

Bangor Land Trust News

Fall 2019

AN EDIBLE LANDSCAPE

by Kathy Pollard

As I sat in a Bangor big store parking lot recently, I watched a man gathering bags of crab apples from a tree next to his car. Seeing this brought me back to one of my very earliest childhood memories of helping my dad gather crabapples on the Navy base in Maryland where I was born. After he was transferred to a base in Southeastern MA, he learned what wild foods grew within a 20-mile radius of our home and the list of what we harvested is astounding! We also had a large garden and a variety of permaculture on our 1.75 acres, and we could reliably source protein from the ocean, rivers, streams, and ponds around our home. Dad also hunted rabbits and waterfowl. This is what a traditional indigenous food system looks like, but before grocery stores, no matter where on earth one's people come from, all humans once practiced similar food procurement. Nowadays, it is ever more difficult to find such bounty in the wild because built land has taken so much habitat. Most people in America have supermarkets to fall back on but wildlife has no safety net. Food scarcity influences reproductive success of all life and starvation kills many birds and animals every day.

Habitat loss is just one example of humanity's capacity to profoundly influence the viability of life for others; cumulatively,



our imprint on Mother Earth has had devastating effects on untold species. In these days when news cycles are filled with the urgency of climate change, mass extinctions, and over consumption of limited resources, it is important to remember that we humans also have the capacity to make a positive difference even if only on a local scale. Restorative ecology--adding back into the environment what has been taken elsewhere, or enriching a given ecosystem with more food abundance--is but one example of our potential to improve life for All Our Relations. Bangor Land Trust is taking a lead in this direction with the Edible Landscape Project. Over the course of two to three years we will add edible food-bearing fruit, nut, and berry plants to Bangor Land Trust's >800 acres of preserves, for the benefit of all and with the expressed intention that people also are welcome to sustainably harvest some of this food. Wild permaculture is already all around us; we are simply adding more. Here is a partial list: red, black, and golden raspberries, choke cherries, black walnuts, highbush blueberries, blackberries, wild rice, apples, crab apples, elderberry, and grapes.

Bangor Land Trust is now stewarding lands and waters that are part of the Penobscot Nation Homeland. In honor of the >13,000 years Penobscot people sustainably stewarded this part of Turtle Island, Bangor Land Trust is embracing some of the tenets of Native American stewardship of place. Now known as the Four R's: Respect, Reciprocity, Relationship, and Responsibility, we hope these values can encourage new generations of stewards to care for Bangor Land Trust preserves within a framework of long-term sustainability. We also hope this project will bring more folks out to Bangor Land Trust preserves to enjoy the many health benefits of connecting with nature.

If you happen to be in Walden Parke Preserve next July, bring a little cup and gather some of the red and black raspberries newly planted along the Blue Jay Trail! We will keep you posted as we add more permaculture and signage helping to identify what has been planted where. We are working together to make a positive difference in the green space surrounding the City of Bangor. If anyone has ideas about what to plant and if anyone would like to volunteer, we welcome hearing from you!

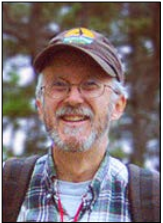
PRESIDENT'S LETTER



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Dear Friends,

These are troubling times for mother earth. It's tempting to avoid distress by turning off the news. But wait - action can energize us and make us feel better! Both our own Maine Land Trust Network and the national Land Trust Alliance urge us to be more active in taking care of the earth, our only home.

The Maine Land Trust Network (MLTN) is planning events to celebrate Maine's 200th anniversary, focusing on our future. MLTN is encouraging all Maine land trusts to participate. First, we must address climate change. E.O. Wilson, in his Pulitzer Prize winning book, "Half-Earth, Our Planet's Fight for Life," argues that we must dedicate fully half the earth's surface to natural areas to avoid the 6th mass extinction of species.

Your local land trust has conserved over 800 acres. Together with the Bangor City Forest, there are nearly 1500 acres of trees, grass, wetlands and natural communities right in our back yard. This includes Penjajawoc Marsh, an Important Bird and Biodiversity Area, internationally recognized for its role in preserving species in trouble.

Seeking to become better stewards of this land, we embarked on the Edible Landscape Project with Kathy Pollard, of Know Your Land Consulting, and her daughter Ann Pollard-Ranco, Penobscot, as consultants. With their help we are exploring the wisdom in the timeless Native American principles known as the 4R's: Relationship, Respect, Responsibility, and Reciprocity. How can we apply these principles as we manage Bangor Land Trust preserves? We can have a Relationship with the natural communities that surround us. We are called upon to Respect them, to take Responsibility for our actions that impact them, and to be committed to Reciprocity, giving back as much to our local ecosystems as we take.

We're excited about the Edible Landscape Project as a way of enhancing the wildlife habitat that we borrow for recreational use. We continue to explore ways to educate ourselves and our community about the ways that this land sustains us and the importance of being good stewards.

Sincerely,





When I was a child I overheard my Mom describe her children to a friend. She described me as her out-of-doors

girl. She said I always liked being outside; but she could tell when I was particularly happy or upset, because I had a need to take to the woods. Some things don't change. I continue to enjoy and need the council of trees.

Why does it feel good to be in the woods? These good feelings are but one of the many direct and indirect contributions of ecosystems to human well-being – ecosystem services. Ecosystems support our survival and quality of life. Bangor Land Trust ecosystems include forest, grassland, and aquatic ecosystems. Four major categories of ecosystem services are: Cultural, Regulating, Provisioning, and Supporting.

The value of ecosystem services has historically not been quantified in dollars. As a result, their importance to our survival and well-being has been undervalued. It is time to re-think our perception of wealth.

Cultural benefits include aesthetic enrichment, recreation, education, and stewardship. Bangor Land Trust (BLT) provides a place to see flowers, trees, and 'critters', and gives a close and beautiful boundary to our more developed places. It provides trails for walking and bird-watching, and places to photograph nature and relax, recharge, and reconnect. We can get introduced to lady slippers and spiders, or get to know salamanders, ferns, and trees. We can follow animal tracks and read their stories. We are encouraged to see how our actions influence these places, feel our connection to the earth, and become better stewards.

Regulating services of BLT ecosystems include cleaning air, storing carbon and fighting climate change, cooling effects during hot days, purifying water, and controlling floods while limiting droughts. These effects can seem magical! The forested lands of BLT absorb pollutants (nitrogen oxides, ammonia, sulfur dioxide and ozone) and filter particulates out of the air by trapping them on leaves and bark. Trees absorb carbon dioxide (CO₂). An excess of CO₂ contributes to climate change. The trees absorb CO₂, remove and store the carbon, and release oxygen (O₂) back into the air. Over a year, one acre of mature trees can absorb the amount of CO₂ produced by driving a car about 26,000 miles! Tree cover also cools our cities and towns in the hot summer months, and helps us use less energy. BLT wetlands help

purify ground water. The toxins in the surface water bind with the inorganics of the wetland, and filter those toxins out of the ground water. Wetlands also hold excess water in time of flood, and in drought conditions they empty their water into the watershed and limit the drought conditions. These magical benefits make BLT a great neighbor indeed!

Provisioning benefits include providing clean and plentiful water, a nursery for fish and a food source for animals, providing wood, and helping pollination. Flowers and plants in BLT preserves help house and feed pollinators (butterflies and bees) and enable them to continue their important work, including pollinating gardens and farm crops that we depend upon.

The Supporting benefits of natural areas provide habitat, and foster biodiversity, photosynthesis, and soil formation. The wetlands, grasslands, and forests of BLT provide shelter and food for insects, birds, and wildlife. They reduce floods. Greater species diversity helps ensure greater sustainability for all life. Biodiversity makes life habitable for humans in many ways, from food to pharmaceuticals. Photosynthesis of green plants cycles CO₂ back to O₂. It feeds the animals that eat the plants and ensures we don't run out of oxygen to breathe. Soil forms slowly, by breaking down rocks and organic matter. The soil, made available to plants, allows the cycle to continue.

As a child it just felt good to be in the woods. It felt balanced. As an adult I can appreciate more how these lands benefit me. In both cases I feel more connected to this place, more grounded, content. It is good to be part of the effort that is Bangor Land Trust. I feel very wealthy indeed.



Northeast Penjajawoc Preserve trailhead kiosk near the Kittredge Road. Photo by Donne Sinderson.

FERN IDENTIFICATION MAY BE EASIER THAN YOU THINK

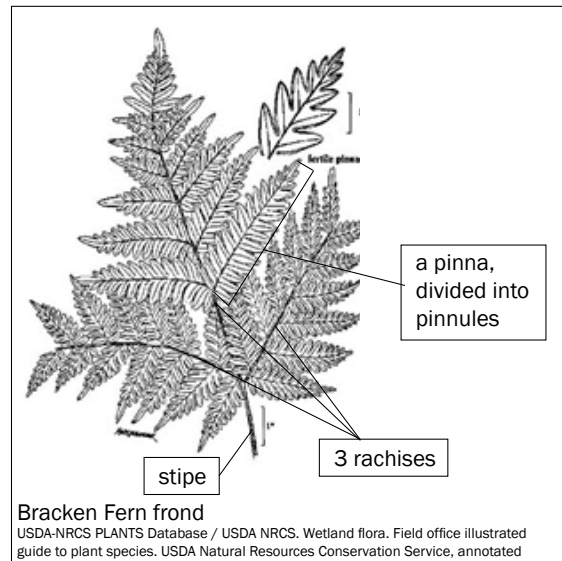
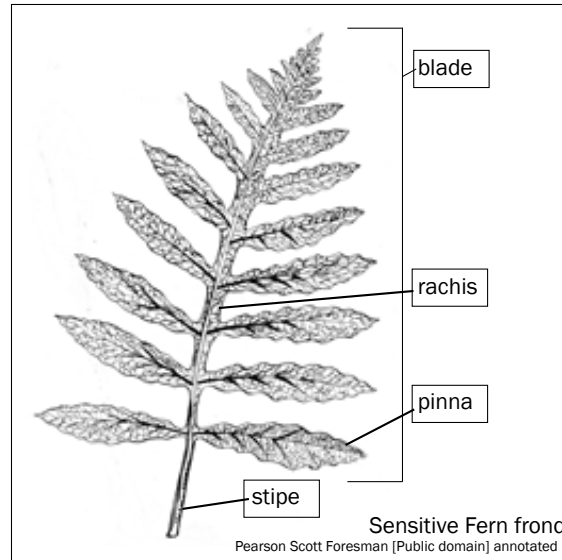
by Justin Poland

Ferns are common plants in Bangor Land Trust preserves. They can often be identified simply by looking at the shape of their fronds. The fronds are like leaves on flowering plants and are the source of food for the fern through photosynthesis.

Sensitive fern is very common, and it has a distinctive frond shape that makes it easily identifiable. The frond has a nearly triangular outline for the leafy part, which is referred to as the “blade” in identification field guides. The central stem of the blade is called the rachis, which translates to backbone. The blade of the sensitive fern is divided into lobes, mostly opposite one another on each side of the rachis. These are called pinnae. Below the blade the word stipe is used for the stem. I mention these Latin terms for the parts of the frond because those are what you find if you look in field guides. Most field guides include a glossary explaining the terms, recognizing that many readers will not be familiar with them. The Sensitive Fern frond has a dull, light grass-green color. The shape, surface texture and color of the frond make it easy to recognize, and it is very common, occurring in a variety of habitats.

Bracken fern is another common fern with very distinctive fronds. It can be large - 2 to 4 feet tall, with the blade up to 2 ft long and wide. There are three triangular sections to the blade, making this a very easy fern to recognize. Its stipe is long, shown truncated in the diagram at the right. It splits into three separate rachises, each bearing pinnae forming 3 triangular shaped sections of the blade also shown in the diagram. The pinnae are sub-divided into multiple rounded end lobes, called pinnules. Bracken Fern fronds have a leathery looking surface, and can be yellow-green to dark green depending on the conditions where they grow.

These two ferns are easy to identify without getting up close; some other ferns require a closer look but can be identified by comparing the details of the frond shapes observed to diagrams in fern guidebooks. The one I prefer is Boughton Cobb, Elizabeth Farnsworth and Cheryl Lowe; *Ferns of Northeastern and Central North America* Second Edition, Houghton Mifflin Harcourt, 2005. Recently I observed 12 different fern species along the Cattail Marsh Loop trail in Northeast Penjajawoc preserve.



Good-bye Donne and thank you!

Our wonderful Program Manager, Donne Sinderson, is leaving us - to be an assistant to University of Vermont Professor emeritus and well-known nature writer, Bernd Heinrich. We thank her for all she has done for BLT in the past 7 years. She's been gears and transmission for Pedal the Penobscot, master organizer of and steadfast presence in our office, advocate for spiders, imaginative developer of programs, communications specialist, in-house Maine Master Naturalist, inspiring photographer, and much more. We will miss her and wish her well on her new projects!

Pedal the Penobscot 2019

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Pedal the Penobscot had a lot of great things going for it this year -- beautiful weather, beautiful views of the river from High Tide, a safer start and finish route along the Brewer Riverwalk, 146 riders, 52 wonderful volunteers, 13 teams, great prizes donated by Bangor area businesses, and community support from all of the towns along the courses. Thank you to all the sponsors, volunteers and riders that made it possible.

Bangor Land Trust Board of Directors





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UPCOMING PROGRAMS

Thursday, November 7
The Maine Master Naturalist Program
Speaker: founder Cloe Chunn
First National Bank, Exchange Street, Bangor

Thursday, December 5 at 6 p.m.
Forest Ecology Topic
Speaker: Nick Fisichelli with Schoodic Institute
First National Bank, Exchange Street, Bangor

Thursday, February 27, 2020
Annual Meeting
Dysart's Broadway Restaurant
Speaker: Edwin Barkdoll, Maine Master Naturalist,
Photographer, Veterinarian, Tree Hugger at Large

For more information and stormy weather cancellations, visit the BLT website, email info@bangorlandtrust.org or call 942-1010.

*H*ave you been thinking about a way to make a difference that will last even after you're gone? You can give an enduring gift of Bangor's wild back yard to future generations by making a bequest to Bangor Land Trust in your will.

For more information call 942-1010
or send a message to
info@bangorlandtrust.org.

"Nature is not a place to visit, it is home."

Gary Snyder

RE-ACCREDITATION

Bangor Land Trust is seeking re-accreditation from the national Land Trust Alliance. The Land Trust Accreditation Commission would welcome any comments you might have about how Bangor Land Trust complies with national quality standards. These standards address the ethical and technical operation of a land trust. For the full list of standards see <http://www.landtrustaccreditation.org/help-and-resources/indicator-practices>. To learn more about the accreditation program and to submit a comment, visit www.landtrustaccreditation.org, or email your comment to info@landtrustaccreditation.org. Comments may also be faxed or mailed to the Land Trust Accreditation Commission, Attn: Public Comments: (fax) 518-587-3183; (mail) 36 Phila Street, Suite 2, Saratoga Springs, NY 12866.