

The Marsh Monitoring Program Needs You!

Through the efforts of hundreds of volunteers throughout the Great Lakes and St. Lawrence region, the Marsh Monitoring Program (MMP) provides information on the population trends and habitat requirements of wetland dependent amphibians and birds in the region. This information makes an important contribution to the conservation and management of wetlands and their wildlife.

The Great Lakes system is the largest network of freshwater lakes in the world and is a prominent and important feature of the North American landscape. The governments of Canada and the United States are committed to addressing a variety of ecological problems in 43 Areas of Concern (AOCs) and throughout the Great Lakes and St. Lawrence Region. The focus of this commitment has been on problems associated with the health of wildlife and their human consumers, nutrient and other pollution inputs, and economic and aesthetic impacts.

Despite their importance to water quality and fish and wildlife support, the basin's wetlands have been filled, polluted, and otherwise degraded for decades. The loss or degradation of wetland habitats can reduce local or even regional population levels of many wetland dependent species. Although some information is available regarding wetland losses and impacts, almost nothing is known about how these declines in wetland area and health have affected the populations of most wetland dependent animals. Wetlands dominated by emergent vegetation (i.e. marshes), often support the most diverse communities of wetland animals. Marsh birds are one of the most species rich groups that breed in marshes but their habitat requirements and population trends remain very poorly understood. Although not as taxonomically diverse as marsh birds, amphibians of marshes are critical members of many food webs. Concern for amphibians has spread globally in recent years as many dramatic and often unexplained population declines have been documented. As with marsh birds, very little is known about the population trends and the habitat requirements of amphibians in the region.

The MMP was launched across the Great Lakes basin in 1995 to provide baseline information on the population status of marsh birds and calling amphibians (frogs and toads), to assess their habitat requirements, and to contribute to evaluations of AOC recovery. The MMP was developed by Long Point Bird Observatory and Environment Canada, receives support from Environment Canada and the U.S. Environmental Protection Agency, and benefits from partnerships with several conservation organizations.

Naturalists with an interest in birds, amphibians or both are being asked to help conserve marshes and their inhabitants by participating in the MMP. All volunteers receive a Training Kit containing: written instructions for surveying marsh birds, amphibians and their habitats; data forms; and an instructional CD with examples of the songs and calls of the birds and amphibians most likely to be encountered in the Great Lakes and St. Lawrence Regions. Marsh Monitoring Program participants also receive an annual newsletter that summarizes survey results and includes interesting articles on marsh ecology, amphibians and marsh birds.

Surveys are conducted in the spring and early summer, and participants may choose to survey amphibians, marsh birds, or both. Because only 13 species of frogs and toads occur in the region and their calls are well described in the Training Kit materials, the

amphibian survey is most suitable for novice naturalists. Although volunteers do not need to be ace-birders to conduct the marsh bird survey, the bird survey is not suited to beginning birders. As a general guideline, participants should be able to correctly identify at least 50 species of common birds by sight and sound, especially those living in and around marshes. The training CD provided will help volunteers refresh their memory and fine-tune their identification skills.

The program and the surveys are an enjoyable and interesting experience but there is a time commitment involved. On average, the total time required to set up the stations, do the surveys, and tally the results will be about 9 hours. Many surveyors take a personal interest in their marshes and, although a long term commitment is not required for participation, the information provided by consistently done surveys over several years is extremely valuable in measuring trends in amphibian and bird populations and marsh habitats.

Upon entering the program, volunteers are asked to select marshes for their surveys and establish a survey route. Although a particular effort is made to ensure that AOCs and other coastal wetlands are surveyed, survey routes in marshes throughout Ontario and the Great Lakes states are needed. If an established route exists near a volunteers home and it is not being surveyed we ask volunteers to survey it instead of creating a new route.

Each MMP survey route consist of as few as 1 or up to as many as 8, semi-circular sample stations, each with a radius of 100-metres (110 yards). Sample stations must face areas of emergent marsh vegetation - small numbers of trees or shrubs can occur within the station but more than half of the area within the semi-circle must be dominated by non-woody, emergent plants such as cattail, bulrush, reed, grasses or sedges. Both the marsh bird and amphibian surveys are conducted facing the curved portion of the semi-circle and from a focal point located at the centre of the 200-metre (220 yard) long base of the semi-circle. Stations are usually accessed along the edge of marshes, on a dike or trail. However, volunteers interested in monitoring a route accessible only by boat or canoe are encouraged to do so. In very large marshes, it may be possible for several different stations to be established by one or more volunteers. In smaller, or less accessible marshes, it may be feasible to establish only 1 or 2 stations.

Amphibian calling intensity and the species composition of calling frogs and toads are strongly linked with season, time of day, and weather conditions. Each amphibian survey route is visited on 3 nights, no less than 15 days apart, during the spring and early summer. In southern and central regions, surveys should begin one half hour after sunset and end before midnight. All surveys should be conducted in weather conducive to monitoring amphibians (i.e. a moist night with little or no wind). Because different species begin calling at different times of the season, survey nights should be one of the first evenings (after mid-March) with appropriate temperatures. Three "temperature thresholds" have been designed to help cover the calling initiation of most frogs and toads within the survey region. The first visit should coincide with minimum night-time air temperatures of at least 5 C (41 F) and the first or second warm spring shower. The second survey visit should occur with night-time air temperatures of at least 10 C (50 F) and the third visit should coincide with night-time air temperatures of at least 17 C (63 F). Each station is surveyed for 3 minutes and one of three Call Level Codes is used to categorize the intensity of calling activity for each species.

Because it is nearly impossible to estimate distance in the dark and determine whether amphibians are calling from inside or outside a defined sample area, amphibian surveys use an "unlimited distance" semi-circular sampling area. Amphibian stations should be separated by at least 500 metres (550 yards) in order to minimize the possibility that individuals or choruses are sampled twice. On routes established through the middle of a marsh, the semi-circular sample areas can be arranged back to back, so that stations face in opposite directions. This allows volunteers to fit in as many amphibian stations in a marsh as possible.

As with calling amphibians, detection of marsh birds is strongly associated with season, time of day and weather. Each station surveyed for marsh birds is to be surveyed twice each year between May 20 and July 5 and no less than 10 days apart. Routes are to be surveyed in their entirety, in the same station sequence, at about the same time on both visits. Surveys should begin just before sunset or in the evening, after 1800 h (6 p.m.). Each station is surveyed for 15 minutes. A 5-minute broadcast tape is played during the middle third of the each survey to help elicit calls from several elusive and normally undetected marsh bird species.

Like the amphibian surveys, the marsh bird surveys use a semi-circular sampling area. The MMP targets specific "Focal bird species" that are marsh obligates and undersurveyed by other programs as well as "secondary species that are commonly found in marshes. Specific birds detected within the semi-circle sample area are recorded. Marsh bird survey stations should be separated by at least 250 metres (275 yards). Unlike the amphibian surveys, these stations can not be arranged back to back because the broadcast tape will be heard by birds located within a full circle around the focal point, not just within the semi-circle.

A very important objective of the MMP is to help determine what habitat conditions are required for breeding amphibian and marsh bird species. In addition to monitoring their stations for marsh birds or amphibians, volunteers are asked to describe the habitat in and around each sample station. The habitat descriptions are easy to do - a simple sketch is drawn of each station area, and the answers to a few multiple choice questions and the percentage of sample area covered by up to four dominant species of emergent vegetation (cattail and bulrushes for example) are recorded for each station.

The Marsh Monitoring Program offers everyone - from amateur naturalists to professional biologists - a unique and rewarding opportunity to help improve the state of understanding of amphibians and marsh birds and of their threatened habitats, coastal and inland marshes. Consider joining a network of others who are concerned about wetlands and their inhabitants and generously contribute their time and talents to the conservation of these rich and valuable components of our natural heritage.

If you would like to participate in MMP surveys, please contact Kathy Jones at the address below. To register you for the program, we will need to know:

1. Where you would like to survey (nearest city or town, and state or province)
2. "Who" you would like to survey (amphibians, marsh birds or both)
3. Your complete name (please include your surname/honorific)
4. How we can get in touch with you (address, phone number, email)
5. Do you have a BBS# in Canada or the US)? If yes, what is the number (needed to register for online amphibian materials)?

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From time to time, BSC may send you information regarding our programs, special issues, membership, and other correspondence. If you would prefer not to receive this information, please contact us by mail at the address above or e-mail rkirton@bsc-eoc.org. Thank you.

Au cours de l'année, Études d'Oiseaux Canada envoie de la documentation concernant ses programmes, ses activités ou autres. Si vous désirez ne pas recevoir cette information, faites-nous parvenir un message par la poste ou par courrier électronique à rkirton@bsc-eoc.org