Strong as Ever

We are proud to report the Great Lakes Marsh Monitoring Program (GLMMP) has reached its 24th year! An impressive 421,000 bird and frog observations now fill our databases. We thank you and all of our participants for making the program an outstanding success. Read on and see how we’ve been busy putting your hard-earned survey results to good use.

How are we doing?

In the 2017 season, we completed bird surveys at 315 routes and 876 stations, and frog surveys at 278 routes and 676 stations. Over 400 volunteers contributed nearly 5000 hours of work. The number of routes and stations surveyed for birds and frogs vary from year to year, but are always in the hundreds (see graph). Using your contributions, it is possible to draw important conclusions on the status and trends of species and help guide conservation actions. Thank you!

How are birds and frogs doing?

The latest trends show that populations of 7 of 18 (39%) marsh-associated bird species significantly declined between 1995 and 2017, and 1 of 8 (13%) marsh-associated frog species significantly declined (see page 2). On the up side, 4 of 18 (22%) bird species and 3 of 8 (38%) frog species significantly increased. Populations of 39% of the 18 bird species and 50% of the 8 frog species remained stable (i.e., did not significantly increase or decrease).

Trends tell us how species change over many
Great Lakes Marsh Monitoring Program
Trends for Marsh Birds and Frogs 1995 - 2017

Annual change in probability of a station being occupied (%)

- Green Frog (+3.2)
- Spring Peeper (+2.8)
- Gray Treefrog (+1.1)
- American Toad (+0.7)
- Wood Frog (-0.07)
- N. Leopard Frog (-0.2)
- Bullfrog (-0.6)
- Chorus Frog (-2.9)

Annual change in mean number of individuals / station (%)

- Trumpeter Swan (+13.6)
- Mule Swan (+5.4)
- Sandhill Crane (+5.3)
- Common Yellowthroat (+1.0)
- Canada Goose (+1.0)
- Least Bittern (+0.9)
- American Bittern (-0.1)
- Swamp Sparrow (+0.3)
- Red-winged Blackbird (+0.5)
- Marsh Wren (+0.7)
- Common Grackle (+0.8)
- Wilson’s Snipe (+1.1)
- Sora (+2.7)
- Virginia Rail (-3.5)
- Pied-billed Grebe (-4.4)
- Common Gallinule (-6.4)
- American Coot (-7.0)
- Black Tern (-10.6)

- Significantly increasing
- Stable
- Significantly decreasing
years. To get a sense of year-to-year differences, take a look at the annual abundance indices for birds (see page 4) and occupancy for frogs (see page 5). The plots contain a wealth of unique information for marsh bird and frog conservation.

**Activities**

With the tremendous effort of volunteer surveyors and financial assistance from supporters (see last page), we have been able to accomplish many important activities over the past year. These include reports and presentations, which summarize and draw conclusions from your hard-earned data:

**Presentations:**
- **Lake Erie: What do the birds tell us?** Great Lakes Sea Kayaking Association, Port Credit, ON; Hamilton Naturalists’ Club Bird Study Group, Burlington, ON. You can watch this presentation on YouTube at [https://youtu.be/3anh3LiSgA](https://youtu.be/3anh3LiSgA).
- **Do you have what it takes to be a frog citizen scientist?** Royal Botanical Gardens, Burlington, ON.
- **Multispecies benefits of wetland conservation for marsh birds and other wildlife.** Latornell Conservation Symposium, Alliston, ON; Ontario Great Lakes Coastal Wetland Restoration Working Group, Oshawa, ON.
- **State of the Great Lakes: Bird and frog-based indicators to assess the status and trends of the Great Lakes ecosystem.** Great Lakes Coastal Wetland Monitoring Program, Midland, MI.
- **Detecting and monitoring elusive marsh breeding birds in the Great Lakes.** International Association of Great Lakes Research, Toronto.
- **Great Lakes Marsh Monitoring Program: Volunteer orientation and training.** Kincardine Shoreline Environmental Working Group, Kincardine, ON.

**Reports:**
- **Influence of call broadcast timing within point counts and survey duration on detection probability of marsh breeding birds.** Published in *Avian Conservation and Ecology*, this peer-reviewed scientific paper uses your GLMMP data to improve the way marsh birds are monitored in the Great Lakes and beyond.
- **Multispecies benefits of wetland conservation for marsh birds, frogs, and species at risk.** Published in *Journal of...*
Great Lakes Marsh Monitoring Program
Annual Abundance for Birds

American Bittern
American Coot
Black Tern
Canada Goose
Common Grackle
Common Moorhen
Common Yellowthroat
Least Bittern
Marsh Wren
Mute Swan
Pied-billed Grebe
Red-winged Blackbird
Sandhill Crane
Sora
Swamp Sparrow
Trumpeter Swan
Virginia Rail
Wilson's Snipe

Mean number of individuals / station

Significantly increasing
Stable
Significantly decreasing

Shadows are 95% confidence intervals
Great Lakes Marsh Monitoring Program

Annual Occupancy for Frogs

Interested in viewing your Raw Data?
You can conduct your own research and request raw data at birdscanada.org/birdmon under the “Download” tab. Note that: bird and amphibian data must be requested separately using a login and password.

NatureCounts Update: Any changes you make to your profile information will automatically be forwarded to membership/supporter department.
Environmental Management, this peer-reviewed scientific paper uses your GLMMP data to garner support for expanding and improving conservation and protection of wetlands.

Data:
We supplied the following partners with information based on your hard-earned data to achieve and advance wetland conservation:

• Environment and Climate Change Canada to inform a pilot study on Chorus Frog monitoring, update the Status of Birds in Canada website, and the Population Status of Migratory Game Birds in Canada report.
• Toronto Region Conservation Authority to assess, track, and report on wetland health.
• Royal Botanical Gardens, Raisin Region Conservation Authority, and many others to monitor biodiversity.
• Ducks Unlimited Canada to make timely management decisions.
• Minnesota Audubon and University of Minnesota, Natural Resources Research Institute to show population trends at the Great Lakes scale in the online Minnesota Breeding Bird Atlas.
• Environment and Climate Change Canada and US Environmental Protection Agency to assess status and trends of wetland health in the upcoming State of the Great Lakes 2019 report.

In the media:
• Honk, honk, ribbit, ribbit in protected wetlands. Published in the Great Lakes Echo by the Knight Center for Environmental Journalism at Michigan State University, this article overviews the “Multispecies benefits” paper listed above.
• Citizen Scientists: the core of Bird Studies Canada's Marsh Monitoring Program. Published in Habitat Matters by the North American Wetlands Conservation Council (Canada), this article overviews the history and success of the program.

Would you like some additional training but can’t find the opportunity?
Check out the Bird Studies Canada YouTube page (youtube.com/birdstudiescanada). Here, you can find the webinars for new volunteers and refresher webinars for more experienced participants.
Marsh Monitors in Action!

Social Media Posts

Click here for the 2018 #MMPSurvey Social Media photo album!

Diana Bright by Diane Dobson

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Social Media Posts

 andersholder • Follow

andersholder Beauty evening for a #paddle in #bewdley #nofilter #marshmonitoring #frog #spring #carp

bonevulture • Follow

bonevulture Some marsh magic this evening during point counts with @chriskatolo in #easternontario a pair of #marshh beside and their colts to a background of 3 singing Least Bitterns! #marshmonitoring #birdstudiescanada
cocoparakeet Those are some very cute colts! And least bitterns singing! Thats awesome
ondiguyaya Look at those fuzzy little babies! letticevees So cute

alliemayo • Follow

alliemayo: Went out after sunset last night to do an #amphibian #marshmonitoring survey and got to try out some night wildlife photography! The point of the survey is to count frogs and toads by ear #greytreefrogs and #greenlizards were the only ones calling but I spotted many #AmericanToads and #woodfrogs along the railroad tracks bordering the marsh.

jesschan23 • Follow

jesschan23 Spring peepers are out and eager to attract some ladies 😊 ...

#springpeep #amphibianmonitoring #marshmonitoring project #workperks @lakesimococconservation #frogs

detroitrivercanadiancleanup

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The Marsh Monitor

Your Data at Work!

Marsh Monitoring Staff in Action!
Social Media Posts from meetings and conferences.

Kathy Jones mentoring students at an early career workshop

You Tube video of Doug Tozer’s Lake Erie presentation

Jody Allair, Citizen Science and Community Engagement, presenting on the importance of Citizen Science.

Sonya Richmond, GIS Data Analyst, presenting a modelling technique using GLMMP data.

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JOIN THE CONVERSATION ON SOCIAL MEDIA USING #MMPSURVEY

Are you a registered participant in the Great Lakes Marsh Monitoring Program? If so, USE the NatureCounts online website

birdscanada.org/birdmon/mmp

for ALL your Great Lakes MMP needs:

- Regional coordinator list
- Equipment lenders list
- Brochure
- Handbooks (protocols)
- Fact sheets
- Survey forms
- Past MMP Newsletters
- Bird call broadcast MP3 file
- Training MP3 files
- MMP metadata
- Custom data search engine
- Online data request application
- Data download tool
- Results and trend graphs
- Updating contact information.

To access monitoring resources on NatureCounts you will need to register through the NatureCounts Marsh Monitoring Program Home page and wait for approval.

Launched in 1995, the Great Lakes Marsh Monitoring Program is:

- A bi-national, long-term monitoring program developed by Bird Studies Canada;
- Built on the commitment of individuals, foundations, governments and non-governmental organizations that work in partnership toward effective conservation;
- A coordination of skills, interests, and stewardship of hundreds of citizens across the Great Lakes basin.

Bird Studies Canada would like to thank all Marsh Monitoring Program participants. Your efforts make this survey successful!

Ontario

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