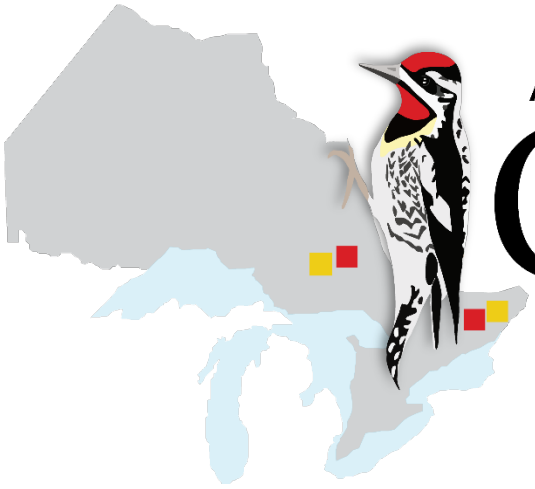

Atlas des oiseaux nicheurs Ontario Breeding Bird Atlas

INSTRUCTIONS FOR GENERAL ATLASSING

April 2021

Ontario Breeding Bird Atlas

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The Ontario Breeding Bird Atlas is a partnership project of:

BIRDS CANADA OISEAUX CANADA

OFO

Ontario Ministry of Natural Resources and Forestry

This project was undertaken in partnership with
Ce projet a été réalisé en partenariat avec

Environment and Climate Change Canada
Environnement et Changement climatique Canada

Ontario Nature

Thank you very much to the Ontario Breeding Bird Atlas Supporters

Table of Contents

1. Introduction

Welcome to Ontario Breeding Bird Atlas-3. This guide provides brief instructions on how to collect and submit bird observations to the Atlas. Basic directions are found below along with links to other documents and Appendices that 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 species of birds breeding within the province over a five-year data collection period: 2021-2025. The goal of each participant is to collect observations on breeding birds using standardized methods within 10x10km (10-km) atlas squares and submit that data as described below. Atlas squares are nested into 100x100km (100-km) blocks based on the Universal Transverse Mercator (UTM) grid, see Figure 1.

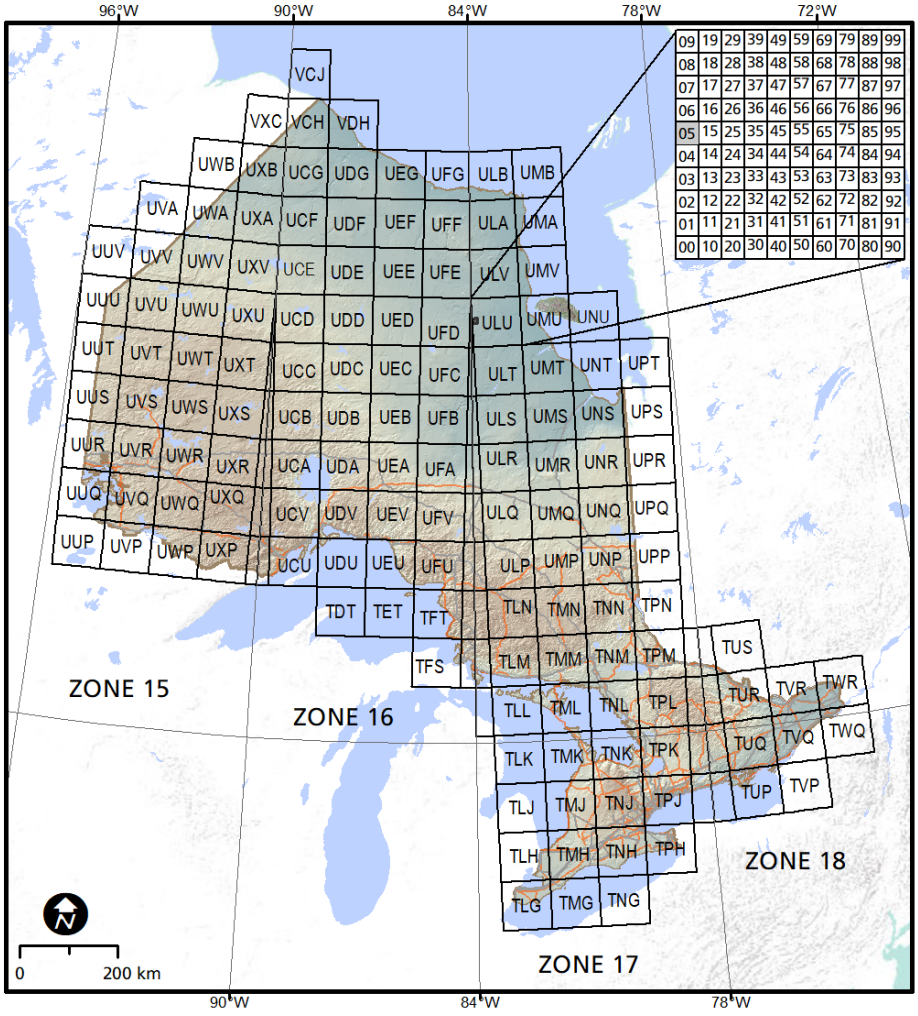

Figure 1. UTM Zones and 100-km Blocks across Ontario. Block designations, which were two letters long in Atlas-2, are now 3 letters long to ensure each is unique in Ontario. The insert at the top right of the figure shows how 10-km squares are numbered in each block.

The objectives of the Atlas are to:

- Determine and map the distribution and relative abundance of breeding birds of Ontario in 2021-25 and compare to previous atlas results;
- Determine population size for each species and compare with previous atlas results
- Gather data on breeding locations and abundance for significant species (e.g., species at risk);
- Expand/enhance knowledge of the breeding birds of Northern Ontario by increasing coverage of the north;
- Ensure data are available for research and conservation projects at different scales (e.g., applications regarding forestry, climate change, protected areas, land-use change, etc.); and
- Publish results and provide an 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 Safety

It is important that atlassing be enjoyable, but safety comes first. Always pack a safety kit (click here) and be sure to inform people of where you will be atlassing each day. Don't go alone if you do not feel safe or comfortable, 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. See Appendix A for important safety information.

1.2 Who can participate

Any careful observer with an interest in birds can participate! We simply ask that people only submit records for which they are certain of identification. **If in doubt, leave it out!** See Appendix B for more information on how new birders can contribute to the project.

1.3 Ways to participate

There are numerous ways to participate, depending on your level of experience. Consult a Regional Coordinator (click here) and work out how you can best contribute to the project based on your skills and interests. Data can be contributed through General atlassing, Point Counts, Incidental records, and Special Surveys.

a) General atlassing

General atlassing is the primary means of contributing data to the project and involves looking for birds breeding in a square, and recording breeding evidence for each species using checklists (see section 3.2 below).

Our goal is to get adequate coverage of all of the 10-km squares in the area the Atlas defines as Southern Ontario (Figure 2) and a sampling of squares in each 100-km block in the north. Any atlasser can, and is encouraged to, contribute to any square. But we also need experienced birders to become principal atlasser for as many squares as possible, taking responsibility for ensuring that each square is adequately covered. Adequate coverage of a square requires a total of **20 or more hours** of atlas data collection (over the 5 years of the project) in the peak of the breeding season (May 24-July 10 in the south; June 1-July 10 in the north) looking for **breeding evidence** for as many species as possible. This involves visiting **all habitat types** within the square, and spreading out effort to include some early- and late-season visits as well as some evening and night-time visits to find species most active outside the peak breeding season and daylight hours.

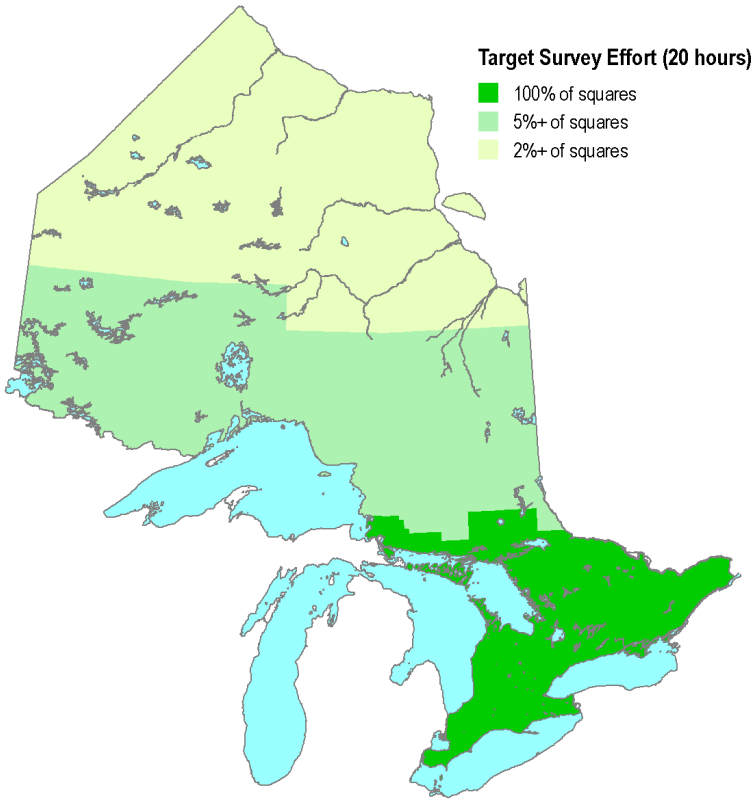

Figure 2. The Atlas coverage goal is to get at least 20 hours of atlassing in the peak breeding season in all squares in Southern Ontario; in 5% of squares in the road-accessible North; and 2% of squares in the Far North.

b) Point counts

A point count is a survey that involves counting all birds seen and/or heard at a designated location during a five-minute period. Point counts are vital to the Atlas, being the primary means by which we are able to map relative abundance of each species and compare it to that from Atlas-2.

There are two ways of doing point counts in Atlas-3. The first is the "Standard Point Count", in which surveyors must be able to identify local birds by sight and song/call. The second, the "Recorded Point Count", is new to Atlas-3 and involves using a hand-held or autonomous recording device to record the bird song at a point for a 5-minute period. The recordings are then uploaded to the Internet and "interpreted" by experts. You don't need to be able to identify birds by song to do Recorded Point Counts, which makes them a great opportunity for less-experienced birders who want to participate, especially in areas with few people able to do Standard Point Counts. Skilled birders who know their songs and calls well, can also help with interpreting recording point counts - a great way to contribute to the atlas in the off-season! The atlas target is 25 point counts in a square with a mixture of roadside and offroad points. See the **Instructions for Point Counts** (Coming Soon) document for details of how to do Standard or Recorded Point Counts, and information on priority squares for point count coverage.

c) Incidental records

As well as atlassing in any square, atlassers are encouraged to submit Incidental records of breeding evidence for birds from anywhere in the province. Incidental records are those you find while doing something other than atlassing. For example, you might notice, while you are driving somewhere, a pair of Red-tailed Hawks sitting side by side in a tree in early spring. You can enter that single record (P for "pair") as an Incidental observation. Typically these are observations of notable or less common species, or of higher levels of breeding evidence. Incidental records are submitted on checklists via the app or the website (see section 4 below).

d) Special surveys: Owls, nightjars and marshbirds

We have developed 6 special surveys for these groups of birds to improve on the coverage provided by general atlassing. These involve a standardized protocol, and most include using playback (broadcasting the bird's song at high volume) to elicit responses. See the **Special Surveys** webpage for more information.

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 contact 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 C for guidelines on surveying private and public property.

1.5 Northern atlassing

We will be making a huge effort to ensure that Northern Ontario (Regions 34-44) is adequately covered during the Atlas. Because we can't cover every square, we will be identifying specific squares as a priority for coverage, and showing those on the "Coverage Map". But coverage can be provided for any square, whether or not it is shown as a priority. We will also be helping to organize trips to ensure that all 100-km blocks in the north are covered, including the most remote parts of the province. For more information on atlassing in the north, see the Northern Atlassing Manual (Coming Soon), and watch the website and Atlas newsletter for updates.

1.6 Atlassing in National and Provincial Parks and Conservation Areas

Discussions are underway (December 2020) with these various organizations about special arrangements for atlassers accessing and/or camping in parks and conservation areas. See Appendix D for more information on this.

2. Getting Started

2.1 Visit the Atlas website and register

The website (www.birdsontario.org) is your portal to the Atlas. The Atlas website and the data entry and management systems are run through NatureCounts, which is operated by Birds Canada. On the website you can **register** as an atlasser**,** find your Regional Coordinator, 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

Ontario has been divided into 47 regions (Figure 3) that are coordinated by volunteer Regional Coordinators (RCs); see the website for a map and contact information.

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;
- Put inexperienced birders in touch with mentors who can help with atlassing/birding skills; and
- Assign special surveys, such as owls, nightjars or marshbirds (see the webpage).

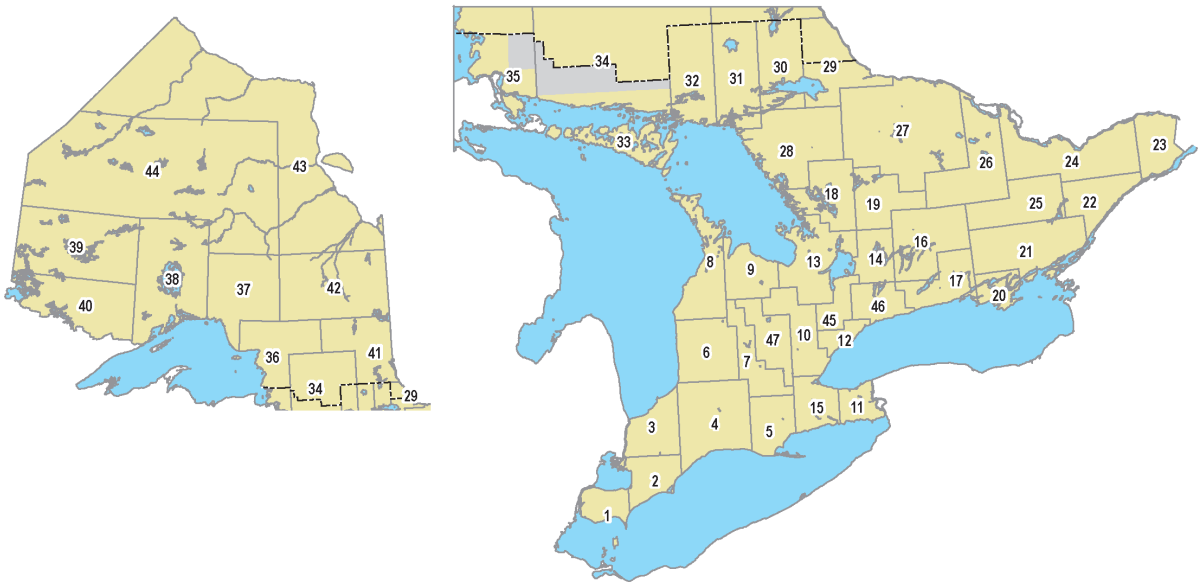

Figure 3. Atlas regions. A more detailed version of this map, allowing you to view squares as well as regions, is available here.

2.3 Atlasser Materials

You can download Atlasser materials from the website or use the NatureCounts app (see section 3.3 below). The app allows you to enter checklist and point count data. See Appendix E for more information on how to download and use the app.

The materials you can download from the website (click here) have all the information needed to participate in the project:

- **Instructions for General Atlassing** (this guide).
- **Square Maps (NOTE: Until Atlas-3 maps are ready, we will be using Atlas-2 maps. Atlas-3 maps will be provided before April 2020.)** Atlas square maps (10-km squares) display topographic and some habitat information and road-side point count locations (Atlas-2 maps). 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. We recommend that you print off a copy of the map for any square you will be spending much time in. You can also download a copy of the map to your mobile device. Instructions for downloading a copy of a square map and using it to navigate are provided in Appendix F.
- **Region Maps** show all Atlas squares in a region.
- **Square Summary Sheets** (click here) 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 species reported in Atlas-2, the highest Breeding Evidence observed for each species, and the number of accumulated hours spent atlassing in the square. They will also provide information on which habitats require off-road point counts in that square. Check online for updates regularly, but note that summary sheets can only be updated once data have been submitted!

- **Atlas Checklist Forms** (on the instructions and forms page) are the primary data collection form used for the Atlas.
- **Rare/Colonial Species Forms** (on the instructions and forms page) are to be filled out for detections of rare species or when a breeding colony of a colonial species is found.
- **Point Count Forms** (Coming Soon) are used by atlassers when conducting point counts.
- **Coding Sheets** contain relevant codes used for the Atlas and include breeding evidence and 4-letter species codes (Coming Soon).
- **Atlasser Dashboard Sign** (in Appendix C) to serve notice about your activities and why a vehicle is parked.

For data collection, atlassers can use the NatureCounts app on their mobile phones, or use their notebook or data forms and enter the data into the NatureCounts website themselves. They will also need a **map of the 10-km square** (Atlas-2 maps); a **pencil and eraser**, **binoculars**, **bird field guide**(s) or **bird ID apps**, and **insect repellent** with them in the field. A **compass, GPS** unit, or a navigation app for your phone, can also help with navigation. The map on the NatureCounts app is also helpful for navigation.

2.4 Breeding evidence codes

One of the main objectives of 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 app, coding sheet or notebook 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 observe birds that you are sure are migrants passing through the square, do not assign them a breeding evidence code. Leave the breeding evidence column blank.

See **Table 1** for details on behavioral evidence required for each of these levels; Appendix G provides more details and outlines unlikely species-breeding code combinations or situations that require caution. The NatureCounts app and web data entry provide information on the likelihood or acceptability of breeding codes for each species and will flag unlikely or unacceptable breeding codes if you enter them.

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

Breeding Evidence should be reported only during the breeding season of each species. We have developed a table of “Safe Dates” during which it is safe to report breeding evidence (Appendix H) for each species. Outside of these dates, the species is unlikely to be breeding or migrants of the species are likely to be present which may not stay to breed. If you do find evidence of breeding outside of safe dates, you can report it, but details should be included.

Table 1. Breeding evidence levels, categories and codes.

OBSERVED	
X	Species observed in its breeding season (no breeding evidence)
POSSIBLE	
H	Species observed in its breeding season in suitable nesting habitat
S	Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season
PROBABLE	
M	At least 7 individuals singing or producing other sounds associated with breeding (e.g., calls or drumming), heard during the same visit to a single square and in suitable nesting habitat during the species' breeding season.
P	Pair observed in suitable nesting habitat in nesting season
T	Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its 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. Kingfisher, Turkey Vulture, and male waterfowl
D	Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation
V	Visiting probable nest site
A	Agitated behaviour or anxiety calls of an adult
B	Brood Patch on adult female or cloacal protuberance on adult male
N	Nest-building or excavation of nest hole, by a wren or a woodpecker
CONFIRMED	
NB	Nest-building or excavation of nest hole by a species other than a wren or a woodpecker
DD	Distraction display or injury feigning
NU	Used nest or egg shells found (occupied or laid within the period of the survey)
FY	Recently fledged young (nidicolous species) or downy young (nidifugous species) incapable of sustained flight
AE	Adult leaving or entering nest site in circumstances indicating occupied nest
FS	Adult carrying fecal sac
CF	Adult carrying food for young
NE	Nest containing eggs
NY	Nest with young seen or heard

3. Collecting Data

3.1 Goals

Minimum coverage goals for the Atlas are shown in Figure 2. Adequate coverage of a square requires the following cumulatively over the 5 years of the project:

- at least 20 hours of effort in the peak breeding season (South: May 24 through July 10; North: June 1-July 10).
- recording a target number of species with breeding evidence.
- 25 point counts are required in most squares in Southern Ontario. See the Instructions for Point Counts for more details (Coming Soon).

In the road-accessible part of Northern Ontario (regions 34-42, see Figure 2), the goal is to obtain adequate coverage of five squares in every 100-km block; in the Far North (regions 43 and 44) the goal is to obtain adequate coverage of two squares per 100-km block. Throughout the north some priority squares have been identified. This is where effort should be concentrated whenever possible. See the Coverage Map to view the priority squares, and talk to the RC about where best to focus your atlassing effort. Although priority squares are indeed the priority, Atlas coverage from any square in the north is valuable.

Most squares can be adequately covered in 20 hours of well-planned effort by an experienced birder during the peak breeding season; inexperienced birders will require more time. Although the 20 hours is a useful guideline, ultimately, adequate coverage is best defined by the number of species reported in the square relative to what is expected to be breeding there. We will provide more on this as the project continues, but for now use the number of species reported in the square in Atlas-2 as an interim target: you can obtain that information by totalling the number of species reported in Atlas-2 on the **Square Summary Sheet** for the square at (click here). More details on species targets will be provided asap.

Once you have covered all habitat types and spent at least 20 hours in a square (and, if you are doing point counts, have done the 25 point counts where required) contact your RC and assess whether more coverage is required. If you would prefer to keep working in the same square, please do, but if the square is considered to be adequately covered, consider moving to a new square if there are any nearby that still have not met minimum coverage requirements. The additional effort will help to complete the list of species nesting in the square and give you a chance to upgrade breeding evidence for as many species as possible.

3.2 How to Atlas

Collection of the basic breeding evidence data for the Atlas is done via checklists. The Atlas Checklist follows a simple protocol where **one checklist is filled out for each active birdwatching session** that follows a single "observation type" within an Atlas square. On the app, there are three observation types to choose from: stationary, travelling count, or incidental, which are the same as eBird observation types. Stationary counts are used when you stay in the same spot or don't move more than 50m; Traveling Counts, which is the most common list type for atlassing, are for when you do move more than 50m; Incidental lists are for reporting birds observed when you are not atlassing, as described above (see 1.3c above). Stationary and travelling counts are far more useful for research and conservation purposes than incidental lists, and shorter duration and shorter distance travelling counts are more useful than longer ones. It is quite feasible to do several checklists per day.

On the NatureCounts data entry web site and the printed data form, you have two additional observation types to choose from: “Area Search”, which involves restricting your list to a particular area, such as a woodlot, wetland or field, that you define by mapping the area on the data entry website; or simply entering data for the whole square without specifying location or track. This “whole square” option is expected to be used primarily for importing institutional data sets, and not used often by atlassers. Instructions for data entry on the website are provided here (click here).

Although you can start and end checklists wherever you like inside the same square, the ideal checklist covers a short distance (<5 km, the shorter the better) and is restricted to one habitat type. So a checklist (and associated track) in a coniferous forest and then one in a wetland is more valuable than a single checklist that combines the two. However, starting a new checklist every time you change habitats can be challenging, so try lists of various lengths and see what works best for you, but please remember that shorter and single habitat checklists are best.

Birds are tallied on a checklist, noting the highest level of breeding evidence observed. Do not assign birds that are clearly migrating through the square a breeding evidence code, simply leave the space blank. Try to upgrade breeding evidence for each species, attempting to find probable or confirmed breeding evidence for as many species as possible.

Species displayed in the app, website, or printed on the paper form checklists represent those most likely to be breeding in a given region. On the printed checklist data form, 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 3.4b below.

It’s especially enjoyable and valuable to try to fill in the list of species breeding in a square by being strategic and systematically seeking new birds to add to the square list. Once you have found most of the common species in the square, check the **Square Summary sheet** online (click here) and make note of any species that are underlined indicating they are likely to occur in the square but have not yet been encountered. Consider searching out those species in the habitat and at the time of year and time of day when they are most likely to be observed.

a) 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. However, some species breed earlier in the year and some atlassing outside of the peak season is recommended to help familiarize yourself with the square and to look for these early breeding species. See the list of possible and safe dates in Appendix H to understand when each species may be breeding in your area. Atlassing can occur at **any time of day**, but note that many more birds tend to be 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.

The time that you put into **off-peak atlassing** (i.e. when the full complement of breeding species is not present) should be considered as **additional to the target hours**. Off-peak atlassing may involve early season or nocturnal atlassing, and may include targeted surveys such as the Owl, Nightjar and Marshbird Surveys.

b) Where to Atlas

The Square map provides a lot of information on the habitats in the square, showing woodlots, wetlands, urban areas, rivers, streams, ponds, hills and valleys, and lots more. Be sure to **spend time searching all habitat types** and be careful not to over-survey habitats that cover a small portion of the square. Provision your time to proportionally represent the habitat types (square maps will help with this); if 20% of the square is forest habitat, then 20% of time should be spent searching forest habitats.

Parks, Conservation Areas and other protected areas are often rich in birds and provide good opportunities to get away from roads. We are also hoping that atlas coverage will allow an assessment of how these areas are contributing to bird conservation in Ontario. So, please focus some efforts in these areas. When doing checklists (see section 3.4a below), **keep entire checklists inside the area of the park, or outside of the area of the park**, so we can compare lists from inside and outside of parks.

The Coverage Map will provide an up-to-date picture of which squares have been assigned to atlassers and which have not, and allow you to see how much coverage each square has obtained. Check the map frequently, and if you have the opportunity, focus your efforts on squares well below coverage goals. Speak with the appropriate Regional Coordinator and they will be able to direct you to squares in most need of coverage.

As much help as possible is needed in areas away from major urban centres, especially on the Canadian Shield and in the north. If you have a cottage or a favourite park, please consider atlassing in that area or even taking on a square. There will likely be squares in most regions that get no or little coverage. RCs will be organizing “square-bashing” events to help cover these squares in many regions. The Atlas office will be working with RCs in areas with few atlassers to organize larger-scale square bashes, inviting people from across the province to come for a few days and help out. More information will be provided via the website and the Atlas newsletter.

3.3 The Atlas (NatureCounts) app

The NatureCounts app can be used for collecting checklist and Point Count data. Appendix E provides more information on how to use the app in an instructional video. Data entered on the app goes directly to the Atlas database upon submission, which saves you from having to enter your data on-line at home. We’re hoping this will open up more of your time for atlassing! The app also allows you to automatically record a track for each checklist. It will also prompt you for more information on significant records and warn you when a breeding code is unusual or unexpected for a particular species. We recommend using the NatureCounts app as much as possible. The information on Atlas checklists below, under Data Forms (3.4a), also applies to checklists done on the app.

a) eBird and the Atlas

Data collected for the Atlas are compatible with eBird, and can be easily uploaded to your eBird account. On the Atlas website, once you are signed in, hover over your user name near the top right, then select profile (or click here to go directly to the profile page). At the bottom of the page is a section titled “eBird Exports”. Fill in your eBird account information here and be sure to save. Once you have filled in this information your Atlas checklists will automatically

appear in your eBird account overnight. Click here (Coming Soon) for a video on how to enter your Atlas data to eBird.

Although it is feasible to use eBird to submit Atlas data, it requires some extra steps to fill in missing data which the Atlas requires. Using the NatureCounts app or website to collect and submit Atlas data is preferable, as this ensures that all the required data are collected in the standard fashion and that no additional steps are needed by you, the RC, or the Atlas office. For more information on how to forward your eBird data to the Atlas, see Appendix I, and a video (Coming Soon).

3.4 Data Forms

It is the atlasser's responsibility to ensure that any data they collect is entered into the atlas. If you are not using the NatureCounts app, you can use either printed data forms or your notebook to record data. Data from notebooks or data forms must be entered to the Atlas database via the Atlas website data entry portal or the NatureCounts app: App Store or Play Store. If you are going to use your notebook to record atlas data, we recommend having a copy of the data form on-hand, as a reminder of all the relevant data that should be collected. The following forms are available to view or download from the Atlas website.

a) Atlas Checklist

See section 3.2 above for how to use checklists. Species displayed in the app, website, or printed on the paper form checklists represent those most likely to be breeding 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.

If you plan to use paper forms to record your checklists, you will need several copies of the form; these can be downloaded from the website and printed at home. See Appendix J for a detailed description of how to complete the Checklist form. 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. Such records should be listed as Incidental.

b) Rare/Colonial Species and Flagged records

Sightings of rare species and breeding colonies require **extra documentation** (see Appendix K for examples). These species are identified on Square Summary Sheets and Atlas Checklists, and on the NatureCounts app. Please fill in as many details as possible, including how you identified the species, behaviour observed, and any other details that you think might be important to have documented, 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 coordinates. However, you should still attempt to record your location while in the field, either by using your Square Map to determine the UTM coordinates, a GPS device, or a navigation phone app. 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 the essence. Any sensitive information, such as the precise locations of Species At Risk, should be kept strictly confidential by the atlasser and their RC. See Appendix L for more information about sensitive species and the Birding Code of Ethics.

During data entry to the app or website, records might be flagged for other reasons beyond those listed above. For instance, the species might be listed as rare based on the date, or the number recorded might be a high count. Records may also be flagged for additional details based on the breeding code used.

c) Point Count Forms

For point count forms and information on how to run point counts, go to the Instructions for Point Counts (Coming Soon).

3.5 Location information

Always know where you are! The NatureCounts app has a map built in that pin-points your location as you move around the square. Additionally, a map of each 10-km square is available on the website at: click here. The square map contains much of the topographic information needed to plan your Atlas survey work. Studying maps of the area you plan to survey ahead of time will economize your efforts. In the field, square maps can be marked up to keep track of where you've atlassed to avoid duplicating your effort, and significant species locations can be marked. The data entry portal on the website will allow you to indicate where you atlassed using the Google Maps interface.

Please do your best to determine your precise location in the field when recording specific locations of rare or colonial species. You can determine Lat/Long coordinates precise to 1 m using a GPS-enabled device. You can provide UTM coordinates precise to 100m using your Square Map. See Appendix M for more information about how to report your location.

3.6 Project NestWatch (Optional)

Information about nests of birds 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. To avoid jeopardizing nesting success, all observers must approach nests with care and caution. By following the Project NestWatch code of conduct (click here), you will reduce the risk of attracting predators to a nest; causing unintentional harm to a nest; or causing adults to desert a nest.

4. Submitting Atlas Data

See Appendix N for how to submit data online. Again, **we recommend using the NatureCounts app** (Appendix E) to enter your data while you are in the field because it will save you time at home, and prompt you for important information while you have the opportunity to investigate further in the field. For those not using the NatureCounts app, the Atlas website allows you to enter and submit your general atlassing, point count, and rare

species data all in one place; tell us exactly where you have atlassed; receive warnings for unusual or invalid species-breeding code combinations or unusually high counts; and receive prompts for rare/colonial observations that require more information.

We highly recommend that you review the data you collect at the end of each atlassing 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 the Atlas Office to regularly update maps and square summary sheets throughout the breeding season to better track progress, avoid duplication of effort, and direct effort as needed.

The annual deadline for data submission is **August 31st**; all data submitted will be peer-reviewed by experts and you could be asked for more details. See Appendix O for data and map ownership information.

If you are unable to enter your data online or are having difficulties doing so, please ask a fellow atlasser, your Regional Coordinator, or the Atlas Office to help you with this.

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.