



The Heron

Spring 2005

The Newsletter of the Mattapoissett Land Trust, Inc. • www.mattlandtrust.org • E-mail: info@mattlandtrust.org

The Mattapoissett River Valley Aquifer: What It Means to You

By Martin Hudis

"Under the rocks and stone, there is water underground."
– Talking Heads, "Once in a Lifetime"

Most Americans take water for granted. Turn on the tap and out it comes. Flush the toilet and it's water to the rescue. Lawn looking a bit peaked? Perk it up with lots of clean, relatively cheap water.

Convenience aside, few things are more valuable to humans and other animals than water, and a lot of it flows continuously beneath our feet in the form of aquifers. What is an aquifer? It's all about water and rocks. As explained by the U.S. Geological Survey, rocks below the water table consist of different porosity and permeability, which affects the way water moves over, around and through them after seeping into the ground. When a water-bearing rock transmits water to wells and springs, it's called an aquifer.

Precipitation adds water to an aquifer, in effect "recharging" it. The rate of recharge is not the same for all aquifers, though, and that must be considered when pumping water from a well. Pumping too much water too fast draws down the water in the aquifer, which eventually causes the well to yield less and less water. And when that well supplies the drinking water for an entire town, you have the potential for a major problem. This shared system also means that aquifers are also extremely vulnerable to contamination, as a single polluter can affect the water in many neighboring communities.

Which brings us to the case of Mattapoissett's drinking water. The 2000 Town of Mattapoissett Master Plan concluded that high quality and an adequate source of drinking water should be the number-one concern for town planning. The Mattapoissett River Valley Aquifer (MRVA) runs south from Snipatuit Pond in Rochester to Mattapoissett Harbor and supplies 14 town wells, including those in Mattapoissett, Marion, Acushnet, Rochester and Fairhaven. The MRVA supplies water to over 24,000

residences, and Mattapoissett itself draws 100% of its water from the aquifer.

Unfortunately, the MRVA has been found to be particularly vulnerable to contamination due to the absence of clay in the soil, which serves as a barrier between the surface and ground water beneath. Therefore, protecting the land surrounding the active wells serves to limit the amount of source contamination to the ground water supply and is vital to the long-term health of the aquifer.

The critical land surrounding wells making up an aquifer is defined as Zone I and Zone II by the Massachusetts Department of Environmental Protection (DEP)¹. Zone I is the area closest to a well, usually within a 100- to 400-foot radius, depending upon the well's pumping rate. Zone II is the primary recharge area for the aquifer, as defined by hydrogeologic studies approved by the DEP. The Zone II land for the five wells operated by the

– Continued on Page 2

Gary Johnson



*"Salty the
Seahorse"
at Dunseith
Gardens*



*"A sign of spring! Wood anemone at the
Munn property"*

Gary Johnson

Aquifer – continued

Mattapoisett Water Department comprises a mix of residential, agricultural and forested land. While these first two are possible sources of ground water contamination, the forested lands in Zone II could become a major additional source if developed. Development of these lands is detrimental for two reasons: first, it increases the chemicals carried by aquifer waters, and second, it also reduces the natural filtering process provided by the forest floor. It's a toxic combination. Currently, the vast majority of land affecting the Mattapoisett wells remains unprotected and threatened by development.

Fortunately, state and local actions have been taken to improve the management of the MRVA. For example, last year we saw the formation of the Mattapoisett River Valley Authority (with representatives from Mattapoisett, Marion, Fairhaven and Rochester), whose role is to provide for the supply, treatment and distribution of water to the member towns. The Mattapoisett River Valley Authority is currently building a water-treatment facility at a cost of over \$13 million.

Local organizations, including the Mattapoisett Land Trust (MLT), the Rochester Land Trust, and the Sippican Land Trust, are also playing a role in preserving our water quality through land acquisition. An example of this is the joint efforts put forth by state, local towns and organizations, and private donors to purchase a conservation restriction on 430 acres, most of it located in the Zone II area of the MRVA. With assistance from the state DEP, the towns of Rochester, Marion and Fairhaven have all made direct contributions to this Rousesville property fund-raising effort. In Mattapoisett, the MLT led a successful petition drive to add this article to the October 2004 town meeting. In addition, MLT has since contributed \$30,000 to complete Phase 2 of the fund-raising project. While some of the 430 acres are classified as wetlands and, in principal, are not available for development, the conservation restriction purchased with these funds will prevent further commercialization in the form of residential, farming or new road construction. Even with all of

these significant steps forward, only 20% of the Zone II recharge area has been protected from development. Furthermore, in 2004, the MLT protected an additional 124 acres (much of it buildable uplands not in the river valley) from potential future development. The 124 combined acres from the purchase of the Boardman property (60 acres), now called the Hiller Cove Preserve, and the purchase of the conservation restriction on the Field property (64 acres) will help protect the quality of the water in the bay.

Land conservation at the local level by groups such as the MLT, which contribute to the quality of drinking water, are becoming more important in Massachusetts, a leader in establishing strong environmental laws in the 1970s and '80s. These environmental laws have reduced businesses' dependence on toxic chemicals, identified new hazardous waste sites and established some of the most protective wetlands laws in the country. However, due to economic pressures within the state during the past 15 years, environment spending at the state level has fallen from \$253 million in 1989 to \$169 million in 2004 using inflation-adjusted dollars, according to a February 2005 Boston Globe article. State and local governments alone are no longer in a position to take the actions necessary to protect the state's drinking water supplies. Community activists and local organizations, such as the MLT, can, by educating and mobilizing citizens, as well as by using their own resources, greatly improve the chances that this precious natural resource will be protected.

We've been fortunate to live in a time of clean, abundant, cheap drinking water; if we work together to take the appropriate preventive measures, we can ensure that clean water won't end with us. If we're successful, our great-grandchildren won't have to wonder what's in the clear liquid pouring from the tap – if we fail, they'll know who to blame.

¹ Massachusetts Department of Environmental Protection Source Water Assessment and Protection Report for Mattapoisett Water Department, May 2003.

Featured Creatures

With spring officially here on the calendar, it's time to get outside and look for those first signs of spring in New England. To help get you started, here are some flora and fauna to keep any eye out for... And while you're hiking on one of the MLT properties, if you see an unusual or interesting species, take a picture and submit a Field Log form on the MLT website!

American Woodcock (*Scolopax minor*):

This plump, quail-sized bird (about 11" in length) is seldom seen, for its protective coloring blends in with the background of dead leaves. However, in the spring, those fortunate enough to live near the bird's breeding grounds – large fields bordered by thicket and secondary growth – may see woodcock perform their remarkable courtship flight. In these aerial displays, the male spirals up to a considerable height, circles, then plummets to earth, after which he begins a series of raspy calls, known as "peents." Woodcock eat primarily earthworms, which they pull from the ground with their long, flexible bills.

Alewife & Blueback Herring (*Alosa pseudoharengus*):

"River herring" (alewives and blueback herring) return to the coastal rivers and streams of Buzzards Bay from late March through mid-April, making their way into shallow freshwater ponds to spawn. After spawning, the adult fish migrate downstream and head offshore, where they spend the remainder of the year in deep water. Young-of-the-year herring hatch during the early summer and exit the ponds and rivers from late August through mid-fall. River herring serve as an important source of food for many species of marine fish, and their numbers have declined alarmingly in the last half century. In Mattapoisett, the number of returning adult herring to the Mattapoisett River has fallen from 626,000 fish in 1906 to approximately 5,000 fish in 2004. The precise reasons for the decline are unknown, although overfishing and habitat degradation are thought to be major causes.

Do You Have Suggestions for Activities We Could Offer Area Kids?

We'd love to hear your ideas on fun, educational outings or events that get kids involved with the land trust and appreciating the outdoors! Call Diane Perry (508.758.9063) if you'd like to suggest an activity that could be sponsored by the MLT.



Gary Johnson

What do you see in this photo? Make a guess and check out the answer at the right side of this page!

Vernal Pools

These unique wildlife habitats are best known for the amphibians and invertebrate animals that use them to breed. Vernal pools, also known as ephemeral pools and temporary woodland ponds, typically fill with water in the autumn or winter

due to rising ground water and rainfall and remain "ponded" through the spring and into summer. Vernal pools dry completely by the middle or end of summer each year, or at least every few years. This occasional drying prevents fish from establishing permanent populations. Many amphibian and invertebrate species rely on breeding habitat that is free of fish predators, including Spring Peepers.

Some vernal pools are protected in Massachusetts under the Wetlands Protection Act. To learn more about vernal pools, or how you can become involved in certifying and protecting a vernal pool, check out the Massachusetts Division of Fisheries and Wildlife website:

www.mass.gov/dfwele/dfw/nhesp/nhvernal.htm



Tom Richardson

What wildlife would you expect to see here in the spring? Could this be a vernal pool?

Join the Mattapoissett Land Trust! Membership Renewal – We only exist with your help! Cut along the dotted line and mail in your support!

Name(s) _____
 Mailing Address _____
 City _____ State _____ Zip _____
 Phone _____ E-mail: _____
 Seasonal Address (If Applicable) _____
 City _____ State _____ Zip _____ Dates _____

Membership Categories:

<input type="checkbox"/> Individual	\$ 30	<input type="checkbox"/> Benefactor	\$ 250
<input type="checkbox"/> Family	\$ 50	<input type="checkbox"/> Patron	\$ 500
<input type="checkbox"/> Supporting	\$ 75	<input type="checkbox"/> Founder	\$1000
<input type="checkbox"/> Sustaining	\$100	<input type="checkbox"/> Friends of Salty \$5 (children under 12 years)	
<input type="checkbox"/> Corporate	_____		
<input type="checkbox"/> Other	_____		

Please make your check payable to:

Mattapoissett Land Trust, Inc.
 P.O. Box 31, Mattapoissett, MA 02739

We would like to hear from you!

Whether your contributions come in the form of tax-deductible financial gifts or through volunteer services, your support matters! Your **annual membership contributions** support the operating expenses of the MLT. Mowing, inspections, forestry services, trash pick-up, legal and accounting advice are all part of what keeps the organization vital and growing. In addition, whether you are concerned about preserving the scenic beauty of Mattapoissett, maintaining its biodiversity, or fear the degradation of Buzzards Bay waters from septic systems and chemical run-off, there are many ways you can **volunteer your time and services**, allowing for the enjoyment and education of future generations.

To become a member of the MLT, renew your membership, learn more about upcoming events, and find out about volunteer opportunities, **check out our website: mattlandtrust.org**, or email us at info@mattlandtrust.org. We would like to hear from you and welcome any suggestions or comments!

Property Updates

HILLER COVE PRESERVE

As you may have heard, the MLT has been able to purchase the three Hiller Cove properties that we were fundraising for last fall. But, we are still seeking contributions to continue this work! The purchase was made possible through a loan from the Revolving Fund of the Saving Buzzards Bay Lands Campaign administered by the Coalition for Buzzards Bay. Those interested in long-term efforts at land preservation should consider contributing to this Revolving Fund, which was established to help land trusts on the South Coast get low cost, short term financing so that they can complete land preservation deals that would otherwise “get away”. The Hiller Cove purchase would have been much more difficult and expensive, if not impossible, without access to this wonderful resource.

MLT PROPERTY SIGNS

We know that not all of our properties have signs. Signs aren't inexpensive, nor permanent, but we would like to gain exposure where it will do the most good. So, if any member believes that there is a particular place where a sign would be appropriate, we would like to hear from you. Send us an e-mail, drop us a note, or mention it to a board member – and thanks!

VOLUNTEER OPPORTUNITIES – WE NEED YOU!

- Have you ever wondered who plants the flowers at Dunseith Gardens? Or assists with tending the Tub Mill property? The MLT is looking for volunteer stewards of the Dunseith Gardens and Munro properties to assist with flower planting and light maintenance. Please e-mail Allan Schubert (allan.schubert@comcast.net) of the MLT if you're interested.

- The MLT is forming an Educational Committee whose mission will be to provide seed money for funding environmental educational initiatives in the wise use of resources (both locally and globally). Thanks to the generous 2003 gift of Edith Shoolman, the MLT will be able to offer educational programming for area children. If you're interested in getting involved in the planning phases and development of proposal guidelines, please contact either Elizabeth Richardson (terichardson@comcast.net) or Diane Perry (508.758.9063).

Diane Perry



“MLT Fall Haskell Swamp Walk, led by Ruth Bates”



The Heron is published bi-annually by the Mattapoisett Land Trust. The MLT, formed in 1974, is a non-profit, tax-exempt charitable organization incorporated under the laws of the Commonwealth of Massachusetts. Its purpose is to preserve open space for the enjoyment of current and future residents of Mattapoisett, as well as to educate the public about the sound use of natural resources, and to work with other organizations having the same goals.

Our membership consists of annual contributors – our primary source of revenue – and a volunteer board of directors: Bob Atkinson, Ruth Bates, Brad Hathaway, Martin Hudis, Elizabeth Leidhold, Paul Osenkowski, Luana Josvold, Richard Kallio, Shawn Kennedy, Jenny Mello, Blanche Perry, Diane Perry, Susan Reid, Elizabeth Richardson, Allan Schubert, Eleanor Smith and Gary Johnson, President.

The Mattapoisett Land Trust is a non-profit 501 (c) (3) organization. All contributions are fully tax deductible.

Mattapoisett Land Trust, Inc.

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Who We Are:

Elizabeth Richardson

In an effort to illustrate the diversity of our members' backgrounds, experiences, and beliefs, we continue with our Member Spotlight column, and sat down this time with Elizabeth Richardson, Board Member and Editor of the MLT Heron:

MLT: *Where did you grow up?*

EER: I grew up in Dayton, Ohio, a medium-sized city in southwestern Ohio that's known as the birthplace of the Wright brothers and aviation. While my father continues to teach there at a small, private college, most of my immediate family have transplanted to Massachusetts in the past couple of years.

MLT: *What is your educational background (college, degrees, etc.)?*

EER: I received my Bachelors degree in Psychology from Indiana University. I was able to graduate early and lived in Florida, where I worked in a psychiatric hospital before heading to graduate school to pursue a career as a Clinical Psychologist. I received my Masters and Doctoral degrees from Louisiana State University, in Baton Rouge, Louisiana, and then moved to the East Coast to finish up my postdoctoral training at Brown University. I currently hold a faculty appointment at Brown Medical School in the Department of Psychiatry and Human Behavior, and a staff psychologist position at The Miriam Hospital in Providence, Rhode Island. I consider myself lucky that my academic career as a Clinical Health Psychologist allows for the flexibility of continuing to treat a handful of patients, while spending the majority of my time conducting research in the areas of weight management and smoking cessation, as well as training medical and graduate students.

MLT: *What attracted you to Mattapoisett?*

EER: My husband, Tom Richardson, and I have lived in Mattapoisett four years. The Southcoast was appealing to both of us because it offered the type of relaxed life-style we were both craving, close proximity to the water, and a fairly reasonable commute for both of us (me to Providence, Tom to Boston). And, we happened across a property that we both fell in love with. We're hoping that some day, perhaps after we've lived here many, many years, folks around town will stop referring to our house as "the old Alden place"!

MLT: *What are your hobbies or past-times?*

EER: Ha! I have to chuckle at this question, as it often feels that I don't have much time anymore for some of the hobbies I used to enjoy. I suppose a 16-month-old child and a 300-year-old house will do that to you! Both of these provide endless amounts of joy and are worth every bit of the energy and elbow grease that goes into them! When I'm not working on some house project or sprucing up our property, I try to get out with Tom on the water for some fishing. One of my favorite things? An evening canoe in Aucoot Cove, fishing for striped bass.

MLT: *Tell us a little about your family.*

EER: Tom and I were married five years ago in Bristol, RI. Tom

has recently begun his own business as a free-lance writer and photographer, after spending 15 years as Managing Editor at Saltwater Sportsman magazine. We have a son, Max, and are expecting our second child in June, and can't think of a better place to raise our children than Aucoot Cove and Mattapoisett. Tom's parents live in Newton, MA, and have gotten the Mattapoisett "bug", enjoying weekend hikes in the area and recently purchasing some land here in Mattapoisett. Almost two years ago, my mother and stepfather moved to Rochester and my sister to Boston. Tom and I consider ourselves so lucky to have all of them nearby, so that Max can really get to know his grandparents and aunt.

Tom Richardson



"Elizabeth, Tom and Max Richardson"

MLT: *Why have you chosen to get involved with the MLT, and to be a board member?*

EER: I became involved with the MLT about three years ago through a neighbor and previous board member, Julie Craig. I have always considered myself an environmental advocate and wanted to become more active at the community level, so the MLT was a logical way to combine these two interests. My primary role to date has been

as coordinator and editor of the bi-annual newsletter, which serves as one of our vehicles for spreading the word about current MLT activities and upcoming events

MLT: *How do you see the MLT contributing to Mattapoisett's future?*

EER: Two of Mattapoisett's most precious resources are the land and sea. In fact, many of us have chosen to live in this area because of the ease of access to wonderful outdoor resources, such as Buzzards Bay and the various coves, local beaches, and open tracts of protected lands, such as those managed by the MLT and Trustees of Reservations properties. Having lived in the Midwest, South and Northeast, I've seen many examples of beautiful landscapes being turned into shopping malls, residential developments, and urban sprawl. I don't want to see this happen to Mattapoisett and the surrounding areas. With each year, there is more and more publicity about the attractiveness of the Southcoast area – something we've all known for a long time! But, if we don't take steps now to consider appropriate ways to accommodate the demands of an increasing local population, we may be left with few greenways, open spaces, and waterfront access – the very stuff that makes living in Mattapoisett so great.

Mattapoissett Land Trust, Inc.
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Spring Calendar

Saturday, April 23, 10:00 AM-12:00 PM – Earth Day Walk of Nasketucket: Explore the habitats and wildlife of Nasketucket Bay State Reservation with our guide, Ruth Bates. Spend the morning hiking Bridal Path, Holly Trail and Saltmarsh Trail with Ruth and other MLT members and friends. We'll clean up any litter as we go. Bring lunch and enjoy amazing views of Nasketucket Bay, Brandt Island, Sconticut Neck, West Island, Buzzards Bay and beyond. Delicious snacks and drinks provided. Wear insect spray, long pants and long socks to cover pant legs (as precaution against deer ticks), and hiking shoes. **Rain Date: Saturday, April 30, 10:00 AM.** *Directions: Take a right off of Route 6 onto Brandt Island Road. NBSR is down about 1 mile on your right.*

Saturday, April 30, 9:00 AM-12:00 PM – Spring Clean-Up at Dunseith Gardens: Join area Boy Scouts as we all help get Dunseith Gardens – home of “Salty the Seahorse” – ready for summer! Bring along work gloves, rakes, and plastic trash barrels, if you have them. We'll start at 9 AM, but please feel free to join us at any time! **Rain Date: Sunday, May 1, 2:00 PM**

Saturday, May 7, 10:00 AM – Field Farm Dedication and 12:00 PM – MLT Annual Meeting

10:00 – Field Farm Dedication: Come join us at William and Liz Field's property for a dedication and tour of these beautiful 64 acres, preserved for future enjoyment under conservation restriction. The MLT and Coalition for Buzzards Bay worked together to purchase a permanent conservation restriction comprised of a 37-acre managed forest, more than 20 acres of salt marsh, a number of small fields and pastures and nearly the entire eastern shore of Brandt Island Cove.

12:00 – MLT Annual Meeting: Following the ceremony and tour of the property, we'll move to the Friend's Meeting House on Route 6 for a potluck lunch, with drinks and desserts provided by the MLT. Following lunch, we're pleased to welcome our guest speaker, Brendan Whittaker, former Vermont Secretary of Natural Resources, who will speak on “Mattapoissett and the Northeast Kingdom: Natural Connections.” The MLT Annual Meeting will be held following the presentation. Bring comfortable walking shoes and a potluck dish to share. **Rain or Shine.** *Field Property Location: 100 Mattapoissett Neck Road (parking on the road)*

Saturday, May 14, 6:30 AM – Spring Birding at Nasketucket: Meet up with naturalist Mike Labossiere at Nasketucket Bay State Reservation for some birding. In June 2003, we heard or saw 51 species of birds; we expect to raise our count during spring migration! Hikers should meet at the reservation parking lot at the end of Brandt Island Road, **Rain or Shine** (the birds don't care). See directions above.

Saturday, May 28, 1:00 PM-3:00 PM – Haskell Swamp Preserve Walk: Explore the forest trails through Haskell Swamp (once known to our native Americans as Great Little Bear Swamp), along Powder's Neck. Join Ruth Bates and other MLT members and friends as they take the Loop trail from Mattapoissett into Rochester, Marion and back. Wide, clear paths; but wet areas too. Wear insect spray, long pants and long socks to cover pant legs (as precaution against deer ticks), and hiking shoes. Drinks and snacks will be provided. **Rain Date: Sunday, May 29, 1:00 PM.** *Directions: Follow North Street north from the intersection of Rt. 6 about 3 miles. Take right onto Abby Lane. Park at 6 Abby Lane.*

Saturday, June 25, 10:00 AM – Shoolman Property Dedication: The MLT would like to commemorate the land donation of the late Edith Shoolman, two undeveloped parcels of land bordered by Oaklawn, Ocean View and Bay View Avenues (1.1 acres). We are excited to continue to maintain these grounds, which will be known as “Shoolman Park.” This park already is known for drawing a diverse variety of songbirds, and now is available for the public to enjoy. And, we've added a memorial sundial, several park benches, and a plaque commemorating the park as a bird sanctuary. Come help the MLT celebrate this wonderful gift to the community! *Directions: Take a right off of Route 6 onto Brandt Island Road. Take a slight right onto Brandt Beach Ave. Follow Brandt Beach Ave. to the water, then take a left onto Ocean Ave.*

July 16-17 – Harbor Days Celebration: Come check us out at the Annual Harbor Days Celebration! This year, we're trying to increase our visibility, and will be offering some new activities, like a motorized tour of MLT properties and a kids' activities tent. But, we need your help! Those interested in helping for a couple of hours on either Saturday or Sunday, contact Marty Hudis (mhudis@mandhgroup.com), or any other member of the MLT board.