



# Newfoundland Breeding Bird Atlas

## Instructions for General Atlassing

### Partner Organizations



This project was undertaken with the financial support of the Government of Canada.  
Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.



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TD Friends of the Environment Foundation



Conserving Canada's Wetlands



### Newfoundland Breeding Bird Atlas

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## 1. INTRODUCTION

Welcome to atlassing! This guide provides brief instructions on how to collect and submit bird observations to the Breeding Bird Atlas. Basic directions are found on pages 2-5 and the Appendices contain further details about various aspects of the project.

The goal of the Atlas is to map the current distribution and relative abundance of all bird species breeding on the island of Newfoundland over a five-year data collection period. The goal of each participant is to collect observations on breeding birds using standardized methods within **10x10km atlas squares**. Atlas squares are nested into 100x100km blocks using geographic referencing that is based on the Universal Transverse Mercator (UTM) grid; see **Figure 1**.

The objectives of the Atlas are to:

- Collect data to allow mapping of the distribution and relative abundance of each species;
- Compile extensive data on rare species; and
- Publish an online, open-access book and electronic database freely available to the public, regulatory agencies, and industry.

In terms of scientific merit, the Atlas will:

- Allow us to track changes in bird populations over space and time;
- Provide information useful in assessing the conservation status and needs of bird species;
- Support sound environmental decisions by regulatory agencies, conservation organizations, and industry;
- Help identify species that may serve as indicators of environmental quality; and
- Highlight areas of greatest avian biodiversity.

### 1.1 Who can participate

Anyone with a pair of binoculars and an interest in birds can participate! People of all skill levels can make valuable contributions to the Atlas. We simply ask that people only submit records for which they are certain of identification. **If in doubt, leave it out!**

### 1.2 Safety

It is important that atlassing be enjoyable, but safety comes first. Always pack a safety kit and be sure to tell people where you will be atlassing each day. Don't go alone if you will be working in a remote area, or expect to be off-road for much of the time. Taking along a less experienced birder can be a valuable learning experience for them and a safety precaution for both of you. Please see Appendix A for important safety information.

### 1.3 Ways to participate

There are three ways to participate, depending on your level of experience:

#### a) General atlassing

Consult a Regional Coordinator or the Atlas Office and sign up for one or more Atlas squares. Some squares have been given priority status in order to ensure even spatial coverage. Spend **12-20 hours** in each square looking for **breeding evidence** for as many species as possible, making sure to spend time visiting **all habitat types** within the square. This can be accomplished in a variety of ways:

- **Spread your effort out over time.** Take on a square and visit it several times over one or more years. Multiple visits will increase the chance of detecting more species, since not all birds are active at the same time of day or time of year.
- **Spread your effort out over time and space.** Participants are encouraged to take on more than one square and survey them concurrently. You might plan to cover a different square during each of 5 mornings during the month of June, and return to those 5 squares again later in the season or in a following year until they are all considered complete.
- **Blitz a distant or remote square.** If the square(s) you plan to cover are far away and you are not certain to be able to visit them again, try to complete them during a single visit, as much as possible.

#### b) Point counts

**Count all birds seen and/or heard** at designated locations (15 per square) over a five-minute period. This requires an ability to identify local birds by sight and song/call. See the **Instructions for Point Counts** document for details.

#### c) Incidental observation

Submit observations of breeding evidence for birds from anywhere in the province. Typically these are observations of notable or less common species.

### 1.4 Surveying public and private property

**Always get permission** from the landowner to access private property. In most cases, a brief explanation of the project and your activities will garner permission. Encourage landowners to call the Regional Coordinator or the Atlas Office if they would like further information about the project. Some of the best hours to survey for birds occur during the first couple of hours of daylight, so access should be **arranged before the day(s) of your visit**.

**Follow all rules and regulations** on public land. Keep vehicles on established roads, and camp only as permitted. Not all areas are open to the general public, and special arrangements may be needed to gain access through locked gates. See Appendix B for guidelines on surveying private and public property.

## 2. GETTING STARTED

### 2.1 Visit the Atlas website and register

The website is your portal to the Atlas. Here you can **register** as an atlasser, find information and materials, and submit data. You must be registered in order to submit data! Take time to explore all the different tools and maps at your disposal.

### 2.2 Regional Coordinators

Newfoundland (along with the islands of St. Pierre and Miquelon) has been divided into 8 regions that are coordinated by volunteer Regional Coordinators (RCs) or the Atlas Office; see **Figure 2** and Appendix C for a map and contact information. Atlassing will be greatly simplified by keeping in touch with the RC for squares that you will be surveying. Your RC can:

- Explain more about the project and suggest ways in which you can contribute, given your skill set and available time.
- Direct you to squares which have not been assigned, or in which additional help is needed.
- Advise you of upcoming atlassing or bird identification workshops.

### 2.3 Atlasser Kit

You can download Atlasser Kit materials from the website or request a hardcopy kit from the Atlas Office ([nlatlas@birdscanada.org](mailto:nlatlas@birdscanada.org)). These kits have all the information needed to participate in the project:

- **Instructions for General Atlassing** (this guide).
- **Square Maps** (10x10km) that display habitat types and roadside point count locations. Square maps for every atlas square are viewable and printable from the website. Each square has a unique identification code based on the UTM zone, block code, and square number, which is displayed on each map.
- **Region Maps** show all Atlas squares in a region.
- **Square Summary Sheets** are regularly updated on the website as data are submitted and provide information about the list of anticipated species for the square and region, the highest Breeding Evidence observed for each species, the number of accumulated hours spent atlassing in the square, and the number of roadside and off-road point counts. Check online for updates regularly, but note

that summary sheets can only be updated once data has been submitted!

- **Atlas Checklists** are the primary data collection form used for the Atlas.
- **Rare/Colonial Species Forms** are to be filled out for detections of rare species or when a breeding colony of a colonial species is found.
- **Point Count Forms** are used by atlasers when conducting point counts.
- **Coding Sheets** contain relevant codes used for the Atlas, including breeding evidence and 4-letter species codes.
- **Atlasser Dashboard Sign** to serve notice about your activities and why your vehicle is parked.

Atlasers need to have their Atlasser Kit, a **pencil and eraser**, **binoculars**, **bird field guide(s)** or bird ID apps, and **insect repellent** with them in the field. A **compass** or Global Positioning System (**GPS**) unit can also help with navigation.

### 2.4 Breeding evidence codes

One of your main objectives as an atlasser is to **obtain the strongest evidence of breeding for as many species as possible** within your square(s). It is best to familiarize yourself with these codes before heading out into the field and **always** bring the coding sheet along when atlassing!

There are four levels of evidence:

1. **Observed** (no indication of breeding)
2. **Possible** breeding
3. **Probable** breeding
4. **Confirmed** breeding

If you are recording migrants do not assign them a breeding evidence code.

See **Table 1** for details on behavioral evidence required for each of these levels; Appendix D provides more details and outlines unlikely species-breeding code combinations or situations that require caution.

You should attempt to obtain probable or confirmed breeding evidence for as many species as possible, especially those that are expected to occur within your region.

### 2.5 When to Atlas

Atlassing is carried out primarily during the main breeding season of **late May to mid-August** with a focus on the month of June. Atlassing can occur at **any time of day**, but note that many birds tend to be more active in the **early morning** than during the afternoon. We encourage dawn, dusk, and night visits to increase the likelihood of encountering species that are more active at these times.

### 3. COLLECTING DATA

#### 3.1 Goals

The overall coverage goal for the Atlas is to have as many completed squares as possible spread across insular Newfoundland (see below for square completion criteria). Once a square has received sufficient coverage it does not need to be visited again; continued effort should shift to another square. To ensure even spatial coverage, some squares have been given priority status and effort should be concentrated whenever possible on priority squares. See Figure 2 for a map of priority squares.

Most squares can be adequately covered in 12-20 hours of well-planned effort. Once you have covered all habitat types and spent at least 12 hours in a square, consider moving to a new square if it is becoming increasingly difficult to find new species. However, first check the square summary sheet online and make note of any species that are underlined, which indicates they are likely to occur in the square but have not yet been encountered. Once these species have been detected, we encourage you to move on to another square. The following criteria will help to determine if a square can be considered complete:

##### Square completion criteria

**Time:** 12-20 hours\*

**Point Counts:** 15

- \* 10 hours in June
- 6 hours in the early morning (04:00-09:00)
- Includes time spent doing point counts
- Spread out over at least 2 days

Several factors will influence how much time needs to be spent in a square, such as:

- **Atlasser skill level**  
Participants who are relatively new to birding are likely to need to spend more time than atlasers with more birding experience. Learning songs and calls of local birds will greatly improve efficiency;
- **Travel conditions**  
Travel may be difficult in some squares due to few roads or poor conditions. In such cases more time will be required to adequately survey a square. Limit travel when road conditions are poor;
- **Habitat structure**  
Some habitats will require more or less time to cover adequately (e.g. forested area vs annual crop). The degree of habitat complexity will also influence the amount of time needed; and
- **Available land area**  
Some squares will consist largely of water or be smaller in size due to UTM projection. Such squares may require less time to cover adequately.

Be sure to **spend time searching all habitat types** and be careful not to over-represent habitats that cover a small portion of the square. Use the square maps available online to provision your time to proportionally represent the habitat types. For example, if 20% of the square is wetland habitat, then 20% of your time should be spent searching wetland habitats.

Some squares may have relatively few species. If you find that encountering new species is becoming increasingly difficult, we encourage you to move on to another square.

Record effort (hours) for **off-peak atlassing** (i.e. when the full complement of breeding species is not present) but consider it as **additional to the target hours**. Off-peak atlassing may involve early season or nocturnal atlassing, and may include targeted surveys such as the Nocturnal Owl Survey or grouse lek counts. Where possible, focus on priority squares for these supplemental surveys.

#### 3.2 Data Forms

For detailed descriptions and examples of each data form, please see Appendix E.

##### a) Atlas Checklist

**One Atlas Checklist is filled out for each active birdwatching session using a single protocol within an Atlas square.** There are four protocols to choose from: single location, travelling count, area search, or entire square.

Birds are tallied over the course of an atlassing session, noting the highest level of breeding evidence observed. If you record migrants, do not assign them a breeding evidence code, simply leave the space blank. Since each session requires its own checklist you will need several copies of the form; these can be downloaded from the website and printed at home or obtained from the Atlas Office. Alternatively, you can use the **NatureCounts mobile app** to collect and submit data using your mobile device.

Be sure to **fill in all the required information** at the top of the checklist. Duration is calculated as the number of minutes that a party spent **actively birding** in the square (a party is either an individual or a group of individuals who are working together). **Do not report time spent in the square that is spent on activities other than atlassing**, even though you may happen to note a few bird species at the same time.

The Atlas Checklist can also be used to keep track of **incidental observations** by checking 'No' under **Complete checklist**.

Species included on the checklists represent those most likely to be encountered in a given region.

Detections of species not found on the list get added in the open space provided and must be accompanied by a Rare/Colonial Species Form, see b) below.

#### b) Rare/Colonial Species Form

Sightings of rare species and breeding colonies require **extra documentation** (see Appendix E for examples). These species are identified on Square Summary Sheets and Atlas Checklists. Please fill in all required information and report the location of the observation as precisely as possible. When entering data online you will be prompted to identify a location on a map or enter UTM coordinates; however, you should also attempt to record your location while in the field, by using either your Square Map or a GPS device to determine the UTM coordinates. Species with the following designations require documentation:

- † **Provincially Rare:** documentation required for **ALL** breeding records.
- ‡ **Regionally Rare:** documentation required for **ALL** breeding records.
- § **Species of Interest:** documentation required for **CONFIRMED** breeding records only, includes colonial species and widespread Species at Risk.

**Contact your RC right away** if you find breeding evidence for a rare species – it may be important to verify details or initiate conservation measures for rare species so time is of essence. Any sensitive information, such as the precise locations of Species at Risk, should be kept strictly confidential by the atlaser and their RC. See Appendix F for more information about sensitive species and the Birding Code of Ethics.

### 3.3 Location information

**Always know where you are!** Studying maps of the area you plan to survey ahead of time will economize your efforts. Bring along road maps and sketch out the boundary of your square(s). In the field, square maps can be marked up to keep track of where you've atlased to avoid duplicating your effort. The data entry portal on the website will allow you to indicate where you atlased using the Google Maps interface.

Please do your best to determine your location in the field when recording specific locations of rare or colonial species. The **UTM coordinates** of locations can be determined from your Square Map or a GPS enabled device (set to the **NAD83 datum**). See Appendix G for more information about how to report your location.

### 3.4 Collecting squirrel data

Red Squirrels are invasive in Newfoundland, and we are interested in using atlas data to investigate how squirrels have affected native bird populations. While atlasing, keep track of any red squirrels you see or

hear. Squirrel counts should be recorded on your Atlas checklist and submitted with the rest of your data.

### 3.5 Project NestWatch (Optional)

Information about nests is useful for studies of breeding success, nesting biology, and breeding distribution. If you find a nest, we encourage you to contribute to Project NestWatch. See project website for details:

[www.birdscanada.org/bird-science/project-nestwatch/](http://www.birdscanada.org/bird-science/project-nestwatch/)

## 4. SUBMITTING ATLAS DATA

We highly recommend that you review the data you collect at the end of each atlasing visit and submit the data soon thereafter. This practice helps to reduce errors and omissions since the details will still be fresh in your mind; it also allows all participants to track progress on the Atlas more effectively. Data collected for the Atlas can be submitted **year-round**, and all data submitted will be peer-reviewed by experts. See Appendix H for data and map ownership information.

There are two options for submitting Atlas data:

#### a) Submit data online or using the mobile app

This is the **preferred method** of data submission. The website allows you to enter and submit your general atlasing, point count, and rare species data all in one place; tell us exactly where you atlased; receive warnings for unusual or invalid species-breeding code combinations or unusually high counts; and receive prompts for rare/colonial observations requiring more information. Entering your data online also allows the Atlas Office to regularly update maps and square summary sheets to better track progress, avoid duplication of effort, and direct effort as needed. See Appendix E for how to submit data online; or

#### b) Submit completed forms to the Atlas Office

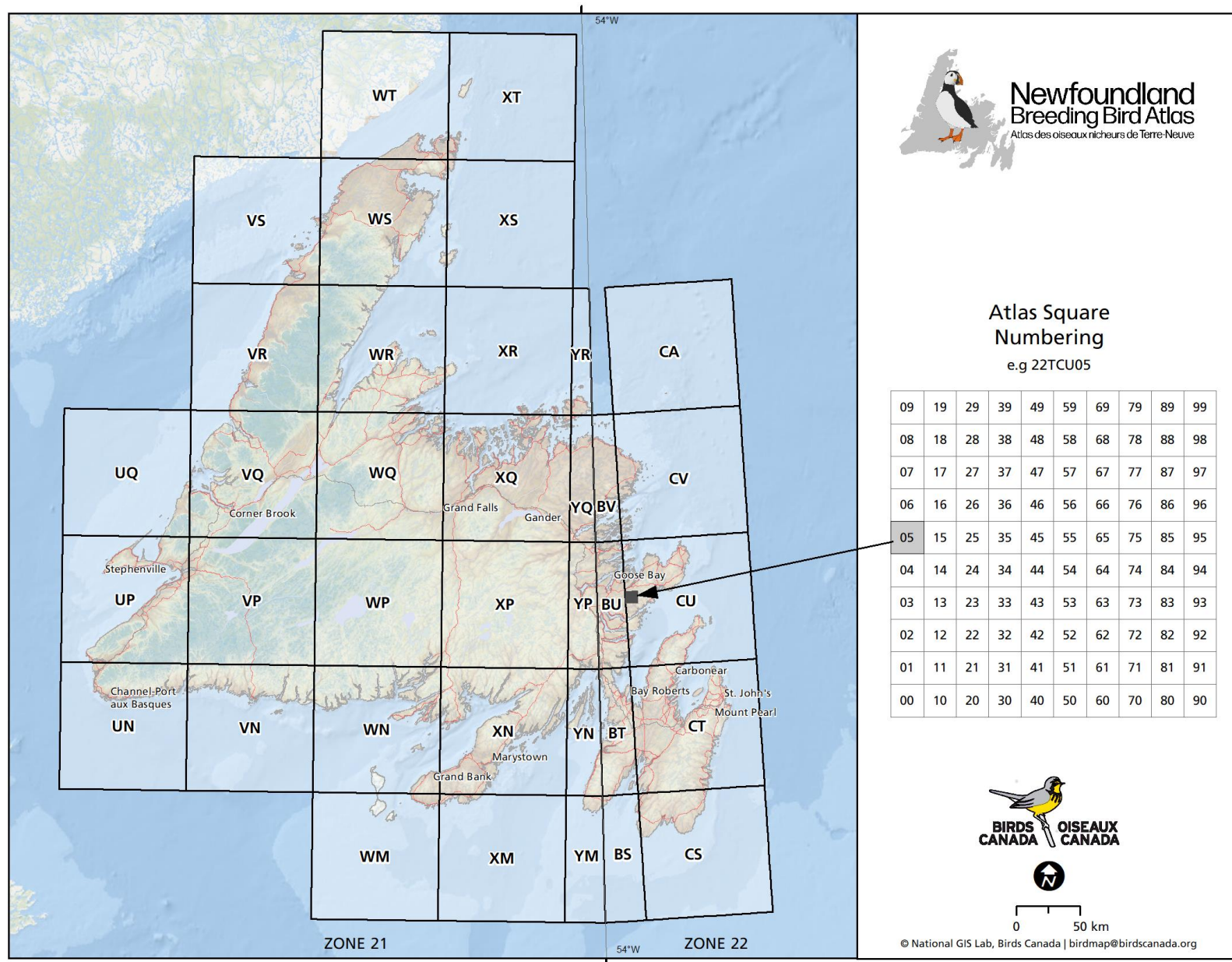
If necessary, completed data forms can be sent to the Atlas Office for entry. Remember to **write neatly** and review all data forms to ensure there are no errors or omissions. Don't forget to include your name, the square number, the date, and any other required information. Please retain a copy of any forms submitted; this will make it easier if clarification is required and guards against forms getting lost in the mail. Please staple all related forms together.

## 5. THANK YOU AND GOOD LUCK!

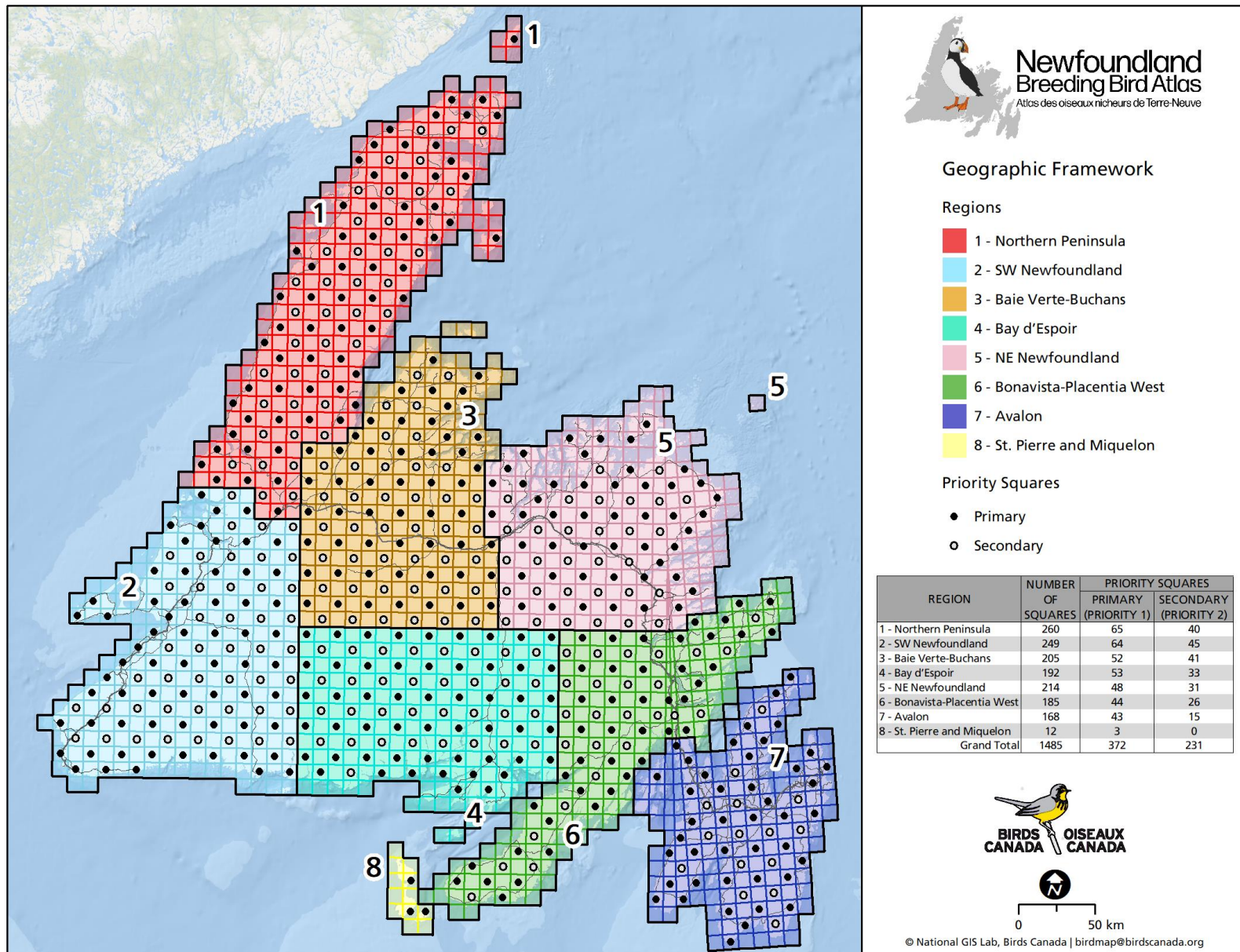
Thank you for participating in the Atlas! If you have any questions, please contact your Regional Coordinator or contact the Atlas Office directly.

*Veuillez contacter le Bureau de l'Atlas si vous souhaitez recevoir ce document en français.*





**Figure 1.** Newfoundland Breeding Bird Atlas blocks (100km X 100km) and two-letter block codes.



**Figure 2.** Administrative regions of the Newfoundland Breeding Bird Atlas, with Priority 1 and Priority 2 squares identified by black and white dots respectively. The table shows regional summaries for the total number of squares, the number of Priority 1 squares, and the number of Priority 2 squares.

**Table 1.** Breeding evidence codes.

<b><u>OBSERVED</u></b>	
<b>X</b>	Species observed during their breeding season, but NOT in suitable nesting habitat ( <b>no breeding evidence found</b> ). Note that this code is rarely used as birds tend to occupy nesting habitat during the breeding season. Do not use for species known to be migrants.
<b><u>POSSIBLE BREEDING</u></b>	
<b>H</b>	Species observed in suitable nesting <b>Habitat</b> during their breeding season.
<b>S</b>	<b>Singing</b> male or adult producing other sounds associated with breeding (e.g., calls or drumming) in suitable nesting habitat during the species' breeding season.
<b><u>PROBABLE BREEDING</u></b>	
<b>M</b>	<b>Multiple</b> singing/calling/drumming individuals (7 or more) heard during one visit to a single square and in suitable nesting habitat during the species' breeding season. Use with caution to avoid counting migrants.
<b>P</b>	<b>Pair</b> observed in suitable nesting habitat during the species' breeding season.
<b>T</b>	Presumed <b>Territory</b> based on the presence of an adult bird (usually singing, but not necessarily so), in the same suitable nesting habitat patch on at least two visits, one week or more apart, during the species' breeding season. Use discretion when using this code. "T" is not to be used for colonial birds, or species that might forage or loaf a long distance from their nesting site (e.g. Turkey Vulture, and male waterfowl).
<b>D</b>	Courtship or <b>Displays</b> involving a male and female (e.g., courtship feeding, copulation) or antagonistic behavior between two or more individuals (e.g., territorial disputes or chases), in suitable nesting habitat during the species' breeding season.
<b>V</b>	Bird <b>Visiting</b> a probable nest site in suitable nesting habitat during the species' breeding season.
<b>A</b>	<b>Agitated</b> behavior or alarm calls of an adult in suitable nesting habitat during the species' breeding season.
<b>B</b>	<b>Brood</b> patch or cloacal protuberance on an adult in suitable nesting habitat during the species' breeding season.
<b>N</b>	<b>Nest-building</b> by wrens or nest hole excavation by woodpeckers (both may build dummy or roosting nests so nest-building alone is not enough to confirm breeding).
<b><u>CONFIRMED BREEDING</u></b>	
<b>NB</b>	<b>Nest building</b> , including the carrying of nesting material, by all species except wrens and woodpeckers.
<b>DD</b>	<b>Distraction Display</b> , injury-feigning, or other displays attempting to draw attention away from a nest or young.
<b>NU</b>	Empty <b>Nest Used</b> or identifiable eggshells from earlier in the same nesting season.
<b>FY</b>	Recently <b>Fledged Young</b> (nidicolous species) or downy young (nidifugous species) incapable of sustained flight.
<b>AE</b>	<b>Adult Entering</b> , occupying, or leaving a nest site (visible or not) or whose behavior suggests the presence of an occupied nest.
<b>FS</b>	Adult carrying a <b>Faecal Sac</b> .
<b>CF</b>	Adult <b>Carrying Food</b> for young.
<b>NE</b>	<b>Nest</b> containing <b>Eggs</b> .
<b>NY</b>	<b>Nest</b> with <b>Young</b> (seen or heard)