

Migration monitoring at the Cap Tourmente National Wildlife Area

BACKGROUND

Cap-Tourmente National Wildlife Area (Cap Tourmente NWA) is an important migratory staging area, well-known across the country for the bird diversity it hosts. The 324 species recorded at the site make this migratory hotspot the most diverse in the whole province of Québec. For many years now, bird surveys have been conducted on the site, especially for the Snow Goose, the emblematic species of Cap Tourmente NWA. Since 2015, Tadoussac Bird Observatory (TBO) has been working hard on promoting the ecological value of the wildlife area by conducting fall migration surveys on songbirds. Daily census and observations from TBO team members allowed Cap Tourmente NWA to gain **a clearer and broader picture of the site's importance for migrating songbirds**. However, to obtain a holistic picture over the entire Cap Tourmente NWA's territory, TBO and Environment and Climate Change Canada (ECCC) would like, with the public's participation, to extend the area covered by the scientific surveys. This would **enrich the current efforts** by including more bird species that might not be detected during standardized morning banding. For example, raptors, shorebirds, and waterfowl are less likely to be detected by the songbird banding program.

The importance of scientific conservation projects, relying in part on data collected by the public, has been constantly growing over the last years. Indeed, **many conservation and research projects already use citizen science** and collect extremely important data so that wildlife managers can take sound decisions in the habitat conservation of targeted species (e.g. Christmas Bird Count, eBird, nesting bird surveys, etc.). With improving analytical techniques, eBird has rapidly become an extremely efficient and easy to access portal for those wanting to study bird population dynamics. Its increased usage becomes even more evident when looking at the number of lists created each year as well as the ones already submitted (more than 74 million completed lists so far). However, citizen science wasn't always supported by traditional science, concerned about the limitations of this type of data, as it remains difficult to guarantee the reliability of these observations. Luckily, these biases are now well known, and more and more tools are being developed to take them into account. The power of this host of observers plays a crucial role in species conservation, especially for bird species. With this in mind, we wish to develop an **easy-to-use migration monitoring tool which would help maximize public participation**. To achieve our goal, we need to use a clear protocol that will allow to use the data and compare it over time and across geographic regions.

OBJECTIVES

The main goal of this project is to raise awareness and promote the importance of citizen science for major scientific projects, including those taking place at Cap Tourmente NWA, by making possible a standardized monitoring of bird migration. In addition to the migration data from TBO's bird banding program, citizen science data will help better understand Québec's bird migration. Analyses resulting from those data will play a crucial role in the understanding and conservation of migratory species nesting from the

southernmost part of the boreal forest up to the Arctic. This one-of-a-kind project could become a pan-Canadian citizen science project on key migration sites through the Canada National Parks and Wildlife Areas network.

METHODS

Methods summary

For the project to run smoothly project, you must have an eBird account. Note down the species you have seen and/or heard, during a 10-minute stationary observation, at one of the proposed sites. Note the number of individuals, then add a comment to the RELMIG list and the code corresponding to the RNFCT-A site (B, C, D or E) separated by ";". If you can't identify a species, you can add it as a sp.

Observation protocol:

Five observation sites have been selected within the Cap Tourmente NWA to maximize the area covered when compiling data. You will find the site locations in appendix 1. The site code (RNFCT-A, RNFCT-B, RNFCT-C, RNFCT-D or RNFCT-E) needs to be added in the comment of the list after the RELMIG mention separated by “;”.

- RNFCT-A : Observatoire du Marais-de-la-Grande-Ferme
- RNFCT-B : Plateforme d'observation du sentier de l'Écart
- RNFCT-C : Le marais de la Petite-Ferme (à l'Ouest)
- RNFCT-D : Le Pavillon Léon-Provancher
- RNFCT-E : Observatoire de la Halte-du-Pèlerin

Once at the site, start an eBird list to archive all the data in one file; otherwise, you can enter them afterward on eBird.org using the same protocol regarding the comments and site designation. You will need an eBird account to do so. Simply create one if don't have one already.

The survey is **stationary**, which means that you must remain in the same location for the duration of the survey (i.e. 10 minutes). You can however move a few meters around to help with identification or if visibility doesn't allow for a satisfactory survey given the migratory movement, as long as you remain near the official site.

For example, if you performed a stationary survey at the “marais de la Grande-Ferme” (site RNFCT-A), you should comment on the list with RELMIG;RNFCT-A.

Important: It is strictly forbidden to attract birds by calling them, by using playback calls or any other sound, or by baiting them with food.

Species recording.

The duration of the survey must be 10 minutes. It is possible to perform several 10-minute surveys in a row. Lists with duration of less than 10 minutes, or more than 10 minutes will not be considered. All migratory and non-migratory species must be recorded even if you cannot identify the species. The aim here is to provide a standardized framework for comparing sites and observations over time.

Important: Do not add any other comment on the species form or on the list.

Important: You can always share your list with other observers from your party.

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ANNEXES: Location of the 5 sites selected for the migration surveys at Cap Tourmente National Wildlife Area. These codes are to be used in the list comments.



