

**11th CMMN-RCSM National Meeting /11^e Rencontre national du RCSM-CMMN
17-19 August, Pearson College, British Columbia**



Attendees (names in Appendix 1)

Hosted by:



Canadian Migration
Monitoring Network



Réseau canadien
de surveillance
des migrations

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11th CMMN-RCSM 2018 National Meeting Summary Notes
Prepared by Stuart Mackenzie and the CMMN Steering Committee
October 2018

All presentations referenced within are available through the *Resources* sections of the *CMMN-RCSM NatureCounts* portal:

CMMN-RCSM Reference Documentation:

CMMN on Nature Counts - <https://www.birdscanada.org/birdmon/cmmn/main.jsp>

CMMN Resources on Nature Counts - <https://www.birdscanada.org/birdmon/cmmn/resources.jsp>

If you do not have access to either of these links ensure that you are registered with CMMN through Nature Counts: - <https://www.birdscanada.org/birdmon/cmmn/register.jsp>

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1. INTRODUCTION:

The eleventh national meeting of the Canadian Migration Monitoring Network – Réseau canadien de surveillance des migrations (CMMN-RCSM) was held at Pearson College, near Victoria, British Columbia from 17 to 19 August 2018. The meeting was hosted by the Rocky Point Bird Observatory. The meeting organizing committee consisted of Ann Nightingale (local host), Stu Mackenzie (BSC), Patti Campsall, Doug Collister, David Okines, and Bruno Drolet (chair of the CMMN Steering Committee).

A total of 16 Canadian migration monitoring stations were represented at the meeting. Bird Studies Canada and the Canadian Wildlife Service were also represented at the meeting. Other participants from affiliate station such as Vancouver Island University Banding Station and Iona Island Banding Station were also in attendance. A list of the 28 meeting participants, along with their affiliation(s) and contact information, is provided in Appendix 1.

The format of the meeting was similar to previous years and included a report from the Steering Committee, brief updates from the partner organizations and member stations, workshops on CMMN development, and a variety of scientific and technical presentations. A copy of the meeting final agenda is included as Appendix 2.

Copies of all presentations and posters (*file names indicated after section headings below*) are available on the CMMN-RCSM NatureCounts website at:

<http://www.birdscanada.org/birdmon/cmmn/resources.jsp>.

Note: *You need to be registered as a participant in the CMMN NatureCounts project to view these presentations. To register, create a User Profile with your login and password. New registrations are usually approved within 48 hours.*

2. STEERING COMMITTEE REPORT (T1-Drolet)

Bruno Drolet, Chair of the CMMN Steering Committee presented a report on Steering Committee activities since March 2016.

To reiterate, most steering committee business occurs within the activities of one of the three subcommittees:

☐ **Science Sub-committee:** lead on making trends and data available, promoting collaborative research, review monitoring protocols

☐ **Communications Sub-committee:** promoting and enhancing communication among stations, outreach to other stations and networks, and facilitating training

☐ **Membership Services Sub-committee:** promoting and enhancing services for current members, and processing new membership applications.

Sub-committee business is summarized in special sections below.

Bruno highlighted the priorities and activities over the past two years including an update to the Strategic and Action Plan, revised membership criteria, flagging criteria for trend monitoring, and the development of Network News e-newsletter.

3. CANADIAN WILDLIFE SERVICE UPDATE (T1-Drolet)

Bruno Drolet presented an update on Canadian Wildlife Service - Environment and Climate Change Canada (CWS-ECCC) activities related to the CMMN. ECCC interest and involvement in the CMMN relates to four specific CWS monitoring needs: Population Trends, Timing of Migration, Training and Conservation Outreach, and Research.

CWS provides the CMMN with a variety of support through direct funds to BSC and stations, teleconferencing services, expertise and support, the BBO, and NatureInstruct website.

Update on the Avian Monitoring Review Committee: CWS wants to carry out an evaluation of how well CMMN can meet monitoring information needs for boreal forest birds and other northern breeders. An important step was reached with the CMMN preparation of a status report to this committee ([select this link to view](#)).

- The implications for CMMN and for CWS population monitoring will be discussed by the Boreal Monitoring Committee.
 - Modeling studies indicate that results from stations with similar trends can be combined into regional trends
 - The next stage would be to broaden this analysis to the national scale for each species.
 - **Important step (ongoing): More data on most likely catchment areas (isotopes)**
 - Future goal: integrate CMMN trends with trends from other monitoring initiatives

4. BIRD STUDIES CANADA UPDATE (T2-Mackenzie)

Stu Mackenzie presented an update on Bird Studies Canada's (BSC) activities related to the CMMN including data collection, data management roles, trend analyses and reporting (updated to 2016 for all stations), communications and technical support, development and funding, and participation on the CMMN steering committee. The Great Canadian Birdathon produced \$71,136 for the CMMN in 2017. The total raised for CMMN since 1998 is \$1,045,588.

There are major staffing changes underway at BSC that will impact CMMN. We will update the steering committee as changes are implemented.

Some suggestions from BSC to help CMMN stations can get the most out of services provided by BSC: submit data annually, let BSC know of any changes in contact, respond to data requests, use the communication and NatureCount tools, and take advantage of the Great Canadian Birdathon!

5. STATION REPORTS (S1-S16)

Station reports were given for 15 stations (S1 through S16 in NatureCounts folder). These five-minute presentations followed a standard template and included information on the station location,

organizational structure, standard programming, and new projects and achievements. An additional presentation was compiled with bird highlights from all the stations.

6. TECHNICAL REPORTS AND POSTERS (T3-T15)

Additional presentations on various research, monitoring, and conservation projects of interest to CMMN stations were included in the meeting program (see Appendix 2 for details of topics and presenters).

Stu Mackenzie provided an update on the North American Banding Council and International Bird Observatory Conference (next meeting March 2019 in Eilat, Israel).

Lesley Howes provided an informative update from the Bird Banding Office establishing high scientific and ethical stands. A valuable discussion followed.

As a result of the Bird Banding Office Update, it was suggested that CMMN stations could contribute to a nation-wide assessment of error codes that could be adjusted – age/sex codes, and band size criteria.

On Friday evening, Dr. David Bird presented on the use of drones in bird research and conservation. On Saturday evening, Stu Mackenzie provided an overview of the Motus Wildlife Tracking System and how it is influencing research and conservation around the world.

Posters: Four posters were also on display at the meeting presenting population trends from CMMN stations, and results from Rocky Point Bird Observatory (See P1-P4 on CMMN NatureCounts Resources).

7. CMMN SCIENCE COMMITTEE WORKSHOP – Ricky Dunn (See T3-Dunn)

Science committee chair Erica Dunn provided an overview of the science committee activities over the last 2 years including steps taken to improve data quality, interpretation of trends for each species at each CMMN station, and progress in disseminating results to important user groups. Focal activities for the next two years are to:

1. Finish 'Executive Summary' for 2016 trend results and disseminate widely
2. Arrange for mapping of new isotope results
3. Follow up on habitat discussions and formulate recommendations
4. Do some of the high priority data analyses identified in the CMMN Status Report ([select this link to view](#))
5. Improve metadata and protocol tracking

Habitat monitoring methods: (Doug Collister)

The majority of this session was dedicated to discuss the importance of habitat change and the need to implement some sort of standardized habitat monitoring. One concern with some migration monitoring data is that trends may be reflect systematic habitat change (succession, or degradation) rather than actual change in population size. Some sites are impacted by this more than others.

Doug Collister led a discussion on the importance of monitoring habitat so the potential impact of habitat change at each station can be assessed. He reviewed methods used elsewhere, and shared some results from different experiences, primarily the method used for MAPS. Also see special presentation from Lesser Slave Lake Bird Observatory (T6-Perkins).

Discussion:

- General consensus that it would be better to adapt a method with an established protocol rather than using a new method.
- Some members noted that even crop fields, or more specifically what crop, can influence captures and census annually. Ricky noted that cyclical or random changes in habitat, although affecting bird numbers in given years, will not bias long-term trends. Systematic, directional change in habitat is the important issue.
- Should the priority for habitat monitoring be based on the method or the result? Shouldn't we first figure out the purpose of collecting the data before we collect the data? Are we looking for a binary result – trends are or aren't being influenced by habitat, or are we trying to correlate trends with habitat change? The type of data we collect might be quite different depending on what outcome we're looking for.
- The aim of habitat monitoring is to determine whether habitat has changed enough to significantly bias the local trend for a given species, so we can flag that trend as potentially biased. There is no simple way to determine "how much habitat change is too much" (although comparisons of trends among species and sites and other monitoring programs may provide clues).
- Despite difficulties in determining effect of a given amount of habitat change, we should be collecting the data needed to show how much change has taken place. Habitat monitoring is a requirement of the new TMP criteria for CMMN Membership, and methods must be detailed in station protocols.
- Any method employed should ensure compatibility with data already collected, so stations need some flexibility in selecting monitoring methods.
- Bruce Peninsula Bird Observatory has been collecting habitat information at 10 year intervals using their own methods. Collecting data in a new format might not be as helpful as collecting data in the existing way. How does the habitat type influence the sampling methods we use?
- The recently conducted poll of 16 CMMN stations showed that about a third of stations do MAPS, so are familiar with that protocol. A quarter have done similarly extensive monitoring on their CMMN count sites (but only one does so regularly), and close to half keep photographic records.

Google maps can be used to characterize habitat zones at each site, also providing a baseline for detection of change in future. [Editors Note: An idea not mentioned in the meeting due to time constraints is that sources of remote sensing data (air photos, or satellite) might provide older habitat images for comparison to current habitat, showing how much change has already occurred.

- Do any stations think habitat monitoring is not worthwhile? Everyone agreed that it should be done.

ACTION: Science sub-committee to investigate and determine the best methods to recommend to stations.

8. CMMN MEMBERSHIP COMMITTEE WORKSHOP (Revised Membership Criteria Review):

Doug Collister provided some background of the membership criteria and an overview of the revision process, and proposed new criteria for CMMN membership. (See discussion notes from 2016 Oak Hammock meeting that led to this review here:

https://www.birdscanada.org/resources/cmmn/1_CMMN2016_NationalMeetingSummary.pdf).

Doug went through the proposed membership criteria (distributed to stations prior to the meeting and attached in Appendix 3).

Discussion:

There were no immediate questions or concerns about the proposed revisions, but some discussion did ensue after coaxing.

- Data requests: Is everyone OK with automatic approval from BSC if there is no response from stations within 3 weeks?
 - It was noted by Ann that one of the main reasons for delayed times on data requests may be staff or director turnover.
 - Do we need to have all of our MOU's available online?
 - Or, better transition planning within organizations?
 - Some discussion was had about various options to help stations manage requests - email reminders that are currently in place, or automatic review and approval by BSC after a waiting period (relate to data management levels), etc.
 - The solutions may vary largely depending on the nature of the request. Some requests are very straightforward, other requests require data that BSC doesn't have access to (e.g. banding data, special projects). Requests for management purposes are straightforward or academia can be straightforward, but commercial requests may require a fee.
 - Wendy noted that data access thoughts were developed prior to eBird and asked whether we should discuss how and/or when we push a lot of CMMN data to eBird. Nature Counts does have the capability to push data to eBird, and that's a tool CMMN could implement for stations to input their data into eBird. Stations could decide to opt out if desired. .
 - At least one station would not approve automatic release of data after 3 weeks of non-response, but several stations were open to this. **ACTION: Keep this option in the MOU.**
- Suggestions for station membership:
 - Simon – stations should be required to send a representative, or report, or information, to the national meetings? Already accommodated somewhat within, and can probably be an easy addition to the MOU.
 - Wendy – concern about the 5 days within a 2 week period? What's the minimum criteria? This criteria should be re-examined, or justified within the document? This point needs to be revisited.
- Process for MOU review:

- Bruno would like to see us arrive at a general decision today on the concept, but with the expectations that there will be a final review based on this feedback and then the steering committee can distribute a final draft. Can we have a vote or an agreement on the principle of the changes?
- Are there any major objections to the principles set forth by the steering committee? There were no objections from all attendees.
-

ACTION: Based on the feedback given, the Steering Committee will revise the MOU and membership criteria and redistribute to stations for review and approval.

9. FUNDING THE CMMN:

Attendees revisited an important idea from Oak Hammock: whether the CMMN steering committee should have some operating funds of its own, separate from purpose-specific funding that comes through CWS and/or BSC.

- There was general support for the idea of instituting a membership fee to support CMMN core activities.
- Is the idea of a fee viable? E.g. \$500/station/year
- Prioritizing how those funds should be used could be contentious, or just split in so many potential ways that it becomes to disperse to have an impact.
- What about the idea of a fund for CMMN – not a fee per se, but a voluntary fund?
- It was suggested the observatories that participate in the Great Canadian Birdathon, could dedicate 5-10% of proceeds to CMMN operations. Even if this raised only a modest amount, it could be used to support station participation at meetings, promotion, conferences, or special projects, etc.
- Capacity Building – Discretionary funds dedicated to CMMN could help to achieve many objectives. One idea is to divvy up the Birdathon revenues, and the remaining funds go into a CMMN ‘fund’ to assist in CMMN operations.

ACTION: Steering Committee to explore what percentage of Birdathon revenue could go into a community CMMN fund to support special projects and or the biennial meeting.

Doug proposed that the CMMN might become a separate nation-wide organization, but no one took that up for discussion.

Would BSC be open to CMMN steering committee pursuing funding on behalf of CMMN (a BSC project)? – Stu responded that the short answer is yes, but it would have to be coordinated with BSC to ensure we’re not creating unnecessary conflict or competition with other BSC programs or partners. At some point a registered NGO would have to be the lead organization on most proposals.

ACTION: The steering committee will investigate potential options for raising discretionary funds for the CMMN.

10. COMMUNICATIONS AND OUTREACH COMMITTEE

(Stu and Patti).

Stu and Patti briefly presented about what the Outreach Sub-committee is doing, but in the interest of saving time for other sections, there was no report or discussion.

11. MEETING SUMMARIES AND OUTCOMES:

Bruno led a brief discussion to collect feedback on the meeting and discuss options for future meetings and increased participation among the stations. Stu suggested that meeting attendance and engagement likely isn't a trend so much as circumstance, so we shouldn't be discouraged that "only" 16 stations were represented here.

- Should we have regional meetings?
 - o The idea of regional meetings was not generally supported as it was felt that content and participation would be segregated.
- Making a greater effort to engage stations throughout the next two-year period, might help build momentum for the next meeting.
- Should we have special WebEx meetings to introduce or discuss special topics?
 - o WebEx could be an important tool to employ at least once or twice before the next meeting to discuss certain points.
 - o WebEx should be focused on a specific topic. – One topic for instance of interest could be the results of the trends analysis and BBS comparisons and Isotope results – Ricky's poster.
 - o Catherine could also provide a WebEx on what NatureCounts has to offer and perhaps ET program things.
 - o Another option is the final review and discussion of the new membership/MOU criteria, trend monitoring program, etc.
 - o Webinar on how to improve and do a Birdathon or do fundraising
 - o Because we span Canada, the only good time for a WebEx is between 11 and 1, which might make it difficult for some banders to attend.

ACTION: Steering committee to organize at least one WebEx prior to the next biennial meeting.

- Should be suggested/recommended that stations bring posters to future meetings whenever possible.
- Reaffirmed by all that these meetings are extremely important from a networking and social perspective as much as a business, technical or scientific perspective.

Agenda Contents and Organization:

- Everyone felt that the agenda was well balanced – station reports, technical reports, and discussion and work items.
- Perhaps we should try to get feedback on the agenda from the stations that didn't attend to see if there was anything we could improve?

Next Meeting:

- An Eastern or Central meeting should probably be preferred. There was some brief discussion about the potential to host it at McGill or Toronto.
- Spring or Fall 2020 should probably be preferred and decided up on quickly.
- There is a movement or plans for a western regional banding meeting in Edmonton in March 2019. How should the CMMN be represented?

12. UPDATE OF THE CMMN STRATEGIC AND ACTION PLAN:

Most up to date version is available here:

[https://www.birdscanada.org/birdmon/cmmn/resources.jsp?dir=CMMN-RCSM Steering Committee Documents](https://www.birdscanada.org/birdmon/cmmn/resources.jsp?dir=CMMN-RCSM%20Steering%20Committee%20Documents)

Bruno led the discussion by commenting that he reviewed the entire strategic and action plan, and doesn't think that there shouldn't be any major changes, and updating it should be fairly straightforward. It's apparent that a previous steering committee spent a great deal of time and attention crafting this version.

- Bruno reviewed the major points with the group.
- Are there any other major objectives that we should pursue on the data and analysis side of things?

ACTION: Each committee should/will review the plans and objectives within, and see what revisions might come into play.

- Network development and expansion – membership review has already fulfilled a lot of these objectives, and will complete these when the MOU is done.
- Compiling and presenting station metadata should be pursued, especially if/when new stations are joining
- Is there a gap, lost opportunities, without having Provincial/territorial representation at the CMMN?

ACTION: The steering committee will update the strategic and action plan over the next year, and seek station input.

Bruno closed the meeting by stating that the steering committee will make a special effort to keep everyone informed about what's going on.

Adjourn

Special thanks to Ann and everyone at RPBO for hosting and all your hard work.

Appendix 1. List of meeting attendees. Photo position is labelled as Back row (B), position 1-14 left to right, and Front-row (F), position 1-8. * Steering Committee Member.

First Name	Last Name	Affiliation	Email	Photo Position
Catherine	Jardine	Bird Studies Canada	cjardineATbirdscanada.org	B – 10
Zoe	Crysler	Bird Studies Canada	zcryslerATgmail.com	B – 12
Eric	Demers	Vancouver Island University	Eric_demersATyahoo.com	B – 8
*Doug	Collister	Calgary Bird Banding Society	collistrATgmail.com	B – 4
*Stu	Mackenzie	Bird Studies Canada	smackenzieATbirdscanada.org	F – 8
*David	Okines	Prince Edward Point Bird Observatory	David.okinesATgmail.com	B – 6
Patricia	Campsall	Lesser Slave Lake Bird Observatory	Executive.directorATborealbirdcentre.ca	F – 7
Robyn	Perkins	Lesser Slave Lake Bird Observatory	BicATIslbo.org	B – 9
*Bruno	Drolet	Canadian Wildlife Service	Bruno.droletATCanada.ca	F – 4
Simon	Duval	McGill Bird Observatory	duvalsimonAThotmail.com	B – 5
*Erica	Dunn	CMMN	ericahdunnATgmail.com	F – 5
Ann	Nightingale	Rocky Point Bird Observatory	motmotATshaw.ca	F – 1
*Lesley	Howes	Canadian Wildlife Service	Lesley.howesATCanada.ca	F – 6
Ted	Cheskey	Bruce Peninsula Bird Observatory - Nature Canada	tcheskeyATnaturecanada.ca	NA
Barry	Lancaster	Freelance, but often Vaseaux Lake BO	mbl.tenbelATgooglemail.com	B – 1
Ted	Murphy-Kelly	Yukon Bird Observatories	tedmurphykellyATnorthwestel.net	B - 3
Wendy	Easton	Canadian Wildlife Service	Wendy.eastonATCanada.ca	F - 3
Kim	Beardmore	Rocky Point Bird Observatory	President	B - 2
Daniel	Donnecke	Rocky Point Bird Observatory	Daniel.donneckeATGmail.com	B - 7
Pierre Alexandre	Dumas	Observatoire d'Oiseaux du Tadoussac	Pierre-Alexandre.DumasATusherbrooke.ca	F - 2
David	Bell	Rocky Point Bird Observatory	parzudakATgmail.com	NA
Siobhan	Darlington	Rocky Point Bird Observatory	darlingATuvic.ca	NA
Donna	Talluto	Rocky Point Bird Observatory	donna.tallutoATstudent.unamur.be	NA
Blair	Dudek	Rocky Point Bird Observatory	blairdudeckATgmail.com	NA

First Name	Last Name	Affiliation	Email	Photo Position
Paul	Pratt	Holiday Beach Migration Observatory	Hmbo.caATgmail.com	B - 14
Caroline	Staddon	Holiday Beach Migration Observatory	Hmbo.caAtgmail.com	B- 13
Azim	Sharif	Iona Island Banding Station	Azim.ShariffAToutlook.com	B- 11
David	Bird	Professor Emeritus McGill University	david.birdATmcgill.ca	NA
Mike	Motek	Rocky Point Bird Observatory	mmotekATshaw.ca	NA
Jo	Motek	Rocky Point Bird Observatory	mjmotekjAHotmail.com	NA
Jannaca	Chick	Rocky Point Bird Observatory	jannacaATshaw.ca	NA
Wallis	Moore Reid	Rocky Point Bird Observatory	wallismrATshaw.ca	NA
Ian	Cruickshank	Rocky Point Bird Observatory	ian.cruickshankATtelus.net	NA
Michael	Simmons	Rocky Point Bird Observatory	simmonsm@telus.net	NA
Rosalind	Coleman	Rocky Point Bird Observatory	NA	NA
Rod	Mitchell	Rocky Point Bird Observatory	rodneATislandnet.com	NA

Appendix 2. Final Agenda

The Canadian Migration Monitoring Network - Réseau canadien de surveillance des migrations (CMMN-RCSM) National Meeting



What:

The CMMN-RCSM is a group of independent bird monitoring and research stations (bird observatories and like-minded organizations) across Canada that contribute knowledge and public understanding of Canadian birds and bird migration, and influence conservation in the Western Hemisphere. It is a collaborative initiative among these member stations, Bird Studies Canada (BSC) and Environment and Climate Change Canada's Canadian Wildlife Service (CWS).

The CMMN-RCSM members and cooperators meet biennially to share ideas and reports about recent activities and projects from across the network, and to set priorities and actions for the next two years. It is an unparalleled opportunity to better understand what the CMMN-RCSM is about, how you and/or your organization can best contribute, or get the most out of being involved.

When:

August 16-19, 2018

Where:

Rocky Point Bird Observatory, Victoria, British Columbia.

Registration: Deadline for registration is 10 August

http://www.rpbo.org/cmmn_2018.php

Prices and additional details are available on the web form.

More information can be found in the latest [CMMN Network News](#).

Meeting Logistics:

A poll to help organize logistics for attendees is available here: <https://doodle.com/poll/k9m678wt5stky6ux>

Instructions: Once you have confirmed that you will be attending, please fill out your name and affiliation, and the days you plan to attend. Please provide any travel details in the comments such as your intended travel dates, flights, and rental car arrangements. Participants can then connect with each and organize communal transportation where appropriate.

Call for papers/presentations:

Organizations or individuals wishing to provide a short presentation (10-15 min) summarizing activities that support the mission of CMMN-RCSM should provide a brief summary (100 words or less) to cmmn-rasm@birdscanada.org by July 1.

Station Reports

All member stations are encouraged to provide a short (**5 min**) summary as part of the regular program. Additional non-member stations wishing to provide summaries should contact cmmn-rasm@birdscanada.org by August 1. Stations without representation at the meeting can submit presentations to cmmn-rasm@birdscanada.org.

	11th CMMN-RCSM National Meeting
	16-19 August 2018, Victoria, British Columbia
	<i>Hosted by Rocky Point Bird Observatory – rpbo.org</i>
	AGENDA
	Thursday August 16th
	<i>travel day; on your own for dinner</i>
All Day	Arrive in Victoria and explore Rocky Point Bird Observatory Environs
	<i>optional activities including:</i>
	1) birding, kayaking/boating,
	2) visiting the Pedder Bay station
	3) checking-in, orientation and socializing as desired
	Friday August 17th
800	Registration, presentation prep, etc.
830	Welcome, Orientation and Introductions (Ann Nightingale)
845	Review Meeting Goals (Bruno Drolet)
900	Steering Committee Report (Bruno Drolet)
915	Environment Canada Update (Bruno Drolet)
930	Bird Studies Canada Update (Stu Mackenzie)
	Discussion
945	BREAK
1000	Station Reports (XX total @ 5 minutes / station)
	<i>Bird highlights compiled for display during breaks and lunch</i>
1200	LUNCH
1330	More Station Reports as needed (5 minutes / station)

1400	Technical Reports (5-15 minutes each with questions)
	North American Banding Council Update (<i>Stu Mackenzie</i>)
	International Bird Observatory Conference (<i>Stu Mackenzie</i>)
	Scientific permits and Banding Office Update (<i>Lesley Howes</i>)
	Scientific and Ethical standards of working with migratory birds in Canada. (<i>Lesley Howes</i>)
1445	BREAK
1500	WORKSHOP # 1: CMMN Science Sub-committee (Ricky Dunn lead).
	<ul style="list-style-type: none"> • Overview of SCC accomplishments in the past 2 years. • Habitat change Discussion • Result of 2016 Trend Analyses • Results of the station poll
1530	Scientific Technical Presentations (4 x 15 minutes) – submitted talks
	Habitat Succession at Lesser Slave Lake (Robyn Perkins)
	Migration correction on the North Shore of the St-Lawrence River (Pierre-Alexandre Dumas)
	Trends and Origin Depictions for Inglewood Bird Sanctuary – A Prototype for the CMMN (Doug Collister)
	Taking a look at tape luring (Erica Dunn)
	Nocturnal Flight Call Monitoring and it's potential to assist Migration Monitoring. (Bruno Drolet)
1700	SOCIAL HOUR
	DINNER
2000	Public Presentation
	<i>Drones: An Emerging Technology for Bird Research and Conservation</i> Dr. David Bird Emeritus Professor McGill University
	Saturday August 18th
0700	Tour of Rocky Point Bird Observatory
	<i>leave station by 10:00 (15 min drive)</i>
1000	GROUP PHOTO
1030	WORKSHOP # 2: CMMN Membership Sub-Committee (Doug Collister)
	Overview of Membership Review and Outcomes
	<ul style="list-style-type: none"> • Topic 1: Revised MOU's • Topic 2: Appendix 1 - Revised Membership Criteria

	<ul style="list-style-type: none"> Topic 3: Appendix 2 – Data Sharing Agreement
1200	LUNCH
1300	WORKSHOP # 3: CMMN Outreach Sub-Committee - Communications & Networking (Patti Campsall)
	Topic 1: TBD
	<i>Open Technical Reports / Discussion Topics (4 x 15 minutes)</i>
	<i>Vancouver Island University Bird Banding Project: Engaging Undergraduate Students in Field Biology – Eric Demers</i>
	Migratory behaviour of vagrant birds in Nova Scotia. (David Bell)
	Comparison of Northern Saw-whet Owl results between to nearby banding sites (Rocky Point and Pedder Bay), and/or RPBO's Hummingbird Monitoring Project (Ann Nightingale).
	Spring Migration Monitoring of Boreal Forest Neotropical Landbirds in Central America – A Mirror to Fall Migration Monitoring in Southern Canada (Doug Collister)
1400	Afternoon Break
1430	Meeting Summary and Outcomes:
	Updating the CMMN Strategic and Action Plans (Bruno Drolet)
	Steering Committee Election wrap-up
	Meeting Evaluation
	Next Meeting and Meeting Structure in General
	Agreeing on Next Steps
1700	SOCIAL HOUR
1800	DINNER
2000	Public Presentation
	<p><i>Wingtips at our fingertips: Unravelling the complex lives of migratory animals with the Motus Wildlife Tracking System.</i></p> <p><i>Followed by a discussion on applying advanced wildlife tracking technologies to the CMMN.</i></p> <p>Stu Mackenzie Migration Program Manager Bird Studies Canada</p>

Appendix 3. CMMN-RCSM Membership Review. Note sent to CMMN Member stations and draft proposed new MOU.

The CMMN Steering Committee has been working since our last biennial national meeting at Oak Hammock Marsh, MB to revise and update the membership criteria. Attached for your review is a final draft Memorandum of Understanding that incorporates the results of our work.

The main change that Steering Committee is proposing is that there be a single level of CMMN Membership, with everyone meeting the same basic criteria. Any Member can participate in any CMMN project as long as they meet the project requirements. For the project we are now calling the 'Trend Monitoring Program,' certain criteria must be met beyond those required of all Members (described in Appendix 1). The main change in the proposed MOU is in organizational structure, however, and you will find little new in operational requirements. There have also been clarifications in the responsibilities accepted by signing the MOU, and in the descriptions of data sharing levels (Appendix 2).

We are hoping for a good discussion of this document at the national meeting at [Rocky Point Bird Observatory, BC August 16-19](#) (click to register), but would like to hear from you sooner if you have suggestions or concerns – especially if your station will not be represented at the Victoria meeting. If major issues arise we'd like to know ahead of time so we can find solutions to bring to the meeting for consideration. Please send any comments to cmmn-rscm@birdscanada.org preferably by 1 August.

There are several new stations waiting for this process to be completed before they can be considered for membership, so we hope to finalize in Victoria or soon after. As well, most existing member stations are overdue for renewal of their MOUs, and we anticipate that once agreement is reached on the final form that all current members wishing to continue will execute a new MOU, customized if needed for their specific circumstances.

Thank you for your input, and we look forward to seeing you in Victoria!

CMMN Steering Committee

**MEMORANDUM OF UNDERSTANDING
CONCERNING MEMBERSHIP OF**

xyz Bird Observatory (the Member)

**IN THE
CANADIAN MIGRATION MONITORING NETWORK
RESEAU CANADIEN DE SURVEILLANCE DES MIGRATIONS (CMMN-RCSM)**

CMMN-RCSM is a collaborative initiative among the Member stations, Bird Studies Canada (BSC) and Environment Canada (EC). The CMMN-RCSM Steering Committee, consisting of representatives of each of the three interest groups, provides advice on the direction, goals and priorities of CMMN-RCSM, establishes criteria for membership in CMMN-RCSM, and considers all applications for membership.

The current mission of the CMMN-RCSM is: *“To contribute knowledge and public understanding of Canadian birds and bird migration through a collaborative network of independent migration monitoring and research stations, and to influence conservation in the Western Hemisphere.”*

The purpose of this Memorandum of Understanding (MOU) is to describe and confirm the roles and responsibilities of the Xyz Bird Observatory (the Member), BSC, and the Steering Committee, within the framework of the CMMN-RCSM partnership. Appendices detail requirements for station membership and present options for sharing datasets with third parties.

Signing of this MOU confirms that the Steering Committee has determined that Xyz Bird Observatory has met the criteria for membership outlined in Appendix 1 and has been accepted as a designated Member station of CMMN-RCSM.

To contact the CMMN-RCSM Steering Committee, email to cmmn-rcsm@birdscanada.org

By signing this MOU, the Member of CMMN-RCSM agrees that it will:

- a) Adhere to all membership criteria (Appendix 1) for the duration of membership in CMMN-RCSM, and report any impending or actual change in ability to meet any criterion to the CMMN-RCSM Steering Committee for purposes of record-keeping and evaluation.
- b) In the event standardized operation protocol must be altered due to unavoidable circumstances (e.g. permanent loss of access to part of study area), inform the CMMN-RCSM Steering Committee for consultation on how to mitigate effects on data quality. (N.B. For stations participating in the Trend Monitoring Program, change of protocol may result in ending one series of years contributing to trend analysis and starting a new series).
- c) Participate in CMMN-RCSM monitoring and research projects when feasible and appropriate.
- d) Provide CMMN-RCSM with current contact information for a station representative and an alternate who will respond in a timely manner to requests from CMMN for information, feedback or permission to release data.
- e) Acknowledge CMMN-RCSM, BSC, ECCC and other partners or sponsors in reports and publications as appropriate.
- f) Neither facilitate nor conduct sponsored bird counts for fundraising other than BSC's Great Canadian Birdathon, unless specifically exempted from this clause by an addendum to this MOU.

- g) In the event the station ceases operation or CMMN membership, allow data already submitted to BSC for posting on NatureCounts to be archived and administered by BSC as a Level 5 data set (open access; see Appendix 2).

Under this MOU, Bird Studies Canada agrees that it will:

- a) Store and archive electronic data submitted by the Member and make such data available on NatureCounts subject to any restrictions covered by Appendix 2.
- b) Report annually to the Member on status of data they submitted (i.e. acknowledge receipt, indicate when archived, identify any problems etc.).
- c) Acknowledge the Member in reports and publications that make use of the station's data, and obtain Member written permission for use of data for any purpose other than allowed by the station's chosen data sharing level (Appendix 2).
- d) Provide copies of manuscripts using Member data for Member input prior to finalization and publication.
- e) Keep a record of, and when permission is required (see Appendix 2) also forward immediately to the Member, all information that a person requesting download of information from NatureCounts submits with their request (name and contact information, purpose of request and how data are to be used, acknowledgement of having read and accepted data sharing policy).
- f) Perform trend analysis at regular intervals (funds permitting) for Members participating in the Trend Monitoring Program that have accumulated at least 10 years of data, and illustrate results for appropriate species as graphs and maps on the NatureCounts website.
- g) Provide opportunities for release and exchange of archived data sets among cooperating Member stations for collaborative research projects that originate from within the network community, on written approval among all cooperating parties.
- h) Provide special benefits to participants in the CMMN ~~Trend Monitoring Program~~ that participate in BSC's official Great Canadian Birdathon, in the form of an allocation of at least 75% of proceeds raised in the station's name.
- i) Maintain a CMMN-RCSM ListServe to facilitate communication among Members and other interested parties.
- j) Help with organization of biannual meetings.

Under this MOU, the CMMN-RCSM Steering Committee agrees to:

- a) Provide leadership in assessing, improving and promoting the value of CMMN-RCSM and its products.
- b) Promote good communication among Members and other interested parties through electronic means and appropriate distribution of CMMN-RCSM reports, and by organizing periodic meetings of Members.
- c) Provide technical and scientific advice, including review of protocols.
- d) Encourage and facilitate Member participation in CMMN-RCSM collaborative projects.

This agreement shall be effective from the date of signing by all parties and continue for the duration of the CMMN-RCSM program, subject to review by the Steering Committee at 5-year intervals, unless one of the parties requests in writing that the agreement be modified by mutual consent or terminated on 12 months notice.

For Xyz Bird Observatory

Signature: _____ Date: _____
(name, position, organization)

For Bird Studies Canada

Signature: _____ Date: _____
(President, BSC)

For the CMMN-RCSM Steering Committee

Signature: _____ Date: _____
Chair (or Co-chair) of CMMN Steering Committee)

Signature: _____ Date: _____
(Co-chair of CMMN Steering Committee, if applicable)

CMMN MEMBERSHIP MOU – APPENDICES

APPENDIX 1. CMMN-RCSM MEMBERSHIP CRITERIA

Basic Membership Criteria

A CMMN-RCSM Member is a site-based operation ('station') managed by an individual or organization that conducts long-term research on migrant birds in Canada.

To be designated as a Member of the CMMN-RCSM, an operation should satisfy the following criteria. (Additional criteria follow for stations wishing to participate in the CMMN-RCSM's Trend Monitoring Program).

1. The station should operate with adequate standardized coverage for the species/group of interest. "Adequate coverage" will depend on study goals, monitoring protocol, geographic region, and other factors, so approval will be considered on a case-by-case basis. However, it is recommended that the following minimum criteria be met:
 - a) The station must adequately monitor migration of at least one Canadian breeding species, ensuring that the station is capable of making useful contributions to the study of bird migration.
 - The station should run at least 5 days per week during a consecutive period of at least 2 weeks during spring and/or fall.
 - The seasonal timing of coverage should be appropriate for sampling the target species.
 - b) The station should expect to conduct adequate coverage following a standardized protocol over at least 5 consecutive years.
2. Stations must hold valid permits and/or permissions to conduct their work. Banding operations are expected to meet or exceed all guidelines provided by North American Banding Council (<http://nabanding.net>), and in particular follow the Banders' Code of Ethics. Stations are expected to be aware of and adhere to any requirements for provincial and federal permitting and Animal Care Committee approval.
3. The station must operate in Canada, although exceptions may be considered on a case-by-case basis for stations located close to Canada's border.
4. The station must agree to operate under a written standardized protocol (example cited below) that includes the following elements:
 - a) A brief statement of goals and objectives of the program, and an indication of the main groups of birds to be monitored (e.g. landbirds, diurnal migrants, neotropical migrants, raptors, shorebirds, waterbirds, seabirds). Alternatively, if only a small number of species are targets of the operation, these should be listed individually.
 - b) A definition of the study area being monitored, including a map or maps showing (where applicable) the boundaries of the count area and locations for standardized counts (census route, visible migration observation points, net and trap sites, etc); with sufficient detail for new personnel to find each location without additional instruction.

c) A description of count methods sufficiently detailed to ensure that new personnel could set up and operate the station consistently in the future using only the protocol as a guide. Methods should include a description of techniques, dates of station operation, timing of daily time period(s) for data collection, and how to record data and effort.

d) A statement specifying the number of each type of personnel required to run the station in a consistent manner (e.g. number of qualified banders, skilled observers, general assistants), and outlining the knowledge, skills and experience required of participants.

5. The station should have a reasonable expectation of secure tenure of the site (5+ years) through ownership of the land, written agreement with the landowner, or a record of historical occupancy.
6. It is strongly recommended that stations have a long-term institutional arrangement that provides a reasonable expectation of operation for at least 5 years. Options include operating under an oversight group such as a Steering Committee or Board of Directors responsible for the station; obtaining non-profit organizational status; or formally affiliating with a sponsoring organization such as a university, research station, or another non-profit organization.
7. Stations are expected to submit standardized daily counts and measures of effort in a timely manner to BSC (using its DET data entry program unless otherwise approved by the CMMN- RCSM database manager).

Trend Monitoring Program criteria

The CMMN's Trend Monitoring Program (TMP) is a cooperative CMMN project to track population change across Canada. Stations wishing to contribute to this program must meet the following criteria *in addition to* the basic requirements for CMMN membership.

- 1) Prior to being accepted as a TMP participant, the following should be submitted to CMMN (cmmn-rasm@birdscanada.org) as evidence that the remaining criteria can be met. (Further detail can be found in the documents listed below.)
 - Station protocol suitable for TMP (see below.) (NOTE: audio luring is strongly discouraged, but may be deemed acceptable by the CMMN Science Subcommittee if its research value has been sufficiently justified and stringent standardization is detailed in the protocol);
 - Standardized daily counts conducted according to the station's protocol, from at least one year of operation.
 - Results of a baseline habitat assessment using the procedure outlined in the station's protocol;
 - Indication of whether landowner has been asked whether and what level of habitat management might be allowed (e.g. to trim vegetation around nets), and if so what was the response.
- 2) The following elements must be included in the station protocol in addition to those required of all Member stations:
 - Standardized habitat assessment procedure to be conducted at regular intervals to document both sudden or gradual change likely to affect counts;
 - Instructions for ongoing assessment of habitat, and where appropriate, for habitat management;
 - Instructions for timing and length of each count type contributing to a consistent index of daily migratory passage. If banding is part of the protocol, four hours should be covered at a minimum, and preferably at least six;
- 3) The station should operate with adequate standardized coverage for at least one species that meets all four of the following criteria:
 - Breeds in Canada;
 - Station coverage spans at least 75% of the days in the target species' spring or fall migration window (the site-specific span of dates within which the middle 95% of migrating individuals are observed);
 - Abundance during the migration period greatly exceeds size of any local-area population present in the week(s) immediately before and/or after the migratory "pulse;"
 - Abundance will clearly meet abundance criteria for trend analysis (long-term average of at least 10 individual passage migrants per season and presence at site on at least 5 separate days per season);
- 4) Stations should have a long-term institutional arrangement that provides a reasonable expectation it can be operated for at least 10 years and through turnover in personnel. This could consist of non-profit organizational status or a formal agreement with an organization such as a university, research station, or another non-profit organization such as a local naturalists group. Secure tenure for use of the station's location should also be based on an expectation of at least 10 consecutive years of operation following standardization of its protocol;

- 5) Stations are expected to submit standardized monitoring data and measures of effort to BSC using the DET program, unless otherwise approved by the CMMN- RCSM database manager.

APPENDIX 2. CMMN-RCSM Data Use Conditions

CMMN-RCSM data sets are a tremendously valuable resource. Preserving and making them accessible for meaningful research and conservation purposes is a key objective of the CMMN-RCSM. Bird Studies Canada (BSC) does this on behalf of the Network, archiving data sets and displaying selected results on [NatureCounts](#), a node of the [Avian Knowledge Network](#) (AKN). Making data freely and widely available allows amateur and professional researchers to explore powerful databases and answer questions that could not otherwise be easily addressed, greatly enhancing our ability to understand patterns and dynamics of bird populations across the Western Hemisphere.

BSC adheres to the AKN standard levels of data access that define how each data set can be accessed. The higher the level, the more likely your data are to be noticed and used by third parties. As part of this MOU, stations must choose one of the levels in the table below, which will apply to all data sets submitted (e.g. daily counts and banding records) Permission levels will stay in place until such time as a Member agrees that it be changed, with the following exception. In the event the station ceases operation or CMMN membership, data already submitted to BSC for posting on NatureCounts will be archived and administered by BSC at Level 5 (open access).

It is strongly advised that all stations opt for level 3 or higher. At **Levels 1 and 2** the website shows that a data set is stored but provides no details on number of years or records, how data were collected, etc. Few users will bother contacting the station directly to request data, countering an important goal of CMMN-RCSM.

Stations opting for **Level 3 or 4** automatically receive information on requester and proposed use of data, so they can track use being made of their data and are able to contact the requester directly if needed (e.g. to explain peculiarities of the data that could impact the requester's intended use). **Note that stations must keep CMMN-RCSM up-to-date on contact information for the person who will respond to requests for permission to download a dataset. If no response to a request is received within three (3) weeks of the initial request, the data will be automatically released.**

Level 4 allows location records to be accessed by specific broad-scale geo-informatic programs, but still requires permission by other parties. CMMN-RCSM recommends Level 4 for stations wanting to retain the opportunity to deny a given request.

Most members selecting Level 3 or 4 have found over time that they never deny a request, indicating that **Level 5** (open access) could be a good choice. Full information on the request can be reviewed by members via NatureCounts.

Circle one	Access to other parties	Detailed description
Level 1	No access to anyone through NatureCounts	BSC and the AKN act as permanent data repositories. Data and analytical results cannot be obtained from NatureCounts, but only through direct communication with the Member.
Level 2	No public access through NatureCounts, but selected use of TMP data by BSC is allowed without consultation	<p>Raw data submitted by participants for the Trend Monitoring Program can be used without need for further approval by BSC only, solely for purposes specifically related to the generation, reporting and interpretation of population statistics and trends. Data cannot be used by BSC for any other analytical purpose without the express consent of the station.</p> <p>BSC may share results of its trend analyses in publicly-available formats, including reports, publications and BSC-generated graphic visualizations on the Internet, including AKN partner sites. Unless otherwise authorized by the station, such results are limited to the display of population trend tables and graphs of annual indices, graphics illustrating migration phenology, and network-wide population trend maps.</p>
Level 3	Data can be downloaded from NatureCount once the Member has given permission	As for level 2 (BSC access to selected data), PLUS complete raw datasets may be download by third parties through NatureCounts following approval by the Member station. An automated system will send the Member full information on the request (including user's agreement to the data sharing policy). Note that data will be automatically released after 3 weeks if the station has not responded to the request for permission.
Level 4	As above except that certain bio-informatic programs may be given access to selected data	Same as level 3 (permissions required) EXCEPT that BSC may provide access to data fields describing positive observation occurrence data (location, date, observer, species, # of individuals recorded) to large-scale, bio-informatic efforts currently outside the formal AKN partnership (e.g. Global Biodiversity Information Facility, or ORNIS).
Level 5	Open access	Complete data sets posted on NatureCounts are available to anyone for immediate download. Members can check the site for download history.