, or 25, depending on the size of the flock.

When conducting point counts, always make your best effort to count the number of individual birds and record these in the “No.” column. If you suspect an individual is singing from multiple song perches, count this as one bird, not two. Where possible, try to determine if individuals of the same species are counter-singing or responding to each other’s song, as opposed to a single individual singing from different locations. This takes practice and care. When in doubt, err on the conservative side of

counting. Please enter only one digit in each space. This allows recording of a maximum of 99 birds per species at each point. If you saw more than 99 of any species (e.g., a large flock flew by, or you were near a colony), or if you record any species that are not on the form, record these in the Additional Species section. Here, you can write as many digits as you need in the larger boxes provided. Fill in the 4-letter code for these additional species (Appendix C of the “Guide For Atlassers”). If you require space to add more species, please provide the details on a separate piece of paper to be sent in with the form.

Next to the “No.” column on the point count form is the “Br. evid” column. Here you record the highest level of breeding evidence you observed for that species during the point count (See Guide For Atlassers – Table 1).

**Before you leave the point count station, be sure you have recorded all of the relevant information (location, date, start time, highest level of breeding evidence for each species)** and, if you are doing an off-road station, that you have recorded the habitat information (see Table 2).

### When to Do Point Counts

**Season:** Point counts should be done in the peak of the breeding season, ideally between

June 7 and July 7, although this can vary with latitude and, to a lesser extent, with annual weather conditions. Because different species breed on different schedules, you are encouraged to spread out point counts throughout this period in each square. However, if you don’t have the luxury of doing so; for example, because you are doing a “blitz”, or can only do point counts on a few occasions; it is acceptable to do all of them at once.

**Time of Day:** Point counts can be done anytime between a **half hour before sunrise and four and a half hours after sunrise**. Sunrise can be as early as 5:00 am in Manitoba in June (check your local newspaper or go to <http://www.birdatlas.mb.ca/mbdata/atlastools.jsp> and find your square for exact times). It is not necessary that counts be done only in the very early morning. In fact, some birds aren’t active until an hour or two after sunrise. In the peak season of June, most species are quite active until about 5 hours after sunrise.

**Weather:** Counts should not be done if it is raining or misty, if there is thick fog, if it is unusually cold, or if winds are greater than 19 km/hr (i.e. >3 on the Beaufort scale, see Table 1). Use your judgment. If you think your hearing is impeded by the wind or that bird activity is significantly reduced by weather, then try to return on a day of better weather.

**Table 1.** The Beaufort Wind Scale

Force		Characteristics	
0	Calm	<2 km/h	Smoke rises vertically
1	Light	2 – 6 km/h	Wind direction shown by smoke drift
2		7 – 12 km/h	Wind felt on face, leaves rustle
3	Moderate	13 – 19km/h	Small branches move (make decision whether to point count or not)
4		20 – 30km/h	Small trees sway (don’t point count)
5		31 – 40 km/h	Large branches move (don’t point count)

## How to Record Habitat for Off-road Point Counts

Record habitat description for all off-road stations using the coding system shown in Table 2. You are not required to do this for on-road counts, but if you are willing to do so, the data will be useful. Please record the dominant one or two habitat types around the point on the point count form. The main habitats are recorded using a 2-character code. The first character is the “Class”, and consists of a single capital letter (A-G), corresponding to the major habitat classes. The second character is the subclass (“SC” on the data form), consisting of a single

number (1-8). For on-road counts you may want to record two categories (e.g. if habitat is different on each side of the road). However, **do not record a second habitat category unless the second habitat covers at least 25% of the nearby area (excluding the road itself).**

If the habitat does not fit within one of the category codes shown in Table 2, or if you would like to record additional detail (such as whether the forest has been recently burned or logged), you may do so in the “Structure” and “Modification” boxes on the data form. These boxes will allow you to fill in up to four additional codes each.

**Table 2.** Habitat codes to use with the point count form

<b>CLASS A: Woodland</b>		
<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Deciduous	<b>A.</b> Young	1. No human disturbance
2. Coniferous	<b>B.</b> Mature	2. Human disturbance light to moderate
3. Mixed (>10 % each)	<b>C.</b> Mixed age	3. Human disturbance heavy
	<b>D.</b> Closed canopy	4. Plantation
	<b>E.</b> Open canopy	5. Clearcut
	<b>F.</b> Scattered trees	6. Partially logged
	<b>G.</b> Wet/ Standing water present	7. No grazing
	<b>H.</b> Standing dead trees present	8. Grazing light to moderate
	<b>I.</b> Fallen dead wood present	9. Grazing heavy
	<b>J.</b> No understorey	10. Human structure present
	<b>K.</b> Grass, fern or herb layer present	11. Recent burning
	<b>L.</b> Low (< 2m) shrub layer present	
	<b>M.</b> Tall (> 2m) shrub layer present	
<b>CLASS B. Grassland, Shrubland and Agriculture</b>		
<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Grassland	<b>A.</b> Hedgerow with trees	1. No grazing
2. Shrubland	<b>B.</b> Hedgerow without trees	2. Grazing light to moderate
3. Tame (planted) grass	<b>C.</b> Tree line without hedge	3. Grazing heavy
4. Tilled land (crop)	<b>D.</b> Isolated group of trees	4. Fallow
5. Overgrown / old field	<b>E.</b> Grass, fern or herb layer present	5. Grain Crop
	<b>F.</b> Low (< 2m) shrub layer present	6. Row crop
	<b>G.</b> Tall (> 2m) shrub layer present	7. Hay crop
	<b>H.</b> Some wet / standing water present	8. Other crop
	<b>I.</b> Waterbody present	9. Burned
	<b>J.</b> Predominantly bare ground	10. Human structure present
		11. Active farmyard
		12. Abandoned farmyard / homestead
<b>CLASS C. Peatlands</b>		
<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Dry vegetated peatland / meadow	<b>A.</b> Tall Shrub	1. No human disturbance
2. Wet vegetated peatland / meadow	<b>B.</b> Low shrub	2. Human disturbance light to moderate
3. Mix of wet and dry peatland	<b>C.</b> Sedge / grass	3. Human disturbance heavy
	<b>D.</b> Dwarf trees	4. Human structure present
	<b>E.</b> Predominantly heath-lichen	

- F. Predominantly bare ground
- G. Some wet / standing water present
- H. Water body present

**CLASS D. Human Sites**

<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Urban	A. Buildings	1. Industrial
2. Rural	B. Gardens	2. Residential
	C. Treed	3. Commercial (offices, stores)
	D. Not treed	4. Agricultural
	E. Shrubs	5. Municipal park, cemetery, golf course
	F. No shrubs	6. Landfill site
	G. Natural vegetation patch	7. Bordered by grassland / farmland
	H. Near road (< 50 m)	8. Bordered by woodland
	I. Near active railway (< 50 m)	9. Bordered by urban area
	J. Abandoned railway	
	K. Bridge, culvert, utility pole	

**CLASS E. Wetlands Dominated by Vegetation**

<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Sedge / grass	A. Areas of open water	1. No human disturbance
2. Reeds /Cattail	B. Entirely vegetated	2. Human disturbance light to moderate
3. Shrub	C. Standing dead trees in water	3. Human disturbance heavy
4. Moss	D. Bog / muskeg (rainwater as source)	4. Actively managed (dam or weir)
	E. Fen (groundwater as source)	5. Margin damaged
	F. Deciduous trees present	6. Human structure present
	H. Coniferous trees present	7. Bordered by grassland / farmland
		8. Bordered by woodland
		9. Bordered by urban area

**CLASS F. Wetlands with Mainly Open Water**

<b>Sub-class</b>	<b>Sub-class</b>	<b>Sub-class</b>
1. Sheet water	A. No visible water flow	1. No human disturbance
2. Pond / dugout (< 0.25 ha)	B. Slow running	2. Human disturbance light to moderate
3. Small lake (0.25 - 5 ha)	C. Fast running	3. Human disturbance heavy
4. Lake (> 5 ha)	D. Emergent vegetation rim	4. Actively managed (dam or weir)
5. Stream (< 3 m wide)	E. Trees standing in water	5. Margin damaged
6. River (> 3 m wide)	F. Oligotrophic (clear, few weeds)	6. Human structure present
7. Ditch with water	G. Eutrophic (green, many weeds)	7. Bordered by grassland / farmland
8. Canal with water	H. Dystrophic (black, peat stained)	8. Bordered by woodland
	I. Sand shore	9. Bordered by urban area
	J. Rock shore	
	K. Mud shore	
	L. Bank / Cliff	

**CLASS G. Coastal Sites**

<b>Sub-class</b>	<b>Structure</b>	<b>Modification</b>
1. Hudson Bay shore (open)	A. Mud or silt shore	1. No human disturbance
2. Hudson Bay shore (cove, inlet)	B. Sand shore	2. Human disturbance light to moderate
3. Estuarine shore	C. Gravel shore	3. Human disturbance heavy
4. Brackish lagoon shore	D. Rock shore	4. Margin damaged
	E. Fully vegetated	5. Human structure present
	F. Partly vegetated	6. Bordered by woodland
	G. Cliff / Bank	7. Bordered by urban area

Figure 1. Example of a completed Point Count form

## Point Count Form - Southwestern Manitoba



No. of survey square: **14PA81**      Atlasser's name: **Mary Smith**      Atlasser's number: **20077**      Year: **2010**

Point	Designated number*	Coordinates** UTM Easting (NAD83)	Point	Designated number*	Coordinates** UTM Easting (NAD83)	Point	Designated number*	Coordinates** UTM Easting (NAD83)
<b>A</b>	<b>01</b>		<b>B</b>	<b>04</b>		<b>C</b>	<b>05</b>	
Month	Day		Month	Day		Month	Day	
<b>6</b>	<b>16</b>		<b>6</b>	<b>16</b>		<b>6</b>	<b>16</b>	
Start time (24 hr)			Start time (24 hr)			Start time (24 hr)		
<b>06:00</b>			<b>06:18</b>			<b>06:32</b>		
<input type="radio"/> GPS <input type="radio"/> Survey square map <input type="radio"/> Web conversion tool			<input type="radio"/> GPS <input type="radio"/> Survey square map <input type="radio"/> Web conversion tool			<input type="radio"/> GPS <input type="radio"/> Survey square map <input type="radio"/> Web conversion tool		
Habitat: Class SC	Structure (Optional)	Modification (Optional)	Habitat: Class SC	Structure (Optional)	Modification (Optional)	Habitat: Class SC	Structure (Optional)	Modification (Optional)
1st			1st			1st		
2nd			2nd			2nd		

Species	Point A		Point B		Point C		Species	Point A		Point B		Point C	
	No.	Br. evid.	No.	Br. evid.	No.	Br. evid.		No.	Br. evid.	No.	Br. evid.	No.	Br. evid.
Mallard							Yellow Warbler						
Blue-winged Teal							American Redstart						
Northern Shoveler							Ovenbird			<b>1</b>	<b>S</b>	<b>1</b>	<b>S</b>
Pied-billed Grebe							Common Yellowthroat	<b>1</b>	<b>S</b>				
Red-tailed Hawk							Chipping Sparrow						
Sora		<b>2</b>	<b>S</b>				Clay-colored Sparrow			<b>1</b>	<b>S</b>		
American Coot							Vesper Sparrow						
Killdeer							Savannah Sparrow						
Upland Sandpiper							Song Sparrow	<b>1</b>	<b>S</b>	<b>1</b>	<b>H</b>	<b>2</b>	<b>P</b>
Wilson's Snipe				<b>1</b>	<b>S</b>		Rose-breasted Grosbeak			<b>1</b>	<b>S</b>		
Black Tern §							Bobolink						
Mourning Dove							Red-winged Blackbird	<b>2</b>	<b>S</b>				
Yellow-bellied Sapsucker				<b>1</b>	<b>H</b>		Western Meadowlark	<b>1</b>	<b>S</b>				
Downy Woodpecker							Yellow-headed Blackbird						
Least Flycatcher				<b>1</b>	<b>S</b>		Brewer's Blackbird						
Western Kingbird							Brown-headed Cowbird						
Eastern Kingbird							Baltimore Oriole						
Warbling Vireo	<b>1</b>	<b>S</b>					American Goldfinch	<b>4</b>	<b>H</b>			<b>1</b>	<b>S</b>
Red-eyed Vireo													
Blue Jay													
American Crow				<b>2</b>	<b>P</b>								
Horned Lark													
Tree Swallow													
Barn Swallow													
Black-capped Chickadee													
White-breasted Nuthatch	<b>2</b>	<b>S</b>	<b>1</b>	<b>S</b>									
House Wren													
American Robin				<b>2</b>	<b>A, E</b>								
Gray Catbird													
Brown Thrasher													
European Starling													
Cedar Waxwing													

Additional species or species with > 100 individuals

Species	4-letter code	Point A No. Br. evid.	Point B No. Br. evid.	Point C No. Br. evid.
Sedge Wren	SEWR	<b>1</b>	<b>S</b>	
Veery	VEER			<b>1</b>
Black-and-white	BAWW		<b>1</b>	<b>S</b>
LeC Sparrow	LCSP	<b>1</b>	<b>S</b>	
Sandhill C	SACR			<b>2</b>

\* Only for predetermined point count locations  
 \*\* Only for point counts that are not at predetermined locations (e.g., off-road). Please provide UTM coordinates and the method used to determine these coordinates

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## SOME KEY ATLAS POINTS

1. Be safe! Don't take chances in the field and don't atlas alone off-road.
2. The first priority is to find breeding evidence for as many species as possible in the square.
3. Try to visit all habitats in the square.
4. Record all times, dates and number of hours you survey.
5. If you know most of your local birds by song, try some point counts – any number would be useful. Knowing bird songs also helps in regular atlassing.
6. The third priority is to upgrade sightings to the highest level of breeding evidence for as many species as possible.
7. Check to make sure your data are complete and accurate before submitting them to your Regional Coordinator or entering them onto the website.
8. Please attempt to cover more than one square within the 5-year period.

*This Guide for Atlassers was based on the Maritimes Breeding Bird Atlas Guide for Participants and the British Columbia Breeding Bird Atlas Guide for Participants. Many thanks to those who worked on the British Columbia Breeding Bird Atlas, Ontario Breeding Bird Atlas, Maritimes Breeding Bird Atlas, and the Québec Breeding Bird Atlas for their assistance in the preparation of this document.*

**THANK YOU VERY MUCH FOR YOUR PARTICIPATION IN THE PROJECT!**