

the Water Column



A Publication of Maine Volunteer Lake Monitoring Program

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Fall 2007

Welcome New Volunteers

2007 sets record for
new volunteers trained

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Invasive Plant Patroller Field Training
Collins Pond August 4, 2007

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Lakeside Notes

True to our Mission

The VLMP's mission is:

to foster stewardship of Maine's lakes and their watersheds, and to insure high water quality and ecological integrity by training and certifying volunteers to collect credible lake data, and to provide this information to a wide range of users.



Scott Williams
VLMP Executive Director

The VLMP is often asked to lend its support to local, regional and state initiatives that, in some way, could influence the quality of an individual lake, or Maine lakes as a whole. Examples include taking a stand on a particular development in a lake watershed, weighing in on a local stewardship issue, such as a water level management dispute, or advocating for or against legislation. If time and resources allow, and if the initiative is focused on providing the public with unbiased technical information we are happy to oblige. But folks are sometimes surprised to learn that the VLMP generally avoids *direct* advocacy.

That is because our purpose is to gather unbiased scientific data, and our credibility as an organization is dependent on our ability to assure the public that the information produced by the VLMP is objective. In fact, advocacy would be antithetical to our strong and straightforward mission, which has served Maine lakes well for 36 years.

As you know, a number of organizations in Maine do good work on behalf of our lakes. Some focus specifically on advocacy; others work primarily on public education. To some extent, the VLMP mission overlaps with those of other entities. We are all working in various ways to “protect” lakes. But what sets the VLMP apart is the particular role we play within this larger statewide effort, a role that actually helps to support the work of all of those other efforts at the state, regional and local levels. That role is guided by our mission.

The outcomes of the VLMP's viable and worthwhile mission can easily be measured. VLMP volunteers produce more lake data than any other entity in Maine. The Maine Department of Environmental Protection, the PEARL database at the University of Maine, the Congress of Lake Associations, the US EPA, lake associations, schools, individuals, businesses, and others all rely, to some degree, on data collected by VLMP volunteers. On this scale, the VLMP has an exceptional record.

In addition to training and certification, VLMP volunteers also receive substantial ongoing technical support and guidance, ranging from assistance with interpreting the data that they collect (whether water quality or invasive plant identification), to troubleshooting their monitoring equipment (such as those finicky dissolved oxygen meters). Along the way, it is our hope that as a result of their training, volunteers will impart their knowledge and understanding of how lakes function, and how to protect those functions, to members of their lake communities, and that this, in turn will foster stewardship of Maine's lakes.

One thing that you can be sure of is that the VLMP does not, and will not knowingly bias the information gathered by its volunteers. Many of the decisions being made today regarding the management of our lakes and watersheds involve a variety of social, political and economic interests. Our job is to serve as an honest and objective source of reliable data. To do so, we do our best to be apolitical, to sidestep personal agendas, and to refrain from "spinning" information toward a particular point of view. We advocate only for the integrity of the data collected through the program. Any other way might cause our data to be perceived as suspect.

Our primary goal is to be able to ensure users of VLMP information that the fruits of our volunteers' labor are as valid and credible as any other scientific data available for Maine lakes.

For thirty-six years, the data collected by VLMP volunteers has been perceived by its users as unbiased and valid. Making sure that this perception (and the hard work, commitment and integrity of so many that underlies the perception) is maintained and enhanced over time is an important aspect of our mission. It is the key to moving the organization forward, and to the future health of our lakes. Thanks to our strong mission and the efforts of our volunteers, those who use our data to protect Maine lakes can do so with confidence!

President's Message



Bill Monagle
VLMP President

As most of you know, the VLMP plays a crucial role in the protection and improvement of Maine lakes and ponds. In Executive Director Scott Williams' column in this issue of *The Water Column*, titled *Lakeside Notes*, he provides a clear explanation of what that role is. The VLMP is not only the nation's oldest, but in my humble opinion, the finest volunteer-based lake water quality data collecting organization in the country, and that is not an accident. Over the program's 36-year history, the goal has been to compile credible lake data collected by certified volunteer monitors. That has not changed, but what has changed is that not only are we dealing with our long-time nemesis, nonpoint source phosphorus pollution, but also biological pollution in the form of aquatic invasive species such as milfoil. In order to maintain pace with these continuing and growing threats, the VLMP needs to be progressive; that is, expanding and at the same time evolving to confront the increases in the magnitude and sources of the threats to our lakes.

As many of you may recall, in my message in *The Water Column* last fall titled *Changing Seasons*, I stated that in order to properly maintain the needed capacity for the VLMP to perform its many critical functions, the organization would need to develop a fund-raising strategy to ensure the program's future sustainability. Well, I am pleased to report that this past year we have been quite successful in this regard. This spring, the VLMP hired Tania Neuschafer to be VLMP's Development Coordinator. Tania has been a great complement to an already dedicated and highly qualified staff, and she directed a very successful spring campaign that many of you generously responded to. Partly as a result of the successful spring appeal, the VLMP had a record-setting year for training volunteers, adding to the ranks 73 new volunteer lake monitors and 40 new certified invasive plant patrollers. These are very encouraging figures, and will hopefully represent a trend in future years. With your support, the VLMP staff and Board of Directors will continue to work to develop strategies to strengthen and expand the organization to meet new and growing demands.

I'd like to close by thanking all of you who donate your personal time to either collect credible lake water quality data or survey our lakes for new-found invaders, and also those of you who have contributed financial support to the VLMP during these pivotal times. As I stated earlier, I believe the Maine VLMP is the nations best program of its kind, and it is the many volunteers committed to monitoring our lakes and ponds that make that possible. Thank you again.

Quality Counts!

Many Hands: The tale of a water quality data form

Dixie Data sheet rattled nervously in the wind while Dave held her securely against the notebook. Until that morning, Dixie had been sleeping comfortably in the security of the large manila envelope in David's den. Then Dave pulled her from the 'bed', tucked her into the notebook and took her on a fairly bouncy ride. This was not quite as bad as her earliest recollections...being sucked into that machine that put these lines and symbols all over her. Tattoos were in, but it is always nicer to choose what gets printed on one's exterior. After the tattooing, Jim had stuffed Dixie into the envelope with a bunch of other papers and magically transported her to Dave's house. While in the den she had gotten accustomed to the markings, although she was curious about what they meant. "Today I may find out" thought Dixie.

Dave selected a writing instrument – a nice pencil, not too sharp, and began writing a bunch of words and numbers in the top part of Dixie's front side. He seemed to know what he was doing and filled in all the empty lines neatly. Dixie felt proud to have provided such a nice framework on which Dave worked. Then Dave put her down. He played with a white tube over the side of his boat then wrote something else on her. Next Dave messed with some contraption that had numbers and buttons all over it attached to a long cable and began writing in the cute little boxes in the middle of the sheet. He was not nearly as fast at this part and Dixie found that she was ticklish. When done with that step, Dave

fussed around with a bottle which he filled with water from the lake – in the process splashing Dixie with what seemed like enough water to drown her. Dixie was annoyed at the involuntary shower, but it was a warm day so she let it roll right off her thinking 'it is a good thing Dave didn't use a water soluble ink or else all these nice marks would be ruined'. Dave set her in a sunny spot for a few minutes while he pulled up his anchor, then tucked her securely back into his notebook for the bouncy slumber home.

Dixie awoke to Dave putting her into a pile of other data sheets that looked almost as good as she did. Now she got it! Dave had a whole collection of others just like her...Donnie, Darcy, Dilbert and a few others. They were all chattering about what was happening. Clearly Dixie was the newcomer to the group, but Dilbert assured her that he had only been with this group for a few weeks. Dave stuffed them all into a new manila envelope and took them to the post office, the beginning of their group journey. After another bumpy ride, they arrived at the Reggie's house, the Regional Coordinator. Reggie put them with a few other envelopes filled with more 'relatives'. It was just like a family reunion, but so far everyone was staying in their cars! After a week or so, Reggie pulled everyone out of their 'car', putting checkmarks on some list. Reggie made a few calls and in a few days two more envelopes appeared. Reggie checked off his list, smiled and put everyone into one big envelope. Dixie was surprised to see all the others like her and a whole bunch similar but



by Linda Bacon
Maine DEP Technical Advisor

not exactly like her at all... 'Diversity' she thought; 'there is a lot of attention being paid to diversity these days. This must be good!' Reggie made another call then took the whole group to Rick, the Data Coordinator.

Rick placed the sheets by his fancy new computer – definitely the nicest one Dixie had ever seen. He poked at the keyboard then began typing the numbers from the sheets into the computer. Once in a while he would sputter and look up something on a list. Other times the sputtering would be something about infernal water soluble ink or tears and folds apparently in critical places. Some of her friends ended up with Post-it notes all over them. Dixie was relieved that Rick didn't sputter at all when it was her turn. He just checked the back then put his initials and date neatly at the bottom when he was done. 'I guess Dave took good care of me' thought Dixie... Rick finished up the data entry, tucked the sheets neatly back into the envelope with the electronic copy of the data and drove to Reggie's house. It was handy that Reggie and Rick lived so close... They loved their lake and made a great team of coordinators. Reggie double checked that all the sheets were still intact and that the electronic copy was included. He mailed the packet to Jim, that helpful guy at the VLMP office. Dixie was thinking that it seemed like she had been shuffled around an awful lot over

the last few weeks. Little did she know there was more to come...

At Jim's office in the Brackett Center, Dixie met another few hundred relatives. She wondered where they all came from. All the sheets were chattering wondering what was next. There were a bunch of nice folks milling about the Brackett house. They were all very courteous and thoughtful. Dixie felt relaxed despite the low level chattering. Jim carefully checked each group of sheets, scanned them on the photocopier, made copies of the electronic data, checked those data files then assembled the envelopes in a nice comfy box. Dixie and the gang were quite tired at this point and fell asleep again. The wake-up call began with a blast of cold air. Jim was carrying the box to his car for the trip to Augusta. Dixie had heard of Augusta before...it was the capitol city (whatever that was!) Jim carried the box to Judy at the DEP office, one of the original state lake biologists and the person who has probably processed the most lake data sheets in the world...well at least the state of Maine. Judy seemed happy to get the box, thanked Jim and put the envelopes in a pile with even more data sheet packets. The stack was about 16 inches high. Dixie was glad to be near the top!

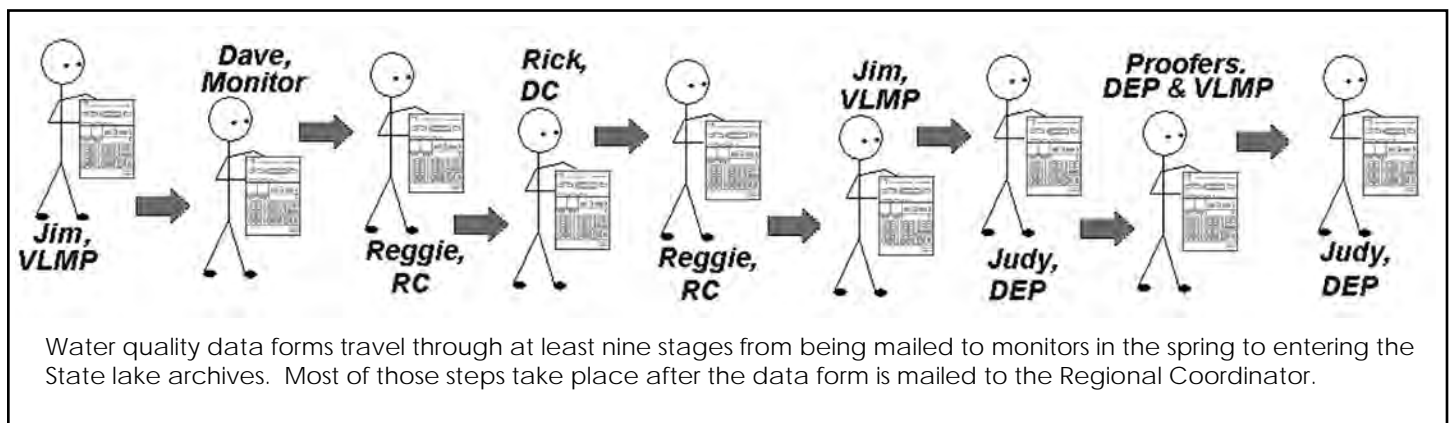
The next day Judy went through each envelope, copying and renaming the

electronic files, printing them out and separating them into batches for proofing. A few in the stack needed extra attention so they went to someone else's desk to be transferred into the standard file format. They returned unharmed ready for proofing. About this time, someone caught wind of the party. 'Party!' Dixie thought what fun! I wonder if there will be cake – whatever cake was...

The day of the party arrived. Judy brought the pile of proofing batches into a room with a large table. On the table were red pens, pencils, rulers, post-it notes, Judy's famous blonde brownies, fruit, cider and orange juice. One by one, folks began to filter in. Dixie tried to wave to Jim when he arrived, but could not get his attention. Judy gave some directions then passed out batches to all the people. They settled down comparing the printed

data to the original datasheets making corrections when they found errors. When the party was over, all the datasheets were sorted alphabetically and Judy began correcting the electronic data. These datasheets were eventually brought to the file room to join thousands of others along a wall of data sheets collected since 1970. The old timers were curious to know how things went with this new crop of sheets. They talked about the old days, when there were so few of them and occasionally complained about all the dust, but mostly just slept. Dixie yawned and joined them, glad that her journey was full of adventure but happy that it was over.

Indeed many hands touch a data sheet between the time a blank sheet is mailed out in the spring and a completed sheet comes to rest in the lake data archives. At each stage, numerous checks are performed to make sure the database quality is top notch. Rest assured that the life of the data does not end in the archives. The electronic data is used to produce products including the VLMP Annual Report, prioritize lake restoration efforts, and, is posted on the PEARL website so that the whole world can access it! We each have a small role in the process and as long as we each do our part to the best of our ability, the goals of the VLMP program are achieved. Keep up the good work!



Data Entry Updates

Volunteers are involved at all levels of the Maine Volunteer Lake Monitoring Program, from collecting data to program administration. One group of tireless volunteers who are gearing up for their busy time of the year are the volunteer Data Entry Coordinators (DCs).

Each summer and fall volunteer DCs enter water quality data from the volunteer field forms into VLMP's database. Last year Data Coordinators keyed in over 3,000 Secchi Disk readings, 14,000 individual temperature and dissolved oxygen measurements, and 1,100 total phosphorus results.

All of that data is entered by Data Coordinators at home using their personal computers into a database program written by Richard Offinger. Richard has been a water quality monitor on Cathance Lake for 30 years and is also a Data Coordinator for Hancock, Piscataquis, and Washington counties. This year Richard has developed a major upgrade to the Lakedata program that now works in Windows and uses email to transfer the data files.



Richard Offinger is volunteer monitor for Cathance Lake and creator of VLMP's Lakedata program

Many thanks to Richard for this extremely valuable tool, enabling volunteers to assist with administering the VLMP data from their home computers.

Are you interested in helping to enter volunteer data into the State water quality database?

If so, become a Volunteer Data Entry Coordinator in 2008.

Anyone interested in volunteering as a Data Coordinator can contact the VLMP office at 783-7733 or vlmp@mainevlmp.org for more information. Data Coordinators must pay close attention to detail and have access to a PC computer running Windows.



Every fall Volunteer Data Coordinators like David Hodsdon (above) enter water quality data into VLMP's Lakedata program.

Staff Bio: Sarah Gross *Summer Intern*



Hello all! My name is Sarah Gross, and I am pleased to be an intern this summer/early fall with both the VLMP and the Maine Department of Environmental Protection. I am so happy to have had this unique opportunity to learn

more about how individuals are stepping up to protect the health of our precious ecosystem. I have greatly enjoyed getting to meet so many of you through the various VLMP and MCIAP workshops, as well as the exposure to a variety of different and interesting environmental projects.

This past spring, I graduated from Saint Lawrence University with a BS in Environmental Studies and Psychology. Therefore, the timing of this experience has been perfect to grab a peek into the professional world. My unique position with both the nonprofit VLMP and the state's DEP has given me insight into the different tools and tactics used to protect our beautiful state, and also how interconnected and

close-knit these outfits operate, the differences among them an asset rather than an obstacle.

As a "Mainer" who went out of state for school, I am thrilled to be back so that I can continue to enjoy the many beautiful and special aspects of our natural environment. I grew up in Camden, where my interest in our outdoors took root in my experiences exploring nature. I was privileged to have the opportunity to study the ecosystem and many of the methods being used in an attempt to keep the environment healthy during my time at college, and I am delighted to have the opportunity to use those skills and share what I learned with my home state.

I have a feeling that this opportunity I've been fortunate to have will prove invaluable to my future, and I would like to thank you all for being such an integral part of the experience. I hope that my future will involve giving back to present and future generations the opportunity to live in an uncompromised environment, just like so many of you have been doing for years. Take care and have a wonderful fall!

Volunteer Perspective:

Lake and Pond Monitors— Quietly Protecting Our Lakes

by Ken Holt, Bear Pond Water Quality Monitor

Pond monitors are creatures found inhabiting Maine ponds and lakes in ever-increasing numbers. Fortunately they are indigenous to the area so there is no need to study ways to eliminate them. Actually they are humanoids who have an active interest in preserving and improving the quality of the state's waterways. Now the question is what do they do that will make all of us feel secure knowing they are out there peering down into our ponds?

The first question is how to identify them. If they are in a regular boat they will be leaning over the side on their knees and doing their work. If they are in a pontoon boat they will be lying on their stomachs to do their work. If they are in a kayak they will be rolling over and falling into the pond.

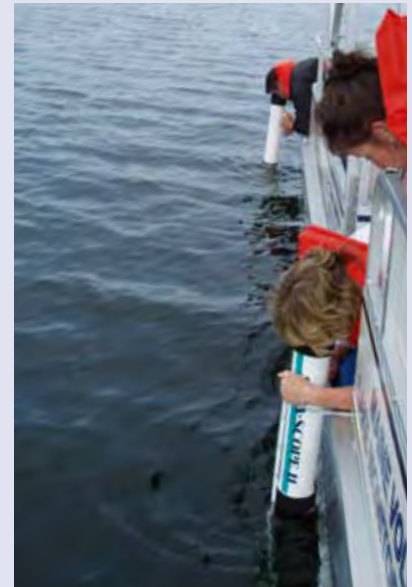
We will devote ourselves in this article to the most basic of the monitors who are the most prolific ones although this has nothing to do with genetics or breeding. These are members of a program that started in 1971 and has grown exponentially since then. Each of them has a Secchi disc on a tape, and reel, and a scope. The disc is a circular piece of weighted plastic with alternating black and white pie sections as in a pie graph. The monitors kneeling or lying on their stomachs drop the disc into the pond and follow its downward route by looking through the scope. Then they record the number of meters and fractions of meters that the disc traversed down into the pond until out of sight. They record this twice a month from May through

October and send their report to a regional monitor who then forwards the information to the statewide organization called the Maine Volunteer Lake Monitoring Program.

The Secchi disc reading is a very basic quick check on the condition of a lake, and takes little time to perform. (In a later article we will discuss the ambitious crowd who gather even more data). The monitors are seeking information that is used to help improve ponds and lakes. In that sense, they might be considered activists. But that does not compromise the quality of the information they collect.

Scott, Roberta, and Jim in the VLMP, and Linda at the DEP, take all of this data and organize it, sort it, correlate it, coordinate it, and convert it into information that is so significant that it commands the attention of organizations and individuals all the way from the governor and state legislature to the town clerk of Hartford, Maine. The conditions of our lakes and ponds affect the whole state economically, esthetically and recreationally. By providing reliable data that can be used to help everyone understand them, VLMP pond monitors are surely having a most positive effect on our lakes and ponds.

Water Quality Monitor
2007 Trainings



New Certified Water Quality Monitors

Welcome new water quality monitors!

2007 was a record year for water quality monitors joining the VLMP. 73 new monitors were trained and certified at workshops in Androscoggin, Franklin, Lincoln, Oxford, Cumberland and Washington Counties.

Water Quality Monitors measure water clarity and other indicators twice a week throughout the summer.



Bob Anderson, East Grand Lake, Weston
Henry Anderson, Saturday Pond, Otisfield
Ken Beach, Whetstone Pond, Blanchard
Rod Beaulier, Sebago Lake, Sebago
Lucien Bedard, Lard Pond, Turner
Nicholas Boulette, North & Little Ponds, Rome
Stuart Burr, Mount Desert Water District
Julie Carell, Bonny Eagle Lake, Standish
Sharron Carey, Threemile Pond, China
Carol Carrey, Little Ossipee Flowage, Waterboro
Joe Cirigliano, Duckpuddle Pond, Nobleboro
Alaina Clark, Lakes Env. Assoc. Intern
Dorothy & Louis Cloutier, Pushaw Lake, Old Town
Chelsea Corcoran-Quadt, Lakes Env. Assoc. Intern
Pat Coville, East Grand Lake, Weston
Joe Destefano, North & South Ponds, Warren
Jessica Dow, Threecornered Pond, Augusta
Suzanne Dwyer, Damariscotta Lake, Jefferson
Peggy Farr, Bonny Eagle Lake, Standish
Mayleen Farrington, Browns Pond, Sebago
Linda Fish, Minnehonk Lake, Mount Vernon
Sarah Gross, Hosmer Pond, Camden
Eric Groves, Saturday Pond, Otisfield
Janet Healey, Papoose Pond, Waterford
Steve Herrick, Sebago Lake, Sebago
Richard Horr, Thomas Pond, Casco
CJ, Gary & Rick Kersbergen, Unity Pond, Unity
Sandra Labelle, Little Ossipee Lake, Waterboro
Jack Lane, Crawford Pond, Union
Ron Langworthy, Brackett Lake, Weston

Luke Lunt, Damariscotta Lake, Jefferson
Sherrie & Tim McKissick, Deering Lake, Orient
Noel & Ron McPherson, Nash's Lake, Calais
Steve Montminy, Mount Desert Water District
Peter Morley, East Grand Lake, Weston
Tania Neuschafer, VLMP Staff
Roger Paradis, Sebago Lake, Sebago
Clint Peterson, Threecornered Pond, Augusta
Jim & Joan Proctor, Mooselookmeguntic Lake, Rangeley
Ron Purnell, Mcgrath Pond, Oakland
Rob & Sharon Quebec, East Grand Lake, Weston
Lenny Reich, Salmon Lake, Belgrade
Dennis Roberge, Mousam Lake, Acton
Carol Rothenberg, Bear Pond, Waterford
Joyce Rowland, Schoodic Lake, Lake View Plt
Fran Samek, Spednik Lake, Vanceboro
Peter Seamans, North Pond, Woodstock
Richard Simpson, Sebago Lake, Sebago
Edward Thomas, Kezar Pond, Fryeburg
David Tozier, Crawford Lake, Crawford
Amy Tragert, Lakes Env. Assoc. Intern
Rob True, Salmon Lake, Belgrade
Andrea Tyler, Threecornered Pond, Augusta
Jake Vangoarder, Somes Pond, Mount Desert
Gary Vanpelt, Green & Mud Ponds, Oxford
Bill & Heather Walton, East Grand Lake, Weston
Kenneth Webb, Poverty Pond, Newfield
Carden Welsh, Horne Pond, Limington
Carol Weymouth, Starbird Pond, Hartland
Peter Wilkens, China Region Lakes Alliance
Fran Zaborowski, Houghton Pond, Bath



New Certified Invasive Plant Patrollers



Out of the 277 individuals who attended one or more IPP workshops in 2007, forty new volunteers became officially certified. The goal of the IPP Certification Program is to encourage and support individual and group commitment to annual collection and submission of invasive aquatic plant screening survey data. To become a Certified Plant Patroller you must have participated in at least one Introductory IPP workshop (or equivalent training), complete an application, and sign a statement of commitment. The Maine Center for Invasive Aquatic Plants provides all certified patrollers with standardized field sheets, an ID card, a bucket scope and annual updates on new survey equipment and procedures. If you have recently attended an IPP workshop, are conducting invasive aquatic plant screening surveys and would like to be certified, please contact us at 207-783-7733 or mciap@mainevlmp.org. Application forms are available on line at www.MaineVolunteerLakeMonitors.org/mciap/IPPCertForm.pdf

Herb Adams, Heald Pond, Lovell	Karen Keller, Jamies Pond, Manchester & Sheepscot Pond, Palermo
Penny Appleby, Pleasant Pond, Turner	Carol Lafond, Great East Lake, Acton
Matt Bolduc, Various lakes in Western Maine	Beth Langton, Lily Pond, Edgecomb & Damariscotta Lake, Jefferson
Bradford Boone, Cold Stream Pond, Enfield	Pamela McKinley, Sebasticook Lake, Newport
George Bouchard, Horne Pond, Limington	Richard Meyer, Trickey Pond, Naples
Rich Bray, Big Bear Pond, Hartford	Linda Miller, Sebasticook Lake, Newport
Daniel Buckley, Various lakes	Andrea Morris, Collins Pond, Windham
Nancy Cleveland, Collins Pond, Windham	Dennis Roberge, Mousam Lake, Acton
Denis Coffey, Crystal Lake, Gray	Bill Rudy, Various Lakes
Patricia Dyer, Beech Hill Pond, Otis	John Sabine, Big Bear Pond, Hartford
Robert Estes, Jewett Pond, Waterford	Katrina Soucy, Kezar Lake, Bradley, Heald & Horseshoe Ponds, Lovell
Megan Facciolo, Hancock County Lakes	Jennifer Sporzynski, Collins Pond, Windham
Cyndy Fairbanks, Biscay Pond, Damariscotta	Keith Strange, Cold Stream Pond, Enfield
Thomas Fanning, Various lakes in Western Maine	Janet Terry, Pleasant Pond, Turner
Ralph Fowler, Sebasticook Lake, Newport	Aaron Tripp, Kezar Lake, Lovell
Robert & Sibyl French, Panther Pond, Raymond	John Wedin, Branch Lake, Ellsworth
Jean Gardner, Androscoggin Lake, Leeds	Cheryl Welch, Crystal Lake, Gray
Harvey Gerry, Crystal Lake, Gray	Bunny Wescott, Panther Pond, Raymond
Ed & Sandy Graham, Wassookeag Lake & Puffers Pond, Dexter	
Elin Haugen, West Harbor Pond, Boothbay Harbor	

Lake Lingo

Langmuir Currents (and Streaks!)

By Scott Williams

Long white streaks of foam that form on the surface of lakes in the wind are caused by “Langmuir currents”, named for I. Langmuir, whose research led to an understanding of this process.

The streaks run roughly in the same direction as the wind, but they are perpendicular to the crests of the waves. This might seem somewhat counter-intuitive, but as is generally the case, what takes place below the lake surface causes this interesting phenomenon. The streaks are formed when multiple spinning tube-like currents that exist adjacent to one another in the lake, converge at the surface, just before they rotate down into the water column (see diagram at right). The axes of the tubes, or cells, run parallel to the wind direction; the cells rotate around the axes.

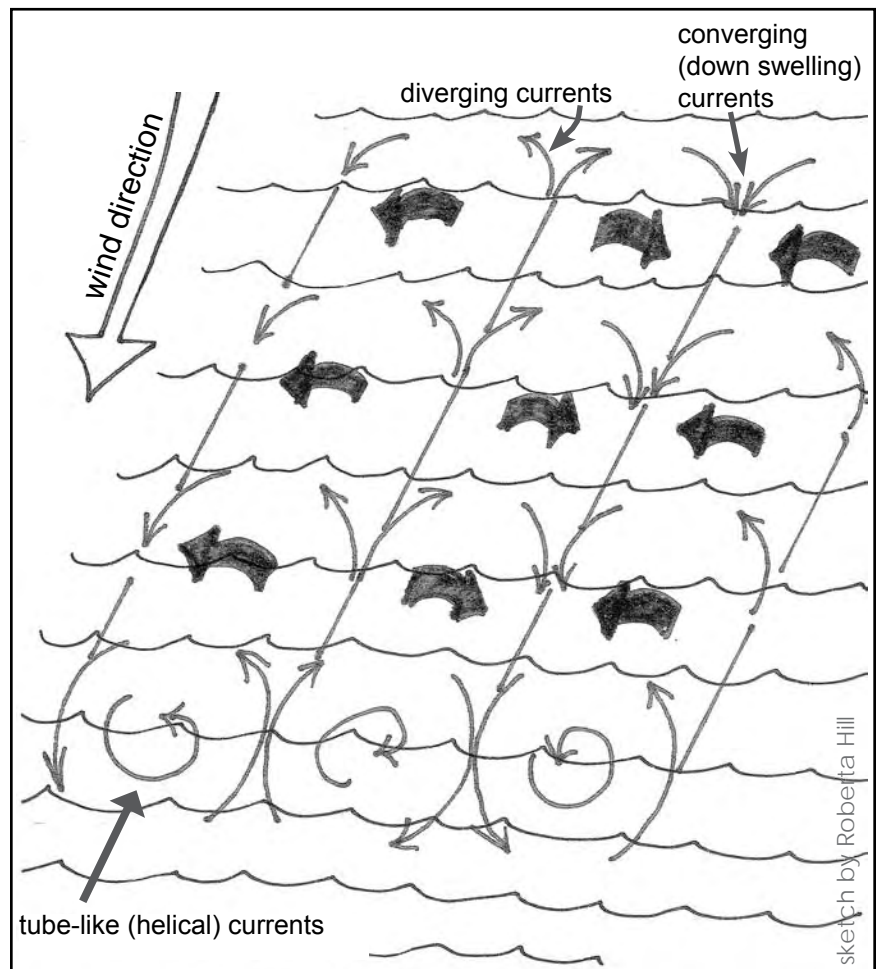
When two adjacent rotating tubes converge, particulate matter in the water (plant debris, zooplankton, and natural surfactants that cause the water to foam) is trapped at the surface, resulting in the relatively straight, foamy lines that form.

In addition to the very noticeable visual effect of Langmuir currents, they play an important role in the circulation of heat (water temperature), algae and zooplankton in the surface layer (epilimnion) of thermally-stratified lakes. Langmuir currents are just one of several types of currents that form in lakes. The exact way in which they form is not fully understood.



photo by A. Thurnherr

Streaks formed by Langmuir currents



sketch by Roberta Hill

Schematic sketch of Langmuir currents

Littorally Speaking

Wonders Below the Surface

By Roberta Hill

Photos and captions by Dennis Roberge

It was almost forty years ago since those first complete, full-color portraits of planet earth floating in the vast sea of space were beamed back to earth by Apollo astronauts. The photos had an instant and dramatic effect on many of us who saw them. They helped us to see, as if for the first time, the wonder, beauty, and fragility of the planet we thought we knew so well. Not surprisingly, this collective sense of awe inspired by the Apollo photos is now largely credited for kick-starting the environmental movement here in the United States and around the globe.

Dennis Roberge's photos of the littoral life in Maine lakes have the ability to elicit a similar experience. As lake monitors and plant patrollers we know, perhaps better than most, the remarkable nature of shallow, sun-filled areas of Maine's lakes, ponds and streams. But one's sense of the beauty, intricacy, wonder and fragility of these areas is suddenly intensified when one gets a chance to see these areas as a fish, or a turtle, or a diving bird may see them. As we saw in the 1970's, such an experience has the power to inspire not only awe, but action. And though it is too early to know for certain what kind of "movement" may result from the release of Dennis's amazing photographs, there is little doubt the potential for a positive and lasting impact is here.

So please sit back for a moment to view these lovely images of life in the "fertile fringe." Each glimpse is unique, and each, as you will soon see, speaks eloquently for itself. Words have been kept to a minimum on these pages in



An eel slithers across the bottom of Mousam Lake

order to allow more space for the images. And one last thing . . . what you see here is a very small sampling of the thousands of photos Dennis shot during the summer of 2007. Please click on www.MaineVolunteerLakeMonitors.org/LakeLife to see the photos printed here—all larger, and all in full color—as well as dozens more. Enjoy!



A dense thicket of fern pondweed in Thomas Pond



small mouth bass



little floating bladderwort



snapping turtle



watershield



freshwater sponge



common bladderwort



small bass and water lilies

pipewort

Tips for Taking Underwater Photographs

When we wrote to Dennis Roberge to ask if he would be willing to share some of his tips for taking great underwater photographs, he replied, with characteristic humility, that he did not object to the idea in the least, but would have to pass as he did not really have much to say on subject other than he uses a good camera and takes lots of photos. Later, when we met to select the photos for the article, and Dennis began to elaborate upon his newfound passion, more tips began to emerge. We have presented Dennis' tips here in the hope of inspiring others to discover and capture similarly wonderful sights below the surface of their own favorite watery places.

- 1. Use a good quality camera.** Dennis uses a Sea and Sea DX-8000/8000G housing and digital camera with a 0.6x wide-angle conversion lens (28mm – 80mm macro zoom). The camera takes very high resolution (8.2 mega pixel) images, and comes with lots of bells and whistles including settings to adjust light input, and the ability to take 30 minute videos.
- 2. Take lots and lots of photos.** With digital photography, there is no reason to hold back. Dennis currently has seven thousand underwater photos on file, all taken during the summer of 2007. He says he took at least twice as many shots, and deleted those he was not happy with.
- 3. If you are not a SCUBA diver and/or don't have a good flash system, stick to depths of less than six feet,** where natural light is sufficient to get excellent photographs and the subject matter is easily accessed with snorkeling equipment. All of the shots you see here were taken while snorkeling. Note to file: Dennis became SCUBA certified at the end of the 2007 season, so stay tuned for his deeper water shots (and more tips!) in 2008.
- 4. Be safe! Let boaters know where you are.** Dennis swims with a six-foot-long, day-glow orange, inflatable raft in tow. The 50-foot tether provides a convenient place to lash a mesh bag for collecting plant samples.
- 5. Don't think you have to have special training or an artist's eye to get good photos.** When asked about this, Dennis casually revealed that in fact he really can't see much of anything when he is in the water. He can't wear his glasses under his mask and until next year when he gets his prescription dive mask "everything is pretty much a blur." (We can hardly wait to see what Dennis will do with his craft when he can actually see what he is doing!)
- 6. Feed two fish with one worm.** In the process of scouring the shallows for new subjects to photograph, Dennis, a Certified Plant Patroller, conducted screening surveys on forty five Maine waterbodies.



Curly-leaf pondweed on West Pond



Little floating bladderwort getting ready to flower.
Mousam Lake



A school of sunfish in Horn Pond

VLMP Launches Secchi Simulation and Virtual Secchi Re-Certification

www.MaineVolunteerLakeMonitors.org/recertify

The Maine Volunteer Lake Monitoring Program workshop for Virtual Secchi Re-Certification is now online. Certified Water Quality Monitors can log-in to test their knowledge of Secchi disk procedures and take a Secchi reading on a virtual lake. To access the site click the link on the VLMP home page. To login, contact the VLMP office for your username and password if you have not already received them by email.

The Virtual Secchi Re-Certification site will supplement the field re-certification workshops for Secchi monitors. After an evaluation period we hope this new site will allow us to extend the time between field re-certification workshops. The goals are to enhance QA/QC, allow more flexibility in timing of Secchi re-certifications and to reduce travel costs for volunteers and the program.

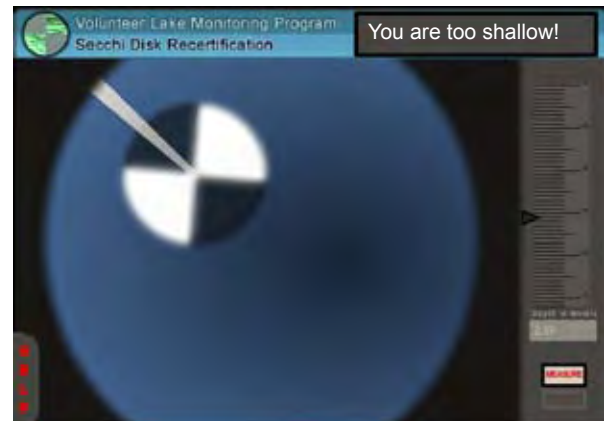
We look forward to your feedback. Please visit the site, take a few readings, answer a few questions then share your comments and suggestions with us by phone at 207-783-7733 or by email at vlmp@mainevlmp.org.

There is also an option for the public to take a demonstration Secchi reading by clicking on the “Try It Out” button. Certified monitors must login however in order for the full test version and to have their results recorded for review by the VLMP.



Virtual Secchi Re-Certification login screen

The Virtual Secchi Re-Certification site is made possible by support from the Maine Department of Environmental Protection and individual donors to the VLMP.



The Virtual Secchi Re-Certification includes a Secchi Simulation that tests water quality monitors on a virtual lake.

Volunteer Feedback:

"I just took the virtual Secchi re-certification and it's absolutely unbelievable! It was easy to follow and I had lots of fun practicing on the different types of lakes. Bravo! What a great job you've done!"
Sue Therrien-Fenn, monitor for Long and Great Ponds in Belgrade

"Great job! Saves gas too! I even learned a few things about team testing, and multiple testing, in the questionnaire. Thanks for this timely innovation. Almost as much fun as my Wii."
Herm Voigt, monitor for Kezar Lake in Lovell

Successful Summer Fundraising Appeal Trains More Volunteers

"We are really pleased with the results of this special appeal and hope that everyone will respond generously to our upcoming annual fund drive in November, which has always provided essential operating support."

Tamara Lee Pinard, Vice President, VLMP Board of Directors & Development Committee Chair

This summer, the VLMP embarked on a special appeal to increase the number of Maine lakes and ponds being monitored in Maine. Over 107 individuals contributed \$6,040 and 28 lake associations and regional watershed groups gave \$4,625 in response to this summer request, helping us raise a total of \$10,665.

Thanks to the support of those who contributed to this special appeal, the VLMP trained and certified a record number of new volunteer lake monitors in 2007! In addition, the VLMP was able to purchase 22 more Secchi disks and view scopes, provide greater technical support, and add 12 new lakes to the program, as well as a number of new monitoring stations to existing lakes.

With the help of this appeal, the VLMP trained a total of 73 new and replacement lake water quality monitors in 2007—bringing the total number of water quality monitors to 574. Over 277 individuals attended an invasive aquatic plant workshop, and 40 of these individuals became certified invasive plant patrollers—bringing the total number of certified plant patrollers in Maine to 274.

Today the pressures on our lakes have never been greater. Nutrient and sediment enrichment, mercury contamination, invasive species, increased development, and acid rain all represent powerful challenges to water quality protection in Maine's lake watersheds. As human activity impacts our freshwater resources, there is a greater need to monitor more lakes and more indicators of lake health. Training VLMP volunteers to collect lake water quality data and screen waterbodies for aquatic invaders strengthens Maine communities to be better equipped to meet the growing demands of a changing environment and better respond to the growing pressures on Maine's lakes.

The VLMP has a clear and focused mission to help protect our beautiful lakes and ponds. Training volunteers to collect data on Maine lakes is an investment that lasts a lifetime. This special fundraising initiative helped pave the way for many more local lake citizens to become long-term stewards on their lake or pond. Thank you so much to those who contributed to this successful initiative to help us train more volunteers and purchase more equipment.



VLMP Field Screening Survey training workshop for Advanced Invasive Plant Patrol Monitors

2007 Special Summer Appeal Donors

The individuals and organizations listed here responded to our special appeal letter mailed early this summer. There have been additional contributions made in 2007 that arrived prior to this mailer in response to our 2006 annual fund. All 2007 donors will be listed in our January 2008 newsletter. Thank you again to all who contribute to VLMP!

Lake Associations & Regional Watershed Groups—\$4,625

Alford Lake/Lermond Pond Association
Bear Pond Improvement Association
Belgrade Regional Conservation Alliance
Berry Dexter Wilson Ponds Watershed Association
Bunganut Pond Association
Cathance Lake Association
Chiputneticook Lake International Conservancy
Clearwater Lake Improvement Association
Dexter Lake Association
Echo Lake Association
Embden Pond Association
Five Kezars Watershed Association
Hebron Water Company
Keoka Lake Association
Little Wilson Pond Improvement Association
Muscongus Pond Association
Nickerson Lake Wilderness Preservation, Inc
Papoose Pond Land Owners Association
Pemaquid Watershed Assoc
Pickerel Pond Association
Pitcher Pond Improvement Association
Pleasant Lake Parker Pond Association
Pleasant Pond Protective Association
Portage Lake Association
Sabattus Pond Watershed Partnership
Sebasticook Lake Association
Sebec Lake Association
Summer Haven Lakes Association

Individuals—\$6,040

Martin Arnold	Bruce Micucci
Pat Baldwin	Debbie Mitchell
Mike Becker	Paul Mitn k
Michael Bernstein	Bill & Grace Monagle
Bill Blaine	Earl & Joanne Morse
Ruth Bontempo	Dick Neal
George Bouchard	Gerry & Meg Nelson
Robert Breen	Tania Neuschafer
Warren Bryant	Steve & Karen O'Bryan
John & Charlotte Calhoun	Richard Offinger
Rob Caron	James & Wanda Orino
Jen Chase	Barbara Paiton
Suzanne Clerkin	Barry Patrie
Carmen & Jacob Coulombe	John & Shirley Pierce
Mary Jane Dillingham	Tamara Lee Pinard
Thomas Dionis	Joseph Potts
Rosemarie Dulberg	Waldo Preble
Sharon & Bruce Eastman	Jim & Joan Proctor
Joe Emerson	Lea & Jose Ramirez
Jim & Aubrie Entwood	Dennis Roberge
Roy & Ruth Farnsworth	John Sanders
Bruce Fenn & Susan Therrien-Fenn	Richard Schneider
Thomas Finlay	Claudia & John Scholz
Peter Fischer	Mary Schuppın
Katherine Flood	Ron Schutt
Kenneth & Jane Forde	Matt Scott
Mark Fuller	Ed Simmons
Carol & John Gabranski	Carolyn Slack
Robert Giencke	Cheryl Soucy
Bill Gies, II	Don & Ingrid Stanley
Ed & Sandy Graham	Rudy & Peg Stanzel
Barbara Hamor	Bud & Delores Stewart
Phoebe Hardesty	Edward Thomas
Bob Heyner	Margaretta Thurlow
Kenneth Hodsdon	Matt & Terri Towle
Ellen Hopkins	Bob Tracy
Peggy & Neil Jensen	George & Jackie Tranchemontagne
Denise Joy & Fred Flammia	Ken Truscott
Pauline Kaiser	Bobbi & Frank Twitchell
Ed & Carol Knapp	Peter Vaux
Chuck & Christine Lamb	Herman & Nancy Voigt
John Laskey	Clyde Walton
Jerry Leach	Robert Warren
Melissa Legg & Richard Reeves	John Wasileski
Pam Lombard	Penny Weinstein
Scott Lowell	Fred Weston
Joanne Luppi	Lew & Miriam Wetzel
Mary Lynch	Stanton Whitman
Connie Mahaffey	Nancy Willard
Bert & Betty Mason	Ann Williams
Robert & Delphine McLean	Scott Williams & Roberta Hill
Philomena McPhee-Brown	Gail York
Richard Meyer	

If you feel we've made any error or omission in our list, please contact us immediately at 207-783-7733. Thank you very much.

Controlling Purple Loosestrife



By Sarah Gross
VLMP Summer Intern

Purple loosestrife, that beautiful yet invasive wetland plant, is gradually becoming a major problem in Maine. You can all attest to its proliferation now along roadsides (particularly the interstate), in marshy areas, and fields. You may even have seen it popping up in your own backyard! While it may look pretty (and come on, even I will admit that it has a certain aesthetic value), its beauty is apparent only if you overlook the plant's ability to cause environmental harm.

Like many of the invasive aquatic plants on Maine's radar, purple loosestrife happens to be amazingly proficient at out-competing native plants, to the point where it often takes over completely. Its abundance is problematic not only in that it edges out native grasses and other plants, but because by doing so it also affects the supply of nutrition to wildlife. The other major problem with purple loosestrife is that since it is a non-native species, like milfoil or hydrilla or any of the other aquatic invaders on Maine's prohibited list, it does not have enemies to naturally control its spread.

If you've ever tried to remove it, you have found how difficult, and often impossible, elimination is due to its complex root structure, remarkable reproductive capabilities (a single plant can produce 2.5 million seeds annually), and ability to rapidly send up new shoots. Since no prior method of removal had proven effective, the USDA carefully tested, and in 1992 approved the importation and release of three biological control agents (species of insects).

Maine released one biocontrol species, *Galerucella* spp. (a beetle), in several locations around the state in 1997 in an attempt to reduce its abundance in DOT mitigation sites (sites created to offset environmental degradation associated with transportation construction). The mitigation site itself

is not successful in replacing wetlands and other disrupted important niches if it becomes a stand of purple loosestrife, so the hope was that these beetles would establish themselves and bring the loosestrife under control.

In conjunction with this state release experiment, this summer I was fortunate to accompany Ann Gibbs (of the Dept. of Agriculture) on a field excursion to monitor those sites where the beetles had previously been released. We were doing a follow-up to determine beetle populations based on the releases over the last ten years (additional releases occurred to boost populations after the initial liberation), to determine whether they had reached sufficient numbers to be further dispersed, or collected and reared for later distribution. We found that while there was still evidence of the beetles, it seems to be taking a long time for them to reach significant numbers.

Later in the summer I traveled to the Rachel Carson Wildlife Refuge with Mark Lickus (of the DOT), to pick up some beetles reared there as part of a program they have. We distributed these new beetles to several of the DOT sites in an attempt to further boost *Galerucella* populations and give the beetles a better chance of getting the loosestrife under control.

I haven't heard yet of any results of our efforts, but it would be wonderful if the beetles could become established in these sites, so that we can distribute them to other infested areas around the state. I certainly learned a lot during my excursions, and hope to be able to help out with the beetle distribution effort in the future.



Galerucella beetles are transported to test sites on carefully bagged purple loosestrife plants. Photo by Mark Lickus, Maine DOT.

Purple Loosestrife (*Lythrum salicaria*)

Purple loosestrife is native to Europe and Asia, and was introduced into North America about 200 years ago. This plant now occurs in wetlands across the United States; with some of the largest infestations occurring in the northeast states, including Maine. Purple loosestrife is a wetland perennial that prefers open sunny areas and wet soils. Plants may be found in wet meadows, floodplains, disturbed areas such as roadside ditches, along stream banks and around the edges of ponds, lakes and marshes. When mature (at three to five years) a single plant may be over three meters tall and produce as many as fifty stems. Leaves are bladeshaped, entire and oppositely arranged on the stems. The stems are usually square in cross-section, but may be five or six-sided. Leaves and stems may be (but are not always) covered with soft hairs. Plants form dense, woody rootballs (up to 50 cm in diameter) with a strong taproot. Purple loosestrife blooms during the summer. Its reddish-purple flowers, each with five to seven petals, are closely arranged on tall flower spikes. A mature plant may produce up to 2.5 million seeds per year. Seeds, which remain viable in the ground for at least five years, are as small as a grain of sand and are easily carried by wind, water, and passing animals, and may go undetected on muddy boots. When purple loosestrife moves into wetlands, it displaces native plants such as cattails, sedges, bulrush and ferns. Wetlands infested with purple loosestrife have decreased native biodiversity and quality of wetland habitat for migrating wading birds and waterfowl. Rare and threatened bird

species are particularly vulnerable to exclusion. As with virtually all invasive species, control is problematic. Young purple loosestrife plants may be removed by hand or with a garden fork. It is very important that the entire plant and root system is removed, as roots broken off in the ground during the process of removal will likely sprout new plants. Removing larger plants by hand is more difficult, and may need to be repeated several times



Purple loosestrife, an invasive terrestrial plant, can produce up to 2.5 million seeds each year.

each year until the desired control is achieved. Ideally plants are removed before they flower (to prevent the possibility of seed release). In cases where flowers are present, the flowers should be carefully bagged,

removed and properly disposed of prior to removing the rest of the plant. Simply removing flower spikes early in their development (by cutting or mowing) will help to reduce seed spread. However, as the plants themselves will easily regenerate, this is at best a temporary and limited means of control. Biological control is widely recommended as a cost-effective, long term means of controlling purple loosestrife. The goal with biological control is to reduce, not eliminate, this wetland invader. Several species of insects have been approved by the United States Department of Agriculture for biological control of *L. salicaria*. The Maine Department of Environmental Protection has recently launched an experimental program in which *Galerucella* beetles are being introduced into several severely infested areas. Contrary to popular belief (that claims some ornamental cultivars of this plant are sterile), all purple loosestrife cultivars have been shown to be fertile, and capable of serving as pollen or seed sources for invasive loosestrife populations. Gardeners are urged to seek native-friendly alternatives.

2007 Volunteer Awards

The VLMP Annual Meeting held on July 28 of this year was a wonderful success by all accounts. Attendees told us how much they enjoyed the presentations, facility, food, and especially the awards.

One of the most rewarding aspects of being involved with the VLMP is the variety of energetic, caring and committed people that volunteer their service to Maine lakes. The Annual Meeting is an opportunity for volunteers to get to know each other better and to recognize their dedication at our annual award ceremony.

The following pages highlight the special awards presented at this year's Annual Meeting. Each award recipient has a heroic quality to their story that we are happy to share with you here.

Only those volunteers present at the meeting are shown on these pages. A complete list of volunteers recognized in 2007 can be found in the previous (Summer 2007) edition of the *Water Column*.

We would also like to thank the following businesses that contributed to the prize drawings at the Annual Meeting: Patagonia; Hamilton Marine; DeLorme; Al's Sports; Farmingdale Canoe & Kayak; and Belgrade Canoe & Kayak.

Scott, Roberta, Tania, Jim, Jackey & Christine

30 Year Water Quality Monitors



Richard Offinger
Cathance Lake

Frank Perkins
Square Pond

Charles McClead
Phillips Lake

2007 Outstanding Water Quality Monitor Award

The outstanding water quality monitoring award for 2007 is presented to **Bob Dunlap**, who has monitored Green Lake in Dedham for 11 years. During that time, Bob, who is a retired professor of chemistry, has conducted research on the relationship between the duration of lake ice cover and late summer dissolved oxygen levels in Green Lake. Bob recently published an article concerning the findings of his research in the VLMP's *Water Column*, and he has presented them at the Maine Water Conference. He regularly publishes the results of his lake monitoring in the newsletter for the Green Lake Association. Bob's commitment to lake monitoring, data interpretation and public education makes him an ideal recipient for the Outstanding Water Quality Monitor award for 2007.

Lifetime Achievement Award

Ken Holt has been monitoring the quality and health of Bear Pond in Turner for 29 years. He retired last year as the Volunteer Regional Coordinator for Androscoggin County, after serving that position since the regional coordinator positions were first established in 1991. In that role, he was well known for offering breakfast, freshly baked muffins and cookies and other incentives for volunteers who attended recertification workshops at his cottage on Bear Pond.



Ken Holt

Ken is also a volunteer member of the VLMP Board of Directors, where he has served continuously since the Board was created in 1992, making him the longest standing member of the Board. Regrettably, he is retiring from our Board as of the July Annual Meeting, and we will truly miss his sense of humor, his knowledge of the history of the program, his instructive corrections on the proper use of the English language (Dr. Holt is a retired professor of English), and most of all, his gently guiding wisdom in helping the Board and staff work through some of our most complex decisions over the years.

Ken will remain active as a volunteer monitor, and he has generously offered to assist the VLMP in whatever ways we can best use his skills and talents. He does not know it yet, but that offer has made him an honorary editor of our newsletter.

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2007 Volunteer Awards

Invasive Plant Patroller of the Year

This year's Invasive Plant Patroller of the Year award goes to IPP partners, **Phillip Ouellette and Dwight Sewell**.

Phil and Dwight met through their membership in the Portage Lake Association. Phil has lived on the lake for 7 years and



Dwight Sewell (above) along with Phillip Ouellette (not shown) received the 2007 Invasive Plant Patroller of the Year Award for their survey work on the 2,474 acre Portage Lake.

Dwight for 17. It was shortly after the first Aroostook County IPP workshop in 2003 that they began surveying the lake.

Portage Lake is an expansive 2,474 acres lake with a maximum depth of about 25 feet, creating hundreds if not thousands of acres of plant habitat. Undaunted by the challenge, Phil and Dwight conduct several surveys each summer, concentrating primarily on the five or so areas in the lake that are adjacent to public access points.

In the process of scouring these vulnerable portions of the lake carefully for interlopers, Phil and Dwight have come to know all of the native plants in the lake quite intimately. And as those who participate in IAP screening surveys know, knowing which plants "belong there" is an invaluable tool for recognizing which may not.

When asked why they do the work and what keeps them going, the answer for both was about the same. They are concerned about Portage Lake and want to protect it, and they enjoy the work. Phil, put it this way . . .

"I have learned more about the lake in the short time that I have been doing this work, than in all of my years on the lake previous. It provides a great chance to meet people who live around the lake (some of whom mistake us for lake experts, and ask us the craziest darn questions). And what a great excuse for being out on the water on a beautiful day! . . . Sometimes we just sit there in the boat and ask ourselves if we could be doing anything else with our time that we would like any better."

Invasive Plant Patrol Team of the Year

Invasive Plant Patrol Team of the Year is a new award for 2007. The need for creating such a category tells you something about how Maine's early detection



The Branch Lake Milfoil Rangers received the 2007 Invasive Plant Patrol Team of the Year Award.

efforts, both in terms numbers of trained eyes conducting surveys and numbers of acres screened.

The recipient of the new Invasive Plant Patrol Team of the Year goes to a group has led the way in this kind of endeavor and their work exemplifies this exciting new level of monitoring activity.

The **Branch Lake Milfoil Rangers** (a committee of the Branch Pond Association) got their start six or so years ago. The Milfoil Rangers survey the entire 11 mile long Branch Lake in Ellsworth.

Carol Gabranski and Don Hayes serve as Co-coordinators of the effort. There are currently 35 Milfoil Rangers. Every summer, Carol and Don contact each of the Rangers, re-affirming their willingness to screen their sector for another year, and

to make sure everyone has the forms and equipment needed to properly conduct their surveys. The survey effort and results are highlighted in the association's fall newsletter. Everyone who contributed to the success of the program is named and thanked in writing.

Last summer the City of Ellsworth, which draws its water supply from Branch Lake, recognized the importance of work of the Branch Lake Milfoil Rangers with a Certificate of Appreciation. The award was presented by the City Manager at the first Milfoil Rangers' Potluck. The potluck proved a great success, bringing together people from different areas of the lake, some whom had never met to share stories and ideas.

effort is evolving. Originally most of the screening survey work on a given lake was done by an individual or perhaps small team of two or three individuals. Increasingly, however, lake groups are organizing to increase the scope of their

2007 Volunteer Awards

Lake Stewardship Award



Clyde Walton (left) received the Lake Stewardship award from Scott Williams

For the past few years, the VLMP has presented an annual award to an individual who has made unique and sustained contributions to the stewardship of Maine lakes. This year the award goes to **Clyde Walton**. Clyde's professional résumé and list of volunteer services to his community, the State of Maine and the Country, is a bit overwhelming. Here are just a few of the ways in which he has advanced the state of the art in water quality protection conservation practices over the years:

For more than 40 years, Clyde was the manager of Landscape and Environmental Mitigation for the Maine Department of Transportation. He is licensed in Maine to practice landscape architecture, site and soil evaluations and professional land surveying.

He is an acknowledged national expert on soil erosion control practices, riparian and littoral area restoration, and water quality protection. He has written extensively on these subjects in trade publications and technical textbooks.

In 1989, Clyde received the International Honors award from the Soil and Water Conservation Society. In 1994 he received the Gold Leaf Award from the International Society of Arboriculture. Also in 1994 he received the State of Maine Lake Conservationist of the Year Award from COLA.

Clyde served nine years on the National Academy of Sciences Transportation Research Board's Landscape and Environmental Design Committee, and he has been recognized repeatedly for his research in the use of composted materials for stormwater and erosion control to protect water quality.

Clyde is a former president of the Maine Congress of Lake Associations, and he continues to work as a volunteer instructor for Maine's Soil and Water Conservation Districts – an extremely valuable and much appreciated role, as any District employee would tell you. He is a former member of Maine's interagency task force on invasive aquatic species, is a board member of the Kennebec Land Trust and serves on Maine's Board of Pesticide Control.

In 1994, Clyde was recognized by the Town of Fayette for his 30 years of continuous service to the community.

And...well, you get the picture – the work that Clyde has done through the years has benefited Maine lakes in countless ways. It has also enhanced our abilities to protect our lakes through the innovative conservation practices he has developed or refined.

We take great pleasure in presenting Clyde with the VLMP's 2007 Lake Stewardship award.

15 Year Water Quality Monitor



George Cross, Center Pond

25 Year Water Quality Monitor



Will Reid, Wesserunett Lake

2007 Volunteer Awards

Invasive Plant Prevention Award

The Invasive Plant Prevention Award is reserved for an exemplary regional initiative. This year's award goes to the **Belgrade Regional Conservation Alliance Milfoil Committee**.

The Milfoil Committee got its start in 2001 (then as part of the Belgrade Lakes Association) when community members attended a training session, led by Peter Lowell of Lakes Environmental Association, to become Courtesy Boat Inspectors (CBI). Twenty seven volunteers attended and joined the CBI effort that year.

Everyone who had shown interest in 2001 was called again in 2002 to sign up for shifts inspecting boats on ramps on Great and Long Ponds. High school students were hired for weekends and to fill in gaps in the volunteer schedule. In 2002, the group did 1,200 boat inspections. Also that year, one of the CBI's found variable leaf milfoil in a boat that had just come from Messalonskee Lake, a scare that only served to further galvanize the group. The following winter the BRCA Milfoil Committee was formally

created expanding on the successes of the BLA to all five lake associations in the watershed.

In addition to expanding the scope of the effort geographically to seven public boat ramps in the region, the BRCA Milfoil Committee has steadily increased the number of hours of CBI coverage throughout. The Committee now has substantial hours at each ramp, seven days a week, during the key 15 week boating season. They have two documented "saves," both invasive milfoils, coming into the Belgrades on out of state boats. It is a testament to both the magnitude and the staying power of this effort that, since the year they started, the BRCA Milfoil Committee has performed between 12% and 15% of the total number of boat inspections conducted in Maine every year.

A successful CBI program well underway, the group turned its attention to early detection. Professionals were hired to conduct initial comprehensive (level 3) surveys of Great Pond and Long Pond, and volunteers were trained



Maureen Maslak (left) accepted the Invasive Plant Prevention Award from Roberta Hill. Maureen is chair of the Belgrade Regional Conservation Alliance Milfoil Committee.

through the IPP program to continue the early detection effort. Every year since they began, this dedicated team of volunteer patrollers surveys six of the most vulnerable locations in the region. According to BRCA member Maggie Shannon, everyone on the team has learned a great deal about the lakes as a result of their involvement in the survey work, and has had a good time and formed strong bonds of friendship in the process.

10 Year Volunteer Monitors



Teg Rood
Wilson Lake

George Bouchard
Horne Pond

Gerry Nelson
Cushman Pond

Mike Whitmore
Embden Pond



Maine Volunteer
Lake Monitoring Program
24 Maple Hill Rd
Auburn, Maine 04210

Data Round Up

Please remember to send in your field forms from the 2007 season.

- ➔ Water Quality Monitors by October 15 to your Regional Coordinator
- ➔ Invasive Plant Patrollers by November 1 to the MCIAP office

