

Littorally Speaking

Moosehead Lake Survey Complete: No Aquatic Invaders Found!

The first-ever, volunteer-powered aquatic plant survey of Maine's largest lake, Moosehead, is complete! The entire shoreline of the 74,000-acre-plus lake has been methodically screened for aquatic invaders. We are very pleased to report that **no invasive species** have been detected.



In 2008, the Maine Volunteer Lake Monitoring Program launched an ambitious program to help promote and support citizen-based early detection efforts in areas of the state where such activities are currently lacking. The objectives of VLMP's Invasive Plant Patrol Jump Start are to: 1) organize a survey team (comprised primarily of seasoned volunteer Invasive Plant Patrollers, supported by VLMP staff) to conduct a comprehensive invasive aquatic plant screening survey and native plant inventory on the target waterbody; and 2) to help "jump-start" a locally sustainable citizen-based monitoring program in the region through outreach, training, and more spontaneous forms of interaction between team members and the host community.

The VLMP decided to pilot its new concept on one of the most highly-valued and more vulnerable lakes in Maine: Moosehead. If such a project could succeed on this grand scale, we surmised, it could succeed anywhere in the state!

A high percentage of the volunteers who participated in this project over its six year timespan remained active throughout, which helped to create a cohesive, highly-competent team. The logistics of surveying a lake the size of Moosehead are challenging to say the least—challenges range from where the team

will make base camp, how meals will be organized, to the more critical issues of access, on-lake communication, and safety. Each challenge was deftly handled by the team, with volunteer team members taking on key roles in all phases of the project: planning, facilitation, technical support, training, outreach, survey activity, plant identification, reporting, and documentation, follow-up, etc.

Can volunteers be effective and efficient monitors of Maine Lakes? Please consider the following project outcomes and decide for yourself.

- The shoreline of Moosehead Lake, including the islands, measures 281 miles. If one takes into account deployment of boats over significant distances (often with larger motorized boats towing smaller paddle craft) and the methodical travel back and forth along transects that is required to survey fertile coves and extensive shallows, the actual scope of the survey was substantially greater. The survey was done in short annual



by Roberta Hill
VLMP Invasive Species Program Director

increments, taking six years to complete. Actual time on the water however was remarkably short: 23 days!

- During this time the team carefully screened the littoral zone of Moosehead Lake for all eleven invasive aquatic plants legally listed as imminent threats to Maine lakes, as well as other potential aquatic invaders such as Chinese mystery snails and zebra mussels. No invasives were detected. Moosehead Lake now has a "clean bill of health" from which future monitoring efforts can proceed.¹



- During the course of the survey, the team also documented all the native plants found growing in the lake. A whopping 110 plant species have been documented. Thirty plant specimens of note have been submitted to the Maine State herbarium.

- Work on the second Jump-Start goal—assisting with the development of a locally sustainable citizen-based monitoring program in the region—is off to a promising start and continues to gather momentum. Through outreach conducted by team members, the VLMP has formed a broad coalition of local partners who will be meeting next spring onboard the *Katahdin* in Greenville to discuss next steps for the region.

The Hunt for Aquatic Invaders, a video documentary featuring this Moosehead Jump-Start project, will have its regional premiere at this event. (For more on *The Hunt*, see page 11, and please stay tuned for more on the *Katahdin Citizen Lake Monitoring Forum*.)

A project of this scale, were it to have been done by professionals, would have been extremely costly, with a price tag in the tens



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of thousands of dollars—a cost prohibitive to most state agencies, municipalities and non-profit lake conservation groups. Volunteer engagement not only enabled this project to happen, it showed that a high-quality survey could be done, efficiently and effectively, by volunteers.

A number of studies conducted throughout the country have consistently shown that information collected by trained citizen scientists is equivalent to, and indistinguishable from, that of professional scientists, at a fraction of the cost. This groundbreaking project on Maine's largest lake serves as a powerful case in point! 🍀



¹. The VLMP survey team did not monitor the lake for invasive fish. Two non-native fish species are known to be established in Moosehead Lake: small mouth bass (*Micropterus dolomieu*), and white perch (*Morone americana*). Both were the result of illegal introductions.

Moosehead Lake Survey Project Contributors

Moosehead Lake Survey Team Members

(2008 – 2013) Followed by number of years each member participated in the survey (no survey activity was conducted in 2010).

Volunteers

Curtis Breen (1)	Dennis Roberge (3)
Sally Breen (4)	Matthew Vachon (2)
Mary Jane Dillingham (1)	Eduardo Van den berg (1)
Robert French (5)	Bunny Wescott (5)
Sibyl French (5)	Ross Wescott (5)
Gabriel Gunning (1)	Ellie White (4)
Elin Haugen (4)	Willis White (4)
David Lamon (1)	Mark Whiting (4)
Marsha Letourneau (1)	Keith Williams (4)
Randy Richardson (1)	

VLMP Interns

Libby Davis (1)
Jamey Epstein (2)
Ilse Pukinskis (1)
Kelly Stewart (1)

VLMP Staff

Jacelyn Bailey* (2)
Christine Guerette* (5)
Roberta Hill* (4)
Jonnie Maloney (1)

*Indicates staff participation in the survey at least one season as a volunteer.

Moosehead Survey Supporters

The Moosehead Lake Invasive Plant Patrol Jump-Start Project has been made possible through the generous support of:

Beaver Cove Marina
The Betterment Fund
The Birches Resort
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Friends of Wilson Ponds Area
Maine Department of Environmental Protection
Maine Outdoor Heritage Fund
Maine Water Company
Patagonia
Plum Creek Foundation
Ram Island Conservation Fund of the Maine Community Foundation
Underwood Productions
Wilsons on Moosehead Lake
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