Cross Pollination

May 2008 – *Volume 57*

Coordinator's Corner

This month I am taking a reprieve from writing the Coordinator's Corner. Sheila has written an article that well describes our dilemmas in spring.

Thank you Sheila for your contribution.

Lorne

As we gardeners well know, the experience of ever evolving changes to our gardens are all part of the gardening process each year. February has been especially hard with lots of snow and, consequently, so much snow shoveling to do. My thoughts have turned to what needs to be changed in my garden this season. I'm tired of having to severely trim back the four climbing rose bushes each year along my walk-thru pergola. I can only recall one season where the dieback was minimal and the result was a spectacular show of roses all along the peak. I have an old pear tree which hasn't been producing much fruit the past three or four years. Pear scab is becoming more of a problem and I'm contemplating removing the tree, much to the chagrin of my family. The tree does provide places to hang the birdhouses as well as a resting spot for the birds. On the negative side, there is the constant pruning of water sprouts and the rush to beat the raccoons to the fruit. What to do, what to do? I have a central oval bed which measures approximately 20' L x 10' W. The bed used to be home to a good collection of native perennial plants and grasses. I had an irrigation supplier remove the plants to keep for himself. In return, I got a discount on my new irrigation system. My new plan is to use mostly evergreen plants and some flowering shrubs to keep maintenance upkeep to a minimum in this bed. I've been reviewing my library of books and internet resources to come up with a design plan for this now open "new" bed. What fun! Spring can't come soon enough for me!

Sheila

Sheila McCallum...and a wee bit of Lorne Sparrow

Labrador Tea

(Rhododendron groenlandicum Oeder)

Once thought to be a distinct genus Ledum, botanists decided in 1990 that Labrador Tea should be incorporated into the genus Rhododendron.

The name Labrador Tea is most commonly used however it has many other names such as Bog Tea, Rusty Labrador Tea, St. James Tea, Hudson Bay Tea, Woolly Tea, Settlers Tea and Tundra Tea. There are also many other names given to it in French and Ojibwa languages. Regardless of the name, they all describe the plant, its location and type of habitat accurately.

Distribution map Canada

Labrador Tea is a fragrant, evergreen shrub native to boreal North America. It occurs from Greenland to Alaska and across northern Canada to Newfoundland and around the Great Lakes. It prefers a cool damp environment and is therefore found in cool mountain woods, bogs and alpine and arctic tundra. *R.groenlandicum* prefers a humus-rich acidic soil with a pH of 4.0 to 5.5. This shrub grows to three feet tall and wide at maturity of twenty years. A key to identifying the plant is the leaves. The top side of the leaf is a leathery dark green that is smooth and shiny and curls under at the edges. The underneath is hairy with rusty coloured fuzz. When crushed, the leaves emit a spicy fragrance. The flowers are white and also have a spicy scent.

Labrador Tea was a very important medicinal plant for many aboriginal people. It has been used as a salve for burns and a tea to wash burns, bites and sores. The roots have been ground into a powder used to prevent ulcers, or as a poultice to relieve burns. When settlers came to Canada they drank it as a tea to protect themselves against scurvy. The leaves contain ascorbic acid (vitamin C) in addition to gallic acid, tanic acid, wax, resin and salts. It was a popular drink in Canada and also for the soldiers who fought during the American War of Independence.

Labrador Tea is made by mixing dried leaves with black tea. Young leaves are picked before flowering in June. Caution is needed as pure Labrador Tea contains ledol, which is toxic in large doses and andromedetoxin, which can cause headaches and stomach cramps. It is recommended to brew the tea only a few minutes as any longer may prove toxic.

The North American Indians would often flavour this tea with the roots of liquorice fern. When lemon is added it can be used as iced tea.
Many other uses were found for the plants of Labrador Tea; the leaves were stewed among the clothes to keep moths away, and branches were placed amongst the harvested grains to keep mice away. In Russia, the leaves were used for tanning leather. In the nineteenth century it was used to repel fleas, bedbugs, lice and mosquitoes. It was also used as a brown dye. A very hard working plant!
The plant attracts wildlife such as squirrels, butterflies and bees. It is a larval host plant for the Northern Blue butterfly.

To grow Labrador Tea you need a moist humus-rich acid soil in shade or semi-shade. The plants flower more freely when grown in a sunny position. Labrador Tea likes cool temperatures and is hardy to at least -15°c. Plants benefit from removing the dead flowers before they set seed. This prevents them putting too much energy into seed production at the expense of more flowers and leaves. Propagating Labrador Tea is moderately easy. It can be grown by seed either by sowing in autumn or starting in February or March in the greenhouse. Hardwood cuttings will take, as will layering. If you can grow Rhododendrons well, you should be able to grow Labrador Tea.

Close up of a Labrador Tea flower, found in the alpine zone of northern New Hampshire. (Wikipedia)

Patty King

I attended the 43rd IPM symposium at Landscape Ontario Congress in January with my colleagues from Cudmore's Garden Centre and found it to be very interesting. It was obvious from the speakers assembled that governments at all levels and the landscape and horticulture industries are very involved in finding alternative solutions to reduce the impact on the environment and our health to combat pest and disease problems. Consumers are demanding changes, but it is a slow and complicated process. There was a lot of information that I will be covering in a presentation in the future but here are the highlights of the symposium.

Nathan Helder of Jan Gelderman Landscaping said that customers are now asking what the industry is doing for the environment and he explained that there is now a National Environmental Committee that is Canada wide. They are working within the various industries to share information, develop best practices and develop guidelines to protect the environment in the horticultural field. This includes nursery growers, maintenance, irrigation, landscape design, retail and wholesale sectors, as well as practices such as water and energy usage and waste reduction. Public education and awareness is also a critical part of the plans.

Paul Gray of the Ministry of Natural Resources made some very interesting points about the weather and how it is affected by human and natural factors. Predicting long term climate change is very dependent on how we behave- will we have more or less industry and will their practices add to air pollution or will we use existing resources in a less harmful way (energy, water, waste disposal, recycling)? Temperature and the amount of precipitation will affect not only our air and water quality but all animal species, ecosystems and land mass changes in unique ways. A plan needs to be made that will sustain all environments, now and for the future.

Dr. Gerry Stephenson of the University of Guelph spoke more specifically about pesticides and the use of alternatives for residential and golf courses. As we become more aware of the harmful effects of earlier pesticides and herbicides to air and water quality, wildlife and even 'non-target' areas of water and soil, it has become critical to find alternatives that are easy to produce, purchase and use. Four such products being studied are acetic acid (vinegar), neem oil, corn gluten meal and sarritor (fungal organism that infects weeds). Because they are 'naturally occurring' they are regarded as biopesticides.

Jennifer Llewellyn from OMAFRA gave an update on a number of pests that plague this area and indicated that the very warm and dry weather last year is partly responsible for the spread of pests and disease that we are finding. Again, weather (lack of precipitation, hot, dry winds, temperature) affects the increase and spread of insect pests and diseases, as well as plant's ability to recover from infestation. An online database is being developed at Guelph University for common pests on outdoor ornamentals.

Geoff Cutten of the Ministry of the Environment spoke about mosquito management not only to reduce the public health problems but also the nuisance factor and economic impacts of high populations. For residential areas, the most effective strategy is cleaning up standing water to reduce mosquito breeding grounds. Public education is critical in controlling this pest.

Bob Wilton of Clintar Groundskeeping Services and Dr. M Sears of the Department of Environmental Biology at Guelph University spoke about lawn pests. Mr. Wilton feels that pesticide usage is no longer an option and this gives us a good opportunity to change how we treat our lawns. He strongly suggests cultural methods to reduce the pests; best practices for mowing height, aeration, fertilization and watering correctly. Dr. Sears discussed a number of common turf pests and explained that by the time you see the damage it is usually too late to try and control the pest. There are some 'natural' ways to combat problems (nematodes, neem oil, Sevin) however, you must identify the pest and know the life cycle in order to effectively control it.

Maureen Millar

HALTON MASTER GARDENERS' BARBEQUE 2008

As previously mentioned to you, we are attempting to expand this year's BBQ into a "Day in Georgetown".

The *Georgetown Horticultural Society Garden Tour* is on that day; the hours are 10 a.m. to 4 p.m. and our garden is on the tour. Therefore, we cannot start our BBQ until after 4 p.m. The cost for the BBQ is $10.00 per person. This provides the meat course, wine and beer. If you are going on the tour and have food to refrigerate feel free to drop it off prior to starting the tour. We will e-mail you a list later to indicate if you are attending and what you are bringing: appetizers, salads or desserts.
I am attempting to get some Tour Tickets so you can purchase them at our meeting on May 7th. See attached map, it shows the location of the other attractions.

While in Georgetown do take time to visit "The Old Seed House Garden". While there note the Kentucky Coffee Tree which we planted in Belinda's honour. There will be a yellow ribbon attached to it that day.

Also "triffids" (Belinda's) is holding a sale that day. Bring your Brink's truck and enjoy her garden.

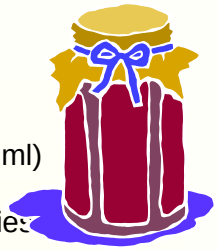
Don't forget your badges and dress for the weather. Looking forward to a great day.

Larry

LARRY & ELOISE ALDEBERT
39 WILLOUGHBY WAY
GEORGETOWN
905-702-0155

See the last page of the newsletter for a map of the Garden Tour.

Saskatoon Berry Jam



Makes about seven 8-ounce (250 ml) jars.
4 ½ cups crushed Saskatoon berries (about 9 cups whole berries)
4 tbsp lemon juice
1 package regular powdered fruit pectin
6 cups granulated sugar
2 tbsp orange-flavored liqueur (optional)
Cook and jar as per any usual jam recipe[1]

Saskatoon Berry Pie

Pie Filling:
2 cups Saskatoon berries
2 cups chopped apples
½ cup sugar
3 tbsp Minute tapioca
2 tsp lemon juice
1 tbsp butter

Mix berries, apples, sugar, tapioca and lemon juice and spread in bottom of unbaked pie shell. Dot with butter. Top with top unbaked pie shell and brush with milk and sprinkle with sugar.
Bake for 15 minutes at 450 and then ½ hour to 45 minutes at 350 until bubbly and golden.[1]

Karen Walsh

THE DOMINION SEED HOUSE

I recently attended a presentation by Heritage Halton showcasing The Dominion Seed House. It was a long presentation. To share with you, I will try to capture some of the facts in short form.


Dominion Seed House Founder
Bill Bradley

William, the youngest son of James Bradley, an Irish immigrant first worked as a Teller for the Bank of Hamilton, the first Chartered Institution in Halton County. He was a community Icon and very involved as a citizen of Georgetown. In 1922 William established the Bradley-Edwards Electric Company in partnership with Roy Edwards. The Company sold appliances such as Electric Ranges, Barbers clippers, Coffee Makers and Sun Lamps by mail order.

Since the Company experienced a slow down of business over the winter months, Bradley came up with the idea of selling mail-order seeds during the cold seasons to prevent having to lay off employees when things were slow. This was essentially the beginning of the Dominion Seed House- the year was 1928. The Electric Company became a distraction. The Dominion Seed House grossed over $20,000.00 in its first year.

The Dominion Seed House flourished during the Great Depression . The first Dominion Seed House was constructed in 1933, followed in 1936 by the famous Tudor structure with its typical half timbering and plaster filling.

Their catalogue was printed in black and white with poetic plant descriptions. In 1981 the catalogue became a full colour production. The colour resulted in an increase in sales. During the 1970's and 1980's well over 200,000 catalogues were distributed each year.

Being the largest and most renowned mail order seed business in Canada the Seed House's history in Georgetown helped the town to be known to gardeners nationwide. The Dominion Seed House thrived for 60 years and was the largest mail-order seed company in Canada for over 50 years. It had 26 full time employees and upward of 125 on the pay roll at peak season. It averaged 3000 orders daily and at its peak offered over 1200 varieties of seeds and bulbs, processing up to 4000 orders a day.

The business was so large that it merited its own postal station. The Seed House also worked with the CNR arranging that a rail car would be left on a siding every Friday in order to accommodate the shipment of Dominion Seed House orders. By the 1980's UPS played a key distribution role. Dominion Seed House had customers around the world.

By 1990 the business was slowing down and was finally sold to Perron Seed from Quebec in 1993, which now operate it as an on-line mail-order business. This sale ended the Seed House's 65 year run in Georgetown. It had been a vital part of the town from 1928 until 1993. By 1998 the property was sold to Developers and the landmark Tudor building was demolished.

The site is now remembered, thanks to "The Friends of The old Seed House Gardens", an organization which has created a park; formal gardens, walkways, pavilions and a sunken garden in the early seed house building foundation. (See Cross Pollination, September, 2006, volume 37.) When you are in Georgetown on June 8th, I hope you will visit The Old Seed House Garden.

In the Halton Region Museum there is a display. Artifacts include catalogues dating from 1935 to 1993, seed packages, printing blocks, a printing press, a seed packet filler and many other items.

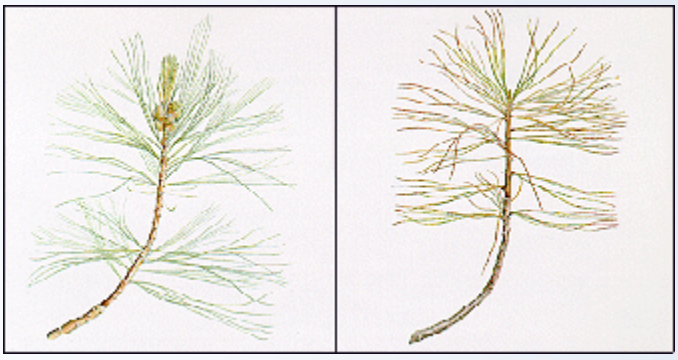
My thanks to Heritage Halton for a fine presentation and for allowing me to reproduce these few historical facts.

Larry Aldebert

Air Pollution Injures Trees

My curiosity was piqued by the unexplained sudden death of a majestic seventy foot Red Spruce at my childhood home in Hudson, Quebec. What could have been the cause? Inspection revealed nothing – no sign of insects or disease.

Research revealed that these particular trees have been indiscriminately dying from the effects of acid rain from Vermont to the Ontario border – their range. The acid rain affects Red Spruce indirectly through changes in soil nutrients, and directly when acidic fogs and rain leach calcium directly from the needles, leaving the membranes of the needles unable to handle freezing temperatures. Interestingly, neighbouring trees may escape, as in this case – it all depends on the individual health of the tree as it enters dormancy in the fall. Although all appears fine as it attempts to put out new growth in the spring, it simply hasn't the energy to continue further and quickly dies.



Healthy pine needles

Pollution-injured pine needles. Green and brown bands on pine needles indicate air pollution damage.

Researchers in smog-prone areas have studied and documented air pollution damage to plants. Some of the major pollutants are:

- Carbon and sulphur dioxides: burning oil, coal, and natural gas for energy, forest fires
- Hydrogen fluoride and silicon tetrafluoride: aluminum and phosphate fertilizer production, oil refineries, and steel manufacturing
- Ozone: chemical reactions of sunlight on automobile exhaust gases
- Methane: burning fossil fuels, livestock waste, landfills and rice production
- Nitrous oxides: burning fossil fuels and automobile exhausts
- Chlorofluorocarbons: air conditioners, refrigerators, and industrial foam

Air pollutants injure trees by damaging their foliage and impairing the process of photosynthesis. This also weakens the trees by making them more susceptible to other health problems such as insects and diseases.

Specifically, ozone damage symptoms can range from slow growth to severe leaf browning, followed by leaf drop. The most likely time to find ozone injury is in the autumn. Trees such as linden, maple and green ash may exhibit ozone-injury symptoms. Outer margins of linden trees display a minor black mottling in early August that progresses to severe marginal tissue destruction. Young leaves on maples display white flecks much like freckles. Green ash trees lose their leaves prematurely and look rather sickly, which is common in my East Oakville neighbourhood.

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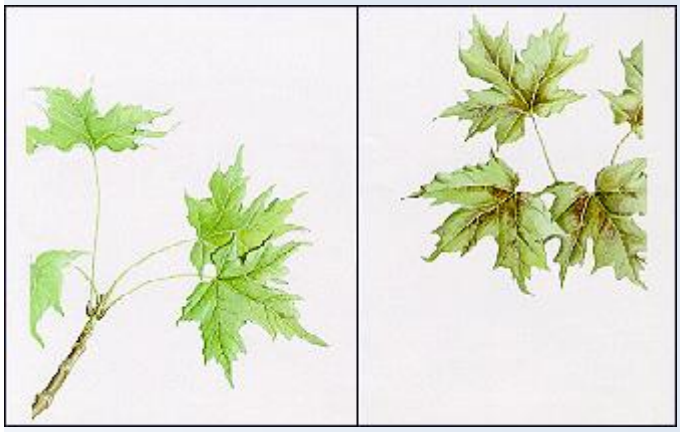

Healthy maple leaves

Pollution-injured maple leaves. Discoloration along the midrib of hardwood leaves may indicate air pollution damage.

Air pollution injury has been documented on the above mentioned as well as aspen, honey locust, willow, poplar, buckeye, pine, and fir. Catalpa, American elm, and larch are also intolerant.

A few trees that are relatively tolerant of common air pollutants are: oak, magnolia, white dogwood, cedar and Norway maple.
Diagnosis from the symptoms is difficult because fungal diseases may cause leaf symptoms that mimic air pollution.
Note that overall, other causes of stress and injury to trees, such as environmental stress (from drought, cold etc.) and soil conditions (tight clay soils, shallow soils etc.) are common and the more easily identifiable causes of plant growth problems.

Sheelagh Rowland-Brown

Coming Events

Volunteer

RBG Special Events: Marg is organizing the volunteer sign-up for the RBG Special Events

Lilac Festival	May 18 & 25
Iris & Peony Festival	June 1 & 8
Rose Festival	June 22 & 29 and July 6

Sign-up at the meeting or contact Marg.

Joseph Brant Hospital: The Joseph Brant Hospital Garden Tour
Friday June 13 and Saturday June 14
Sign-up at the meeting or contact Lorne
Kippax Garden: Planting of native species in the new Kippax Garden mid to late June.
Date TBA

Special Event

THE FIRST ALL-CANADIAN ROSE SHOW

The Hamilton & Burlington Rose Society proudly presents THE FIRST ALL-CANADIAN ROSE SHOW. A CELEBRATION OF Canadian Rose Hybridizers, this unique show features 700 Canadian Cultivars produced by 86 Hybridizers. Everyone is welcome to exhibit Canadian Roses (ONLY) and /or attend the show to see the beautiful rose blooms that Canadians have produced

Where:Royal Botanical Gardens

When: Saturday June 21 and Sunday June 22

May 7th
Georgetown Horticultural Society Garden Tour
10 a.m. to 4 p.m.
Master Gardeners' BBQ
4:00 p.m.

Alliaria petiolata – garlic mustard

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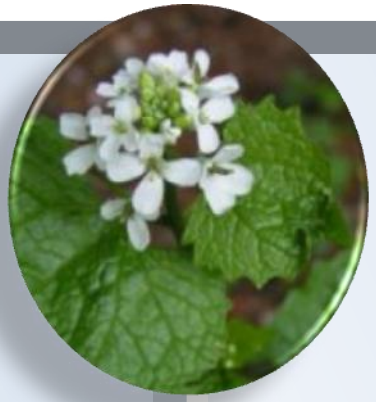

Garlic Mustard is a recent invasive weed in our part of Canada. When I lived in England, I knew it as *Alliara officinalis* or jack-by-the-hedge. Other common names include hedge garlic, sauce-alone, poor man's mustard, jack-in-the-bush, garlic root, garlicwort and mustard root.

Native to Europe, it was first recorded on Long Island, New York, in 1868 and is now found from eastern North America to Alaska. Brought to the New Word by settlers for food and medicine, it has since spread through all but the hottest and driest regions of North America.

Garlic mustard is a cool-season, biennial member of the Brassicaceaes, which includes cabbages and mustards. It can be recognised in its first year by a rosette of dull, mid-green, heart-shaped leaves that smell of garlic when crushed. The leaf margins are coarsely toothed and the leaves feel rough. It's easy to recognize these plants in a mild winter as they form an evergreen groundcover in disturbed areas, alongside trails and in our forest edges, ready to grow once the warmth of spring arrives.

In the second year, the plants shoot up to half a metre (20 inches) in height and the leaves become smaller towards the top of the stem. Clusters of small white flowers appear with petals arranged in a cross shape. The flower stalks lengthen as the black seeds develop in long, thin pods. The plants die rapidly after flower production, leaving dry brown stalks by July. Each plant may produce as many as 850 seeds, which can remain viable in the soil for up to five years.

Why should we be concerned about this weed? It crowds out our native plants, such as the trillium, and competes with garden flowers. It grows in shady places and produces a chemical that inhibits the growth of other plants. Garlic mustard has no natural enemies in North America, though it is pollinated by our native insects and also self-pollinates. Caterpillars of the endangered West Virginia White butterfly (Pieris virginiensis) die if eggs are laid on garlic mustard.

Removal of garlic mustard takes persistence. Seed blow in, even if you think every plant has been removed.
Non-flowering stems have a very strong root system, so in hard clay soils, cut plants down well below the crown; otherwise new stems will shoot up from buds at the top of the roots. In softer soils and for flowering stems, which have a weaker root system, pulling them up by the roots is usually effective. Be sure to destroy any cut of pulled stems. because stalks left exposed with have enough stored energy to produce seeds.

If it's permitted in your area, Roundup can be used as a control in the early spring when growth has just started. Remember that using this product kills every green plant it touches, so apply with care, according to directions.

Mulch your garden well and try not to disturb the soil too much, which will bring dormant seed to the surface where they will quickly germinate.

Luckily, many plants will be killed by a cold winter with little snow cover. However, in harsher winters, a thick cover of snow will protect the plants.

Look out of the window. Is the soil visible in your garden? Go out and check for garlic mustard. If it's warm, it will be growing, so get it early!

Anna Leggatt

Anna Leggatt is a Master Gardener and tireless TBG volunteer.

Garden Tour
June 8th 2008

*** MAP NOT TO SCALE ***