

GROUNDWATER

The Essential, Vulnerable, and Invisible Bloodstream of an Ecosystem

Three different experts spoke at VLT's annual meeting this year about the importance of groundwater—to our preserves, our community, and to our world in general. Geologist George Kendrick, Josh Bowe, natural resource

manager at Poland Spring Bottling, and Maine Water Company president Rick Knowlton covered a wide range of groundwater issues, and left those in attendance with a much clearer understanding of the nature and importance of groundwater.

As precipitation falls over the land, most of it—something like 50%—will run off and quickly find its way to the ocean. Another good percentage, on the order of 30-35%, will either evaporate or pass through plants and return to the atmosphere through transpiration. The last precious 10-15% will seep into the ground, staying with us in places like lakes and ponds, water-bearing soil strata (the richest of which we call aquifers), or in the assorted cracks and fissures that are found throughout the bedrock beneath us.

Geologist George Kendrick emphasized that, unlike most of the communities in the state of Maine, Vinalhaven lacks any significant aquifers. Most

of the groundwater storage here relies on cracks in the granite bedrock, although a fair amount is also held in the peat-rich freshwater wetlands that have formed since the last glaciation. As George put it, this island holds "a tiny lens of fresh water, surrounded by an ocean of salt water." This freshwater resource must provide the water that all the plants, animals, and people here need, and it is vulnerable—to pollution, to extended drought,



to over-extraction, and perhaps most ominously, to salt-water intrusion as the sea level rises. George's remarks helped the audience understand the need to monitor and safeguard this resource, and the ways in which a land trust could take a strong supporting role in doing this.

Josh Bowe pointed out that a hydrologically isolated community like Vinalhaven is especially dependent on seasonal precipitation.

> Extended dry spells, such as we experienced here in 2016 and 2017, leave an immediate and visible impact on the forest. Moreover, he pointed out that as climate change leads to increasing intensity of precipitation, an ever-higher percentage will be subject to runoff, since the land cannot absorb rainfall that comes too hard and fast. During the wetter times, like this past spring and early summer, people's efforts to conserve water can diminish. However, the more water saved now, the better off the groundwater supply will be when we encounter the next drought.

> Josh also noted that ground water does not respect property lines, and said, "Your own water use might affect your neighbors." If you think of groundwater as a common milkshake in which we each have a straw, we must indeed pay close attention to how much of this shared resource we are consuming! Toward this end, Josh said that one of the best things we

can do is to work with landowners who will allow their wells to be monitored, in order to gather and analyze data on trends in water levels and usage.

The last speaker was Rick Knowlton, who continued on next page

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PRESIDENT'S MESSAGE

September ushers in a crispness in the air, a signal for change and cooler times ahead, a good time to start the strategic planning process and to look at the next five years for VLT.

We are in a good position to prepare for the future: our lands are being well managed; our membership is growing; our Walks and Talks program is active and getting good reviews; our Environmental Education programs benefit from having Vinalhaven teachers on our board; and our Executive Director is doing a great job of juggling the many facets of our work, as well as managing the budget. We look forward to input from many sources as we seek to understand and anticipate change, the changes that will drive our work and allow us to remain a successful and wellrespected land trust.

Caring for this beautiful island and so many of its natural resources is a privilege. Thank you all for your support of Vinalhaven Land Trust.

-David Hyde

Photo, right: water lilies at Folly Pond, by Kerry Hardy. Below: students hauling scallop cages at Hurricane Island, by Jonathan Smith.



Groundwater (continued from first page)

shared anecdotes about the history and development of a public water supply on Vinalhaven, referring back to T.D. Libby establishing a town water utility way back in 1910, and invoking names such as Ducky Haskell and Bud Crossman who worked some twenty years ago to bring in the Maine Water Company to handle treatment, distribution, and billing here. Rick pointed out that currently, the area served by the public water supply relies on Round and Folly Ponds for about twenty million gallons of water each year, and underscored what precious assets these water bodies are for such a small island to possess. The ponds are at the center of a roughly 400-acre watershed, of which the water company owns only about 140 acres. Not surprisingly, they welcome any conservation protection being applied to the remainder of the watershed, and are staunch supporters of the work of local land trusts in this regard. He also mentioned our local water commissioners—Pam Alley, Al Koenig, and Patrick Trainor—and urged the audience to meet with them and share our thoughts about Vinalhaven's water resources. He closed with the thought that local landowners giving the water company permission to conduct well studies in the years to come would be a great step forward in the collective work of monitoring and safeguarding the town's water.

All three speakers' remarks were eagerly received by the crowd, and long after the "official" end of the Q&A portion of the talk, our speakers were being buttonholed by a gauntlet of folks with water on their mind a sure sign of a successful presentation! Our sincere thanks to Elizabeth Swain, who took on the task of lining up these speakers and arranging the logistics of getting them here as one of her last tasks in a long career of serving as a VLT trustee.

-Kerry Hardy, Stewardship Coordinator



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Executive Director Report

I have the best job. Among many other tasks, I get paid to go hiking in beautiful places. Am I lucky or what?

VLT's relationship with our landowners is important. As we get to know each other, I have the honor of learning their history and relationship with the property, their hopes and dreams for it, and, often, to share in making those hopes and dreams a reality through well-planned conservation. I am also often one of the first to hike proposed new trails, and, along with a crew of close to twenty dedicated volunteers, help monitor VLT's thirty plus conservation easements annually.

I am blessed to spend quality time in so many beautiful places. But our special island is being impacted by climate change: here are just a few-very few-of the challenges I see regularly. Wherever I go on the island, I note more and more signs of sea level rise. The parking lot in town floods more frequently. There are ferry trips that are canceled because the tide will be too high for vehicles to unload. VLT staff has noted shoreline erosion and "slumping" of the salt marsh, such as in the Basin, as those transitional areas of grassland between the ocean and the land are more frequently inundated by higher tides. What is slumping? It's when sections of the bank "slump" into the surrounding tidal waters, in this case usually due to more frequent inundation by higher tides. Some salt marshes have the capacity to migrate, to move further inland, often into adjacent freshwater wetlands. Other marshes, those surrounded by steep sloped uplands, will be inundated, resulting in the loss of this valuable habitat for fish, birds, and shellfish and leaving the shore even more vulnerable to future storms.

I am a member of the town's Sea Level Rise

Committee which has been active for about three years now. A web-based "living" mapping tool to document flooding events and impacts is currently being developed. Approximately ten sites, mostly infrastructure, that are vulnerable to sea level rise have been GPS'd and photo documented. Soon we will be looking for citizen scientists—AKA committed volunteers—to visit those sites at times of storm surge or king tides, so we can document local changes with some real data.

Hiking in the woods and spending time on the land is not as simple as it used to be. Remember when you would just throw on a pair of shorts and some flip flops before heading out to find the perfect picnic spot? I doubt many of us are that cavalier anymore. When I first started working for VLT, ticks and tick-borne diseases were not an issue and we purposely made our trails very narrow, just one-person wide. Now, VLT's steward and volunteers patrol our trails regularly, making sure that no branches overhang the trails, and that the underbrush and ferns are pushed well back, so one can hike with little risk of brushing up against potential tick habitat. Climate change has not only pushed tick populations north, but it has also lengthened the "season of concern" to almost year-round: any day the temperature is above freezing, one is at risk of a tick bite.

Am I discouraged and do I avoid the outdoors? No—I can't imagine not spending time outside. But I do dress differently: you all, I hope, know the drill. (And no longer is tucking your pants into your socks a fashion faux pas.) All these concerns are tempered by the natural beauty of this special island, and we have much to be grateful for. The sight of an eagle soaring over the Basin. An inlet at high tide in spring, when the water



is an incredible shade of green. The screech of a kingfisher as it flashes by. Mossy ledges, bare ledges; gnarly old spruce, hopeful young spruce. Islands silhouetted against fog. The sparkle of sun on water; the incredible red of swamp maple in fall. I could go on and on, but I hope, that you, like me, pause often to savor, even if just for a moment, the treasures—sights, sounds, smells – that nature presents us on a daily basis.

As Eleanora Duse said, "If the sight of the blue skies fills you with joy, if a blade of grass springing up in the fields has power to move you, if the simple things of nature have a message that you understand, rejoice, for your soul is alive."

Please take time to simply marvel at the world and be grateful for this moment.

-soften lagit

Praying mantis stands out on fall leaves. Photo by Kerry Hardy.



A NEW LOOK

VLT has a new look, well, in print anyway! Our logo has been updated, as well as our stationery and other communication materials. The hard work of our graphic designer Gabe McPhail, plus a very dedicated communications committee made this happen. We hope you like it!

VLT would like to thank all the amazing people who gave their time and energy in this past year. Now more than ever, it is critical to work together and we are overwhelmed by the support of our volunteers. Last year over 150 people volunteered over 400 hours, and that does not include the many hours our board members give to VLT! Please accept our apologies if we have inadvertently left out your name.

Annual Meeting

We thank Skip and Carol Thompson who ensured the event went smoothly. Addison Ames Jr. set up the tent; David Lawrence and Bill Alcorn tended bar; Mike Mesko and Steve Rosen provided ice; Diane Cochran loaned us a table; Craig Jewell did a fantastic job setting up the sound system; Carver's Harbor Market donated beverages; Island Spirits gave a generous discount; Jan Lichtenstein made sandwiches; Heather White, Carol Baker, and Sherry Rega played music; Karen Gates helped with cleanup; and Bob Candage helped set up chairs.

Committee Members

Board members are active on all of our committees, with the addition of community members, both seasonal and year-round. Louisa lves and Charlie Lowrey lend their skills to the Investments Subcommittee. Elise Stockly brings her expertise to the Development Committee, as does Sarah Forbes to the Communications Committee. Former board member Lucy Quimby remains an active member of VLT's Easements and Acquisitions Committee. We also thank Merry Boone, Janet Gohres, Allan Hayes, Jeff Kilbreth, Rick Morgan, Arlene Rodenbeck, and Sally Wylie for their support of the Walks and Talks Program. Pam Alley and Bob Candage serve on Tax Impact Task Force. Skip Thompson on Skoog Park, and Javier Peñalosa on Preserve and Conservation Easement Management.

Mailings and Office Help

What would we do without those who heed our call? Alison Angel, Merry Boone, Amy and Dave Calkins, Diane Cochran, Kay Giffin, Pam Grumbach, Carla Harris, Suzanne Heller, Ed Hirst, Pam Johnson, Pat Lundholm, Stevie Mesko, Arlene Rodenbeck, Carol and Skip Thompson, and Mary Lou Upton: thank you! Additional thanks to Carol and Skip Thompson, Dona Bolding, and Sarah Forbes for reviewing and editing our mailings and newsletters.

Boat Transportation

Thanks to Chris Ayres, George Fosque, David Lawrence, Banner Moffat, and David Swain for using their boats to transport people for the Babbidge Island trip and to other locations.

Trail Work

Banner Moffat, Rick Morgan, and Hugh Roth volunteered their time to help maintain our trails. Sue Dempster and Kelly Richards helped update and maintain the stories on the Story Trail. Many thanks to whoever kept our trailheads plowed out last winter; it was most appreciated. Thank you all!

Coastal Clean-ups

There were several clean-up efforts through-



Banner Moffat



Kerry Hardy



Banner Moffat



Top left: Bringing in the haul of debris from Otter Island! Bottom left: It was not easy getting trash off of Ott Middle left: VLT steward Kerry Hardy accompanying a load of trash. Center: A great turnout for the fall coas

ır Volunteers

out the year both on island and on some of the offshore islands. Taking on the task of cleaning washed up debris and trash from our shores were: Geoff and Mike Bird, Merry Boone, Amy and Dave Calkins, Marcia Cleveland, Cindy and Jim Dunham, Isaiah Felton, Pete Gasperini, Janet Gohres, Marian Grogan, Jem Grumbach, Marnie and Morgan Grumbach, Pam and Jim Grumbach, Bob Hahl, Ed Hirst, Pam Johnson, Norbert Leser, Lisa Lewis, Deb Manegold, Maureen McKenna, Banner Moffat, Rick Morgan, Jack Myer, David and Tito Newby, Bob Parrish, Daniel Paul, Win Quayle, Zachary Sanborn, Elise Stockly, Miguel T., and Joe and Mary Lou Upton. The Tidewater Motel lent us a canoe and paddles, and Joe Upton lent us the use of his truck. Thank you all! And as always, thanks to the Transfer Station staff for allowing us to dispose of several truckloads of collected debris free of charge.

Graphic Design and Tech Support

Taina Litwak updated several of our preserve brochures, and converted them so they could

be uploaded to the VLT website.

Monitoring

For their invaluable assistance in making sure that any restrictions on VLT's properties are being observed, we would like to thank Halcyon Averill, Colleen Conlan, Niall Conlan, Joshua Eckels, Pam and Jim Grumbach, Hal Holt, George Kendrick, Charlie Lowrey, Audrey Nichols, Herb Parsons, Anna Poe, Susie Rodriguez, Marthena Webster, and David and Sally Wylie.

Photos

Thank you: Chris Ayres, Sarah Barrett, Alice Bissell, Kirk Gentalen, Norbert Leser, Banner Moffat, and Karen Oakes for providing such beautiful images of our preserves and of people enjoying them.

Walks and Talks

Thanks to Rick Morgan for leading and organizing the bird walks, as our usual leader, Kirk Gentalen, was unavailable this summer. Also helping lead the walks were Janet Gohres, Pete Jaques, Suzette Jones, and Don and Valerie McQuillan. Other volunteers who helped with the Walks and Talks program: Colleen Conlan, George Fosque, Beth Gilford, Allan Hayes, Pam Johnson, Suzette Jones, David Lawrence, Banner Moffat, Amy Palmer, Steve Rosen, Anne and Kendrick Simmons, David Swain, Heather White, and David Wylie. Thank you all!

Other

Andrew Quinlan provided pest control management; Skip Thompson and Bob Candage built adjustable shelves for the office; and Sue and Hugh Martin loaned us their mainland vehicle for community and school garden visits in Damariscotta and Isleboro.

Finally: We could not do this without the support of the board of directors. They, too, volunteered their time and skills for many of the opportunities above, as well as leading walks, monitoring properties, proofreading and editing, and sharing their wisdom and insights through their work on VLT's many committees.





Norbert Leser

Norbert Leser

er Island; a fall into the cool water while dragging old traps with a frayed rope was one harmless mishap. tal cleanup. Right: Having fun while keeping Vinalhaven beautiful.

Planned Giving: Connecting the Future

By now, most of you have received our planned giving brochure; if you have not, please stop by, email, or call the office and we will make sure you get a copy.

A planned gift of almost any size will help ensure the protection of the habitats and scenic views we all love. Such a gift could be accomplished by simply adding a codicil (amendment) to your will, or by naming VLT as the beneficiary of an insurance policy or retirement plan. Please contact Linnell Mather directly at 207-863-2543 for more information on planned giving options.

In planning your gift, you should consult with a financial advisor or attorney to discuss your particular situation.

EXPLORING THE ISLAND'S HISTORY

Island Explorers had a new session this year: Vinalhaven History, featuring a trip to the Vinalhaven Historical Society and a talk by Jim Boone and Bill Chilles. They learned about the granite industry, the schools, and more. Bill Chilles showed them how an old fog horn worked, with a crank! Photo below by Sarah Barrett.





Every year, VLT sponsors a fairy house building walk on Granite Island Preserve, led by Heather White and Colleen Conlan. Photo by Norbert Leser.

TRANSITIONS ••••••



New Board Member

Art Carpenter has been a summer visitor to Vinalhaven since 1984 when he and his wife Alex first rented "The Birches" from Tudor & Winona Peterson. It rained every day that first week and Art and Alex loved the island so much they've come back (almost) every year since. After many rentals arranged through Captain Frank Thompson, Art and Alex purchased a 19th century cottage on Arey Cove.

Art grew up in Williamstown, Massachusetts and is a real estate investor playing a small part in the crazy boomtown that is Austin, Texas. Vinalhaven has provided an important connection to New England and a welcome respite from 100 degree temperatures!

Departures

Steve Rosen has been elected to the VLT board three times, serving for a total of eighteen years in many capacities. He has served on the Walks and Talks Committee, identifying experts in the fishing community, and has been a valuable member of the Nominating and Environmental Education Committees. Steve is responsible for the reintroduction of alewives to Old Harbor Pond, a multi-year effort that will restore a long-lost resource. Steve is the posterchild for "Speak Quietly and Carry a Big Stick." Steve's stick is one of knowledge, experience, island contacts, love of VLT, insight into people, and the ability to get things done.

Elizabeth Swain has dedicated over eighteen years to VLT. The skills she brought to her work enhanced the land trust through, among other actions; strategic planning, developing a conservation matrix that led to outstanding land conservation, working to be sure there was ample staff and competitive wages and benefits, and helping develop policies needed to gain national accreditation. Her calm demeanor will be missed at board meetings. Happily, Elizabeth will remain on the Easements and Acquisition Committee. Thank you for your dedication to conserving the nature of Vinalhaven.

ENVIRONMENTAL EDUCATION NEWS

Fall in Vinalhaven is a great way to start a year of outdoor learning, and VLT's environmental education programs help whole classes at Vinalhaven School do just that.

Educators from Tanglewood Learning Center led grade K-3 students on a hike at Perry Creek Conservation Area in October. The Tanglewood staff engaged students in their environment through interactive lessons and games. VLT also sponsored an overnight trip for grades 5 and 6 at the University of Maine's Learning Center at Tanglewood, an outdoor education program in Lincolnville, ME. Tanglewood's open air classrooms immerse students in outdoor adventures to help develop life skills, community spirit, and an awareness of their connection to nature. This year's focus was "Ecology from the Ground Up."

Cultivating Scallops with the Hurricane Center for Science and Leadership

Educators from Hurricane Island Center for Science and Leadership will visit the classrooms of grades 6-12 for the fourth year in a row. This year's project will be catching wild baby scallops in spat bags. The spat bags will be hung, several to a line, in various locations in the water around the island. Each bag is filled with a hard substrate that is suitable for the tiny scallops to settle on and grow. While in their larval stage, scallops can flow through the mesh bag, but once they settle on the inner substrate, they grow too large to escape. The bags will be brought into the classroom, where the spat will be taken out to develop in bottom cages at Hurricane's scallop farm at Gibbon Point on the north end of Hurricane Island. Any other organisms collected in the bags will be studied before being released.

Ocean Education Through Global Collaboration

In September, an innovative program called Saltwater Classroom visited Vinalhaven School for the first time and spent three days with grades 4-6. Educators Lexi and Olivia from Saltwater Classroom taught students marine science and conservation with a focus on experiments and field-work. Through their mobile phone and iPad application, participants around the world can connect, build cross-cultural relationships, share marine discoveries, and ultimately forge a passion for the ocean that extends beyond whatever differences may set us apart.

Perspectives After School (PAS)

PAS is a weekly enrichment program for elementary students at Vinalhaven School. It offers a wide range of experiential learning activities that are hands-on, creative, and fun. VLT and Partners in Island Education (PIE) co-fund this program, which serves three age groups: grades K-1, grades 1-2, and grades 3-5. Each group meets one afternoon a week for 31 weeks during the school year, offering a balance of place-based learning activities in fields such as nature and the environment, art and music, healthy living, community service, technology, and problem solving. This year, the K-2 class sizes are large enough that we will be offering two sessions for that age group. We will also have a new teacher and more challenging curriculum for grades 3-5. Visit our website, Facebook, and Instagram for updates on this and other programs, and great photos of students engaged in the environment.

-Sherry Rega, Programs Coordinator



Island Explorers summer camp exploring Lane's Island with dip nets. Photo by Sarah Barrett.



An 8th grader and a high school student leader make it to the top of the very challenging Saddle Trail together, on the Mount Katahdin camping trip. Photo by Emily Cohn.

The Season of Giving

Through our ever-expanding environmental education program, VLT inspires the next generation to become better stewards of the island we love. Our Walks and Talks program provides opportunities for all to learn more about the nature of Vinalhaven. Our conservation efforts focus on protecting those significant plant and wildlife habitats, water resources, and traditionally valued spaces that nourish our lives and our souls.

VLT operates on a calendar year basis. Your gift by December 31, 2019 helps ensures that we can close this fiscal year in the black. We are especially appreciative of leadership gifts of \$250 or more, which traditionally represent 80% of all funds raised. You can also make a gift of appreciated securities, which costs you less in addition to being able to claim a charitable income tax deduction for the full fair market value of the shares, you also avoid paying a capital gains tax on appreciation.

You may donate by mail or securely online at vinalhavenlandtrust.org/donate, or by phone at 207.863.2543. Thank you!

Our Leadership

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Nick Farago, Seasonal Stewardship Intern

WISH LIST

Tablets and good quality handheld GPS devices for land protection and monitoring



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Vinalhaven Land Trust promotes the conservation and appreciation of our island's significant plant and wildlife habitat, our water resources, and scenic or traditionally valued spaces in order to preserve the character of the community for generations to come.

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