

June 2020

ATTLEBORO LAND TRUST NEWS

A Monthly Newsletter on Outdoor Adventure and Conservation



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The Attleboro Land Trust in the Covid19 Era

Your Land Trust is a function of its members. The property already obtained is protected in perpetuity but the maintenance and protection requires an active membership.

Covid19 has put us all in danger. To do our part, while continuing to function as a vital and energetic entity, the Land Trust will be following these procedures:

- Protect our members, the people who support us, and the public who utilize our properties by following the WHO and CDC recommendations of separation, wearing masks, and sanitizing hands and surfaces frequently.
- Maintain our properties, using small groups that stay separated, wear masks, and use their own tools or sanitize Land Trust tools before and after use.
- Conduct more continuing business through email and faxes to minimize face-to-face contact.
- Change the bylaws so meetings and voting can be conducted online instead of as groups.
- Postpone group activities such as next month's 30th Anniversary Celebration, working with Attleboro High School students, building new Hike Attleboro trails, and the Guided Walks until infections decline and vaccines and cures are available.

During this trying time we must all work together. The Land Trust will continue to obtain more properties to preserve our city and environment and will maintain our existing properties.

Stay Safe Everyone.

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A NEW DISEASE AMONG OUR TREES

As if the year 2020 could not pack in even more calamity into the first half of the year, there is word back from researchers about a mysterious disease that is beginning to kill our American Beech (*Fagus grandifolia*) trees throughout the Northeast and New England woodlands. This is a tough concept to consider as the Beech tree, the only species of this genus native to North America and the fifth most common species that we have in our forested region, is in potential peril.

Common and distinctive, Beech trees have smooth hard steel gray bark with light and dark patches that are described as resembling elephant legs. Large specimen trees can grow to over one hundred feet tall and their small nut like fruit provide food for birds, squirrels and



deer in the fall. The overall success of this species, that grows best in cool moist upland soil, is that it is very shade tolerant. As an immature seedling, it is ready when fire, harvesting or natural wind destruction opens the tree canopy to expose it to more light and less competition, to which it responds to become a co-dormant tree in our woodlands.

To date, there is disagreement as to the exact cause to this disease. What is known is that it is

spreading fast from the Great Lakes to New England and likely northward. Though research on all levels is vast, it has become hard to pinpoint exactly what is the cause. Some say it is a disease pathogen while others are studying a link with nematodes in the leaves as the cause of the beech leaf disease. They are similar to nematodes found in beech trees in Asia that infest but do not kill the trees. Scientists say there are no known leaf eating nematodes that affect trees in North America. Whatever is the real cause of the shriveling leaves in the beech trees, it needs to be resolved very quickly. This malady is spreading in our regional woods and has been found in Western Connecticut and Long Island, just outside New York City. In any direction it goes, it will alter a great deal of the woodland environment in urban, suburban and exurban settings that it infects.



Without question, the cause and how it is spread has to be determined in order to develop the protocol that can begin to arrest this new potential invasive tree killer. In the Northeast, we are already dealing with the possible devastation from the Emerald Ash borer, the Asian Long Horn beetle and the newly announced unnamed beetle found on stressed European Beeches in New York. It has not yet been determined if this new beetle will jump to munch on our American Beech. I will keep you posted.

Phil Boucher

When it comes to producing fruits, vegetables, and meat, there are two ways, starting a garden and having a farm. There are pros and cons to both methods and how much they produce. First, let's understand the difference between a farm and a garden. A farm is an area of land (usually a large amount of space) used for farming crops and holding animals under the control of one owner or manager. A garden is a small plot of land used to grow vegetables, fruit, herbs and flowers usually



by a homeowner or family. A major difference is the size. The average farm in the U.S. is 444 acres (43,560 sqft per acre) which can be a smaller family farm or a large commercial farm. An average garden is usually about a quarter of an acre (10,890 sqft). With this large difference in land, you can produce more food on a farm than a garden but a garden requires less labor and can produce more crops per unit area. In the olden days, labor on a farm is usually done by animals such as oxen or horses, while in modern times, machines are used to maximize efficiency.

With all this land, farmers can produce thousands of pounds of crops in a year. A well-maintained 600 sqft garden produces about 300 pounds of crops but can save a household a lot of money on groceries. The general consensus is, the larger the area, the more labor you need, but more crops produced. A garden has a smaller area with less labor required and not as much crops but with the addition of saving significant money annually. According to the National Gardening Association more than one third of all households in the U.S. grow some of their own food. A well maintained garden can produce 1/2 lb/sqft of produce per growing season. Some crops such as lettuce, herbs, scallions, and carrots can grow several crops a season while indeterminate tomatoes and beans will



continually produce all season.

The problem with farms is when they ship out their crops; they ship them out to grocery stores or wholesalers to sell their product. They are often shipped unripe, meaning they are not as fresh as if they came ripe from a garden. Garden produced foods tend to be more nutritious, flavorful, and have less chemicals.

Proofread by: Paul Dansei and Jamie Laliberte

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.

Updates, Comments, and Interesting Reading

There are many technological inventions which are supposed to slow or reverse climate change or remediate the effects of climate change. The problem comes that we need to figure out what the ramifications of these technologies will present to the planet. One solution presented is to place billions of micro hollow glass spheres on the ice in the Arctic and Antarctic to reflect the sun's rays but this could lead to micro glass pollution to go along with micro plastic pollution. Alien species of plants or animals were introduced to the US to solve one problem only to result in other problems later.

The Eco Stove, by using volcanic rocks and briquettes made from waste to create heat, uses 95% less wood in underdeveloped countries for cooking, while also having a solar panel to power a Led light, charge a phone, and power the internal fan.

A study by the University of Michigan from 1978 to 2016, published in the journal Ecology Letters, has found that in all 52 species of migratory birds they studied, body mass (size) has decreased while wingspan has increased. As the atmosphere warms, it takes more aerodynamic efficiency (larger wings) to fly and support their weight.

A study of 56 million live births, by UCLA, shows an increase in births from 6 days to two weeks early, when temperatures are above 90 degrees. The last couple of weeks of gestation is critical for lung development.

MIT is working on developing efficient wave energy converters (WEC) and high efficiency perovskite solar cells, which are much cheaper than silicon solar cells.

Researchers from Singapore-MIT Alliance for Research and Technology (SMART), MIT's research enterprise in Singapore, and Nanyang Technological University (NTU) have designed an antimicrobial polymer that can kill bacteria resistant to commonly used antibiotics, including methicillin-resistant Staphylococcus aureus (MRSA).

According to a study in JAMA Urology, a diet rich in poultry, fish, vegetables, fruit and whole grains produces the highest testosterone and sperm counts. Vegetarian diets were significantly less with a "western" diet with processed foods being the worst. Testosterone is necessary for the building of muscles and bone mass. Other factors include, pollution, chemicals in our food and water, alcohol consumption, smoking, and obesity.



Victory Gardens Are Good for Conservation

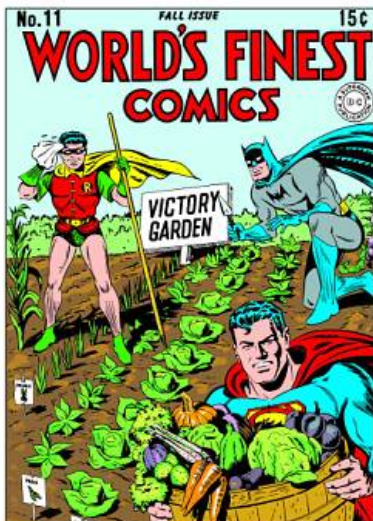
The Victory Garden idea started in World War I as a way to have more food for civilians, so farm raised food could be used to support the war. Individuals would plant gardens wherever they could. There were also community garden plots available on city commons and other areas for those without their own land, much like the Attleboro Community Garden. Today a Victory Garden or home garden is being revived as a modern conservation effort.



So what are the benefits and disadvantages of a home garden?

- A 10 X 20 foot garden could produce \$200 or more of produce a year depending on what is planted. Indeterminate crops, herbs, microgreens, and quick season crops produce much more.
- Your own grown fruits and vegetables will be fresher and tastier than store bought.
- You can plant crops that are more varied and more nutritious than any from a store.
- There are no transportation, warehousing, and refrigeration costs or pollution.
- You will have to work on the garden, but isn't a little exercise good for you?
- The garden will take up some area of your property that won't have to be mowed.
- The grass clippings from the rest of your property can be used for mulch and compost.
- Any chemicals used on the garden will be determined and controlled by you.
- A well tended garden improves the soil, prevents erosion, cleans the air, and provides a return on any investment made.

What?! You don't have any land and the Attleboro Community Garden is full? You can still plant herbs, one of the most expensive crops to buy, in pots on a windowsill or microgreens for salads which can be harvested every two weeks. You can use inexpensive grow bags on porches or patios. Planters either upright or hanging are an option. It is amazing how many tomatoes, herbs, peppers, or potatoes you can get from one.



There are many sources of information and supplies for gardening online. Now is the time to start when the soil is getting warm. It is a way to be an environmentalist which benefits nature and you as well. You will be rewarded for your efforts with delicious fruits and vegetables.



What's Happening on the Barrows' Farm in 1720

Most of the crops are now planted and the newborn animals have been tended. Benajah and the boys are busy with the mills. Now that it was warmer and work could be done outside, it was time to make soap and prepare fat for candle making.

Soap was made either in spring or fall. If you were butchering animals it would coincide with the butchering in the fall, otherwise it was done in the spring. Soap making would take from two to three days. Of course soap from England could be bought but there were more important items to spend money on, if you had any. The soap made now would need to last all year.

Two ingredients were necessary, lye and fat. Lye was made from hardwood ashes which had more mineral content than softwood ash. The ashes were called potash. Potash was very valuable and vendors would come by every year to buy potash. There was a large trade with England for pearl ash which is purified potash. For some colonists, this was the only money they received all year. A barrel or hopper was prepared with filtering material on the bottom and ashes on top. Rain water, not brook water which is too acid and would neutralize the lye, was slowly poured through the ashes and out through a spout or channel in the bottom into a container. This would take some time for the lye solution to leach out. The lye solution was then boiled in a pot to concentrate it. It was strong enough when an egg or potato floated on top showed a spot the size of a sixpence (quarter).

Then the fat, that had been collected all year, was put in a pot with water and slowly boiled for hours, a very smelly operation which is why all these operations were done outside. When all the fat was thoroughly melted and floated to the top, more water was added and it was allowed to cool with the impurities staying in the water. The cleaned fat would solidify on top like on soup.

The next day an appropriate amount of lye liquid and the fat were put into a kettle and slowly cooked for 4 to 8 hours until it was a gel and very frothy and a small bit placed on the tongue didn't "bite". The resultant soap would be like a jelly and put into a barrel for use during the year. If you wanted a hard bar of soap, salt had to be added before cooling. Most colonists used the soft soap as salt was expensive.

This is a very trial and error process. Too much lye and the soap would make you raw while too little and the soap wouldn't gel and be greasy. Sometimes it took several tries to get it right. Natural fragrances would sometimes be added. The extra fat was saved for making candles.

Of course, the younger children had to keep up with protecting the newly planted crops and newborns from predators. They were kept away from the soap making as the lye or splashing foamy soap mixture could cause serious burns.

The warm weather brought the heavy work season with longer daylight hours but also some time when neighbours could come by for bartering and socializing.



*Thank You
to All the
Amazing
People
Working
Hard
Taking Care
of Us
and
Saving
Lives.*

Power Vampires: Conserve and Save Money

Just what is a power vampire? A “power vampire” is any electrical or electronic item that is using power when the object is switched off or not being used.

Items such as power adapters and chargers use about 10-20% of their rated amperage when they are plugged in and not being used. Any appliance that uses a touch switch or remote control rather than an old mechanical on and off switch is working on a switched mode power supply. Switched mode power supplies were made to replace the older transformer power supplies that wasted a lot of electricity by dissipating heat. The smps dissipates very little heat but it remains on all the time providing power to a touch switch circuit, remote control, and other circuits that allow an item to come on more quickly. We are paying for the convenience. TV's, microwaves, stereos, cable boxes, DVR's, VCR's, computers, printers, monitors, and other appliances are always using power even when they are switched off. These are all wasting energy which causes more pollution and global warming.

What can we do about it? Some items such as a cable box, microwave, DVR, remote controlled TV, or any item with a timer, we don't want to switch the power off unless we will be gone for a long time such as on vacation. When on vacation, most items in the house should be unplugged or the mechanical switch in a power strip switched off to protect the items and your house from power surges and lighting strikes. Don't trust surge protectors as the MOV's or spark gaps in them can fail with no indication, including the monitored ones.

Power adapters and chargers should be unplugged when not in use. For your computers and stereos use master/slave(swached/auto-on) power strips. The computer or receiver should be plugged into the master outlet and all the peripherals plugged into the switched outlets. When the computer or receiver is turned on, the other items will be switched on as well.

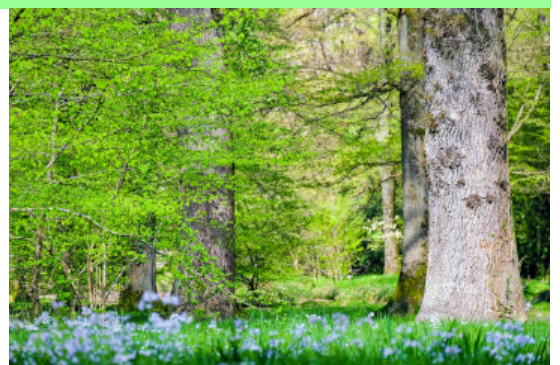
Now you are saving energy, money, and the world as well.



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or send us and email at attleborolandtrust@gmail.com**



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