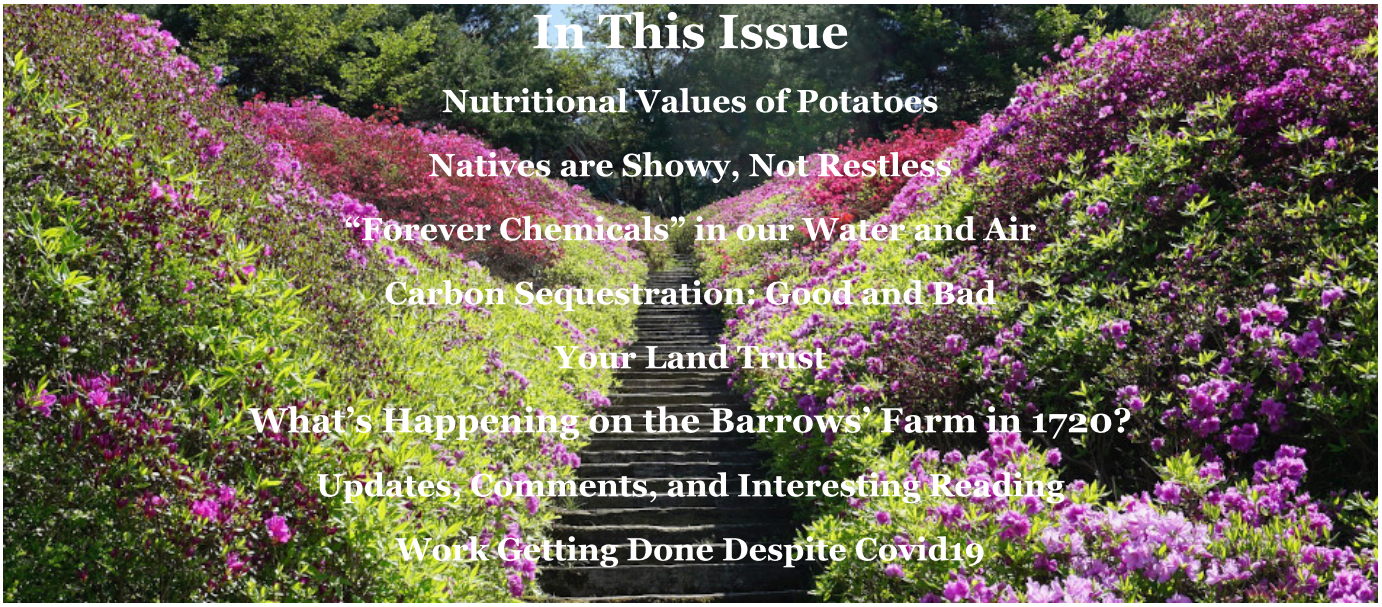
May 2020

ATTLEBORO LAND TRUST NEWS

A Monthly Newsletter on Outdoor Adventure and Conservation



In This Issue

Covid-19 Upsets our Plans

EARTH DAY was April 22nd, but we were unable to carry out the tree planting project we had planned due to the Covid-19 pandemic. Arbor Day activities on April 25th were also scrubbed.

Normal committee meetings have not taken place. Plans to start work on the parking lot at the Richardson Preserve were halted awaiting permits from City Hall – now closed till the virus passes.

However, your Land Trust did not stop functioning because we cannot gather to work together as usual. Although we are currently unable to meet, we are planning to go forward on these and other projects as the situation and health considerations allow.

We were able to remove several of the invasive Norway Maples at the Larson Woodland in preparation for replanting the area with native species. Volunteers took away the downed timber and used the small branches to augment the erosion control effort near the river. Replanting should take place in May, and we'll need volunteers to complete that project.

Meanwhile, a large pine tree at the Deborah and Roger Richardson Nature Preserve came down in a windstorm, taking down power lines and one light pole on Wilmarth Street. A small group of hardy volunteers came out last Saturday to clean up the debris left behind. Appreciative neighbors joined in, and we made quick work of the job. Social distancing and personal protective equipment were the order of the day.

Meanwhile, a fine spring edition of the print newsletter had been in process for weeks and was published and distributed via U.S. Mail. Extra copies will be available at the library when it re-opens.

Having to alter our plans reminds us that we humans are not in complete control of the planet and that we must respect nature and the science that guides our efforts to preserve Earth's bounty.

Roy Belcher

Pictures on page 7.

Contact Us
Attleborolandtrust@gmail.com
(508) 223-3060 ext. 3604

Attleboro Land Trust
P.O. Box 453
Attleboro, MA 02703

To subscribe to this newsletter
send your email to
Attleborolandtrust822@gmail.com

Nutritional Values of Potatoes by Emily and Jenna Gittle

Potatoes often get a bad rap for being those thick, starchy, and non-nutritious vegetables used for guilty pleasures such as stuffed baked potatoes or French fries. However, beneath the surface of their stereotypes lie healthy vitamins and minerals that improve heart health, colon health, and blood sugar levels. If eaten in moderation, these antioxidant-rich and versatile tubers can improve digestion and provide an excellent bank of energy for athletes. The wonderful world of potatoes doesn't just end at white; there are many varieties, which come in various shapes, sizes, and colors. The color of a potato's skin can actually provide a good indication as to what nutritional value it holds.

Sweet Potatoes: Sweet potatoes belong to the "morning glory" family while white potatoes belong to the "nightshade" family and yams belong to the "yam" family. They are not related. Sweet potatoes carry a high nutritional value despite their higher concentration of sugar in comparison to white potatoes. They are often used as a healthier substitute to white potatoes. Sweet potatoes are high in fiber, as there are approximately 6.6 grams of fiber per one cup of baked sweet potato. This accounts for 22% of a 30 g daily recommendation for fiber intake. Fiber has many health benefits, including reduced cholesterol levels, reduced blood sugar levels, and healthier bowel functioning. Fiber also improves digestive health, providing fuel for colon cells and promoting a healthy digestive tract. Adding sweet potatoes to your diet is a great way to reduce stomach pain & constipation in addition to losing weight.

Sweet potatoes are also an excellent source of Vitamin A- according to the USDA, 100 grams of sweet potato contains approximately 787 mcg of Vitamin A. This is approximately 3 times the minimum requirement per day for people aged 14 and older. An intake of more than two sweet potatoes a day for several days can be potentially dangerous, but staying near the daily-recommended value can provide the vitamin A needed to protect your body's cells from damage. Vitamin A is a fat-soluble vitamin so eating a sweet potato without any fat in the meal will minimize any Vitamin A absorption.

White Potatoes: Although they aren't known for being the most decorated vegetables in nutritional value, white potatoes are similar to sweet potatoes in nutritional value. They are rich in potassium, trumping even bananas. One medium sized banana contains about 425 mg of potassium vs. the mighty white potato's 925 mg of potassium when cooked with the skin. Most white potato varieties are waxy, or low-starch, except for the russet potato. What's the fuss about russet potatoes? They are a widely popular potato commonly used for baked potatoes among other foods, and they have a very mild, earthy taste. By weight, russet potatoes are about 78.3% water, but they are also a great source for potassium and have a rich supply of carbohydrates that are a quick energy source for active people. Russet potatoes are the starchiest of the potato varieties, with approximately 31 grams (approx. 6.1 oz or 173 g.) of starch per medium baked potato. They are also a good source of Vitamin C and Vitamin B-6. On top of this, they are mostly fat, cholesterol, and sodium free.

Purple-Skinned Potatoes: Purple potatoes, like purple vegetables in general, are rich in antioxidants that help fight inflammation and phytonutrients that help fight disease. Due to their richness in the pigment anthocyanin, they help prevent hypertension and can fight diabetes. According to a study in the Journal of Agricultural and Food Technology, a 140g serving of purple potatoes caused a 5-point drop in blood pressure in overweight and middle-aged subjects despite previously being on hypertension drugs. Lowering blood pressure into the healthy range has been known to reduce significantly the risk of heart disease and strokes. Anthocyanin also improves eyesight as well as decreasing the risk of eye infections/eye diseases.

NATIVES ARE SHOWY, NOT RESTLESS

The first signs of spring are different for all of us. There was a time when the first Robin would excite, but they are now year round residents. An errant daffodil in bloom, warmed by the late winter sun, near a house or fence, was a spring signal enough for most. Still, a drive on back roads or a country walk is where spring would speak loudest with the first blooms, that we can see in our woodlands, waterways or boggy lowlands. Our natives provide many displays throughout the early season, but the first to bloom and usher in the spring is the Shadbush or Serviceberry.

In the apple family, the Shadbush belongs to the genus Amelanchier of which there are over a dozen different species across North America. There are great variations in the forms of the three species that grow in our area. It takes form sometimes as a shrub, that can easily grow to twenty-five feet or sometimes a tree that can be forty feet tall with slender spreading branches, but usually they attain about half that size. Soon, this very early bloomer with its graceful white flowers will be very conspicuous in the distant moist woods or riverbanks. It is here where its common name comes to light. The Native Americans, and later the colonialists, used this flowering time as a natural sign of when the Shad fish were known to be ascending up the tidal rivers on their spawning runs. Along with fishing, the colonials also recognized this time as when the soil was warming and early crops could be planted.

Due to the variations within this genus, I will be referring to (Amelanchier laevis) Smooth Shadbush or Allegheny Serviceberry which is our most common native tree form. It is very adaptable to a growing site and can grow well in upland hillsides or second-growth woodlands. The sunnier the location, the heavier the branching, which adds to a well rounded crown that when flowering in a leafless forest resembles a bridal veil. For this reason, this native tree should be used far more in our ornamental landscape plantings than we do currently.

When the flowering is done, the young leaves emerge with a light purplish hue and extend into a smooth surfaced, heart shaped green leaf. Once in leaf, it takes a good eye to pick them out in a forest of green, but that is not the end of the story. Along with a very colorful fall display, its second common name reveals the true second act. Serviceberry refers to the prized fruit that Amelanchier produces in the fall. The purplish fruit were considered a valuable food source for humans, birds and wildlife alike. The early settlers and Native Americans used them with dried meat and nuts to sweeten their pemmican cakes. They were favored for baking, as well as for jellies, preserves and for juices. Some of the higher yielding species were planted close to gardens and homes similar to orchards, which eliminated competing with the wildlife for this very coveted fruit.

Amelanchier can be purchased at local nurseries or garden centers if you want to plant them in the landscape. They will need initial protection from rabbits but it is a small price to pay for a flowering under-story in the spring. I would not discourage anyone from investigating our local woods, armed with a tree book, to unravel some of the greenery we see. Just be curious and careful where you walk.

Phil Boucher

"Forever Chemicals" in our Water and Air

"Forever Chemicals" or PFAS's have been around for 70 years. They made the promise of resisting heat, grease, water, and stains. They are used in cookware, food packaging, paper food holding products, and firefighting foam. PFAS's are in the water we drink and the air we breathe. They have been associated with cancer, liver damage, thyroid disease, and developmental issues and they are in the bloodstreams of 99% of everyone in the U.S. They are called "forever chemicals" because they don't degrade for thousands of years.

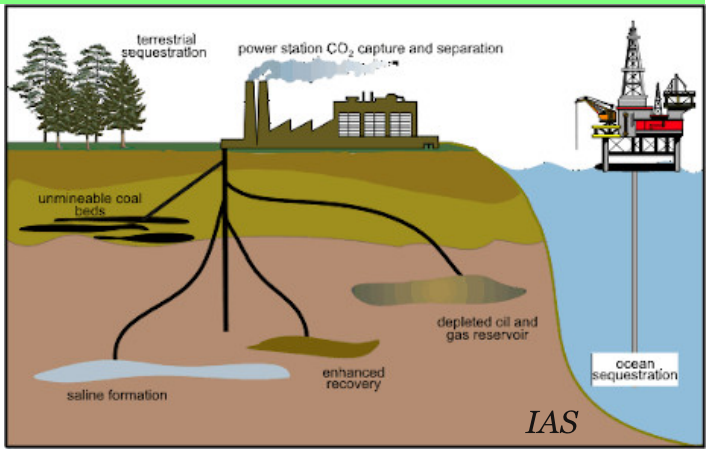
The standard method of removing them from water is with carbon filtration, but experiments are being done by Clarkson University, working with the Air Force, on another method, plasma reactors. In a confined container, argon gas is pumped into the water to bring the PFAS to the surface and then they are zapped with high voltage plasma to break the chemical bonds. Presently this can only be done with small water flow rates but hopes are, when it is commercially developed, it will work out cheaper and more effective than carbon. The problem with carbon is the carbon has to be incinerated when used up, to prevent it going back into the ground water, which puts more global warming CO2 in the atmosphere.

The current EPA has delayed setting a limit on PFAS's, and rejected congressional acts to ban them, and declare them "hazardous chemicals". The Administration has said they will veto any legislation put forth to protect our water from PFAS's, or other industrial chemicals. The solution is to invent more methods to remove them in water treatment and the air or put in a better administration that cares about our lives and the environment.

WRD SoCal

Carbon Sequestration: Good and Bad

Artificial Carbon Sequestration is the process by which CO2 is pumped into the deep ocean, into underground chambers vacated by mining or oil removal, or mineral areas high in calcium to create limestone or magnesium to create magnesite. Though a good idea, it comes with problems and dangers.



This pumping requires the use of more energy which creates more CO2. Pumping CO2 into the deep ocean disturbs the natural environment there and makes the ocean more acidic damaging coral, shellfish and other marine organisms. And there is the problem that if the CO2, under pressure, is inadvertently released from underground chambers, it could kill nearby populations by suffocation. This has happened before in several locations. A release from under the ocean has sunk oil rigs and ships. This could happen from temperature or current changes through the area, earthquakes or other disturbances.

Nature's way by using plants, peat, sunlight, and the oceans' plankton is still the best.

Your Land Trust

What does the Attleboro Land Trust do? Most people think that we just accumulate land for wildlife preservation. We do that, but so much more! We currently own nearly 500 acres and protect another 200 that are under "conservation restriction". We are working on procuring more to make Attleboro a better place to live.

First, most of our properties are open to the public and therefore require maintenance. Nature isn't stagnant and people using the properties sometimes litter. We have a volunteer corps of site stewards to keep trails open, clean and safe with larger groups of volunteers for bigger projects.

Second, we are continually plotting and building new trails in conjunction with "Hike Attleboro" so eventually every neighborhood in Attleboro will have trails where people can safely enjoy the health benefits of the outdoors. Studies show that access to "Open Space" in a community promotes well-being and increased property values. Have you walked our many trails? If you don't have our property guide, trail maps are on our website and you can walk them now as long as you maintain, "Social distancing". Sun, air, water and soil are nature's great purifiers. Enjoy nature's natural beauty!

Third, we offer a "Guided Walks" series. Once the state of emergency has been lifted we plan to include walks focused on nature photography, forest bathing, wildlife track identification, our rivers and wetlands, colonial living, and others.

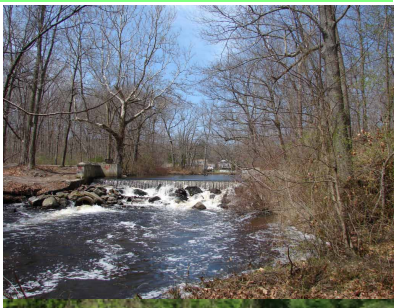
Fourth, we host the popular Attleboro Community Garden with its 62 plots. The Garden conducts educational activities and workshops for the Attleboro community. There is also a "Little Free Library".

Fifth, we produce a monthly email newsletter including articles by students at Attleboro High School where we also participate in an Opportunity Fair. This is just part of our continuing effort to engage today's youth in remediating Climate Change and preserving nature.

Sixth, we collaborate with other conservation organizations such as Mass Audubon and the Attleboro Geocachers Alliance, (the World's Largest Treasure Hunt) holding Geocaching classes for kids and adults on our properties in cooperation with the Attleboro Public Library to get more people to exercise and enjoy the outdoors.

Seventh, we have a historic "Colonial Vegetable and Herb Garden" to show how people farmed and lived here 300 years ago. We are also working on establishing a "Native Plants Nursery". The plants will be used to replant areas where we are removing "invasives". The Land Trust has other events during the year, including our upcoming 30th Anniversary.

Don't miss out! Be sure to check our website attleborlandtrust.org and our email newsletter so you can enjoy our properties, upcoming events and the new trails we are opening up as part of our "**Hike Attleboro**" project.



The Attleboro Land Trust is looking for Supporters by becoming a member, making a Tax-Deductible Contribution and/or as a Conservation Volunteer. Membership, contributions or volunteering can be done securely at Attleborolandtrust.org or by mail at Attleboro Land Trust, P .o. Box 453, Attleboro, MA 02703. Thank you for your support.

What's Happening on the Barrows' Farm in 1720

Spring is here and it is getting warmer. The annual herring run is the end of April and running into May. They can scoop up buckets of them as they accumulate at the dam. Some they eat right away, some they pickle, some they dry, and some they pack in salt. The vinegar they needed for pickling was produced naturally from apple cider.

The Native Americans taught them to put one herring in each mound when planting corn so they place one periodically in each row of corn as fertilizer. They always leave a dam spillway open each night so some can get to the ponds to spawn or there won't be any the next year. You can still see the herring run on Cape Cod Canal the end of April and beginning of May though it is greatly reduced from past years. Even 50 years ago, people were there with nets and buckets harvesting the herring.

The "Stone Harvest" is over and now they are working on plowing the fields. The areas they cleared over the preceding year is now brought under the plow. Manure is spread on the fields for crops and the animals are let out to graze on the hay-fields, naturally fertilizing them. Flax is planted in the lowlands as it needs more moisture while the corn, squash, beans, and other crops are planted on plowed mounds to provide good drainage. In planting the crops, they now would use the seed saved from the previous year to get the best propagation, setting aside a new reserve in case of crop failure from a late frost or excess rain. The previous year's reserve, if still available, could now be used as fill between the seed that sprouted. Seed in that era could have a poor propagation rate because of over-wintering conditions.

The animals are reproducing, increasing their herds, flocks, and gaggles. This is important, not only for food, but for barter as the colonists didn't use much money that was controlled by the Crown, since anything bought with money would be taxed before being brought from England. They would need money for staples such as salt, sugar, flour, gunpowder, lead, hoop iron, tools, glass, paper, utensils, pots, and tea, bought from Boston or Providence but they still bartered whenever possible.

In 1720, the Barrows were in an isolated area of the North Purchase and depended on their neighbors as their neighbors depended on them. It helped that the Barrows had a sawmill, shingle mill, and coopery plus produced both linen and wool cloth. With their Milking Devons they were able to produce milk, butter, and cheese but mostly for their own use. Spring was here and it would portend a new beginning.

Updates, Comments, and Interesting Reading

New Zealand will be the base for a global satellite methane emissions measuring program from oil and gas producers starting in 2022. It will be used to police excess emissions.

Karst Stone Paper is made from waste limestone and HDPE resin. It releases 67% less CO_2, uses far less water, is waterproof, difficult to tear, recyclable, and photodegrades in sunlight over time leaving only calcium carbonate.

Ecovative has developed a system of using mycelium (root structure of mushrooms) and organic waste grown in molds to make a Styrofoam substitute for packaging. When done you break it up and throw it in your garden as a nutrient.

North Carolina State University has developed the most efficient method of converting sewage sludge and restaurant grease to methane thereby producing energy from waste.

Work Getting Done Despite Covid19

Larson Woodland

Richardson Nature Preserve

Larson Woodland

Richardson Nature Preserve

Ted Leach- Richardson Nature Preserve

If anyone doesn't want to continue receiving this newsletter, they may optout by emailing to ALToptout@gmail.com and leaving their email address.