

Pollination Guelph Symposium – March 25th 2017

This report on the talks at this conference was prepared by David Oldacre - March 18th 2018

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Virginia McPhail Pollination Guelph
Welcome and Updates on Pollination Guelph
A Ghost in the making - Movie about Rusty-sided Bumble Bee

This was a brief update for the various projects that were being undertaken by Pollination Guelph which included Eastview Pollinator Park - Several projects being undertaken with various degrees of success.

Conversion of a 3 hectare area into a natural prairie grass area – which has not no success in germination over the past two to three years – so new ideas to be attempted in 2017

Remediation Project - Native pollinator friendly seed quilt and bee condo. (see report below)
 The former was very successful, but there was little occupation in the bee condo. Project is being expanded in 2017

Riverside Park Garden – maintenance activities

Trans Canada Trail – clean up activities in September 2016

University of Guelph Arboretum – Gosling gardens – plans for upgrades in 2017

Hospice Wellington – The Gosling Pollinator garden; 5 phases beginning in 2012; 9000 sq ft developed by the end of 2016, and they have funding for the maintenance and further development for the next 10 years.

Scottsdale Drive – New plantings for 2017

Kortright Road - general maintenance of roadside plantings

Hospice Rordan - new interpretive signs, updating planting and infilling some areas

Guelph Community Food Forest – Multi purpose, mimicking a woodland ecosystem. Food for humans and pollinators Plantings in May 2016, and October 2016

Outdoor classroom More plantings - March 30th 2017

Guelph Hydro - landscaping activities from 2013 to 2016 – including ongoing filling of grass areas with flower beds, over time. Objective is to replace most of the turf over time.

Clair Road Emergency Service centre. Landscaping activities - July 2014, July 2015, October 2015. Looks beautiful even in winter. 2017 plans include expanding area, infilling, and on going maintenance,

Volunteers needed – planting and maintenance of gardens, help with displays and presentations, serving on the board of directors, etc. Help us to increase our reach and help pollinators.

Donations needed - A volunteer run charitable organization – which relies on our board of directors particularly for obtaining plants and other materials, insurance, and website hosting.

Screening of the documentary [“A Ghost in the Making”](#) the topic of which was the Rusty Patched Bumble Bee whose habitat has been severely reduced over the past thirty years in the Eastern and SE USA. One of the reasons for this was the spread fungal parasite *Nosema apis* from Europe. For information on this parasite, see the Wikipedia website at https://en.wikipedia.org/wiki/Nosema_apis

This was a somewhat emotionally charged presentation with the author Clay Bolt, describing how he had been influenced by the research by Aldo Leopold and had become interested in bumble bees and this bumble bee in particular. Several segments of the film dealt with his trips to various research centres in South Carolina, Tennessee, Virginia, and Wisconsin, interspersed with personal reflections about the future of the species and what can be done to help it survive in North America.

Following the presentation, there was a long discussion about surveys carried out of bumble bees in southern Ontario and Southern Quebec. The Rusty Sided bumble bee was the fourth most common species in the 1980s with a range from S Ontario to S Quebec but this species has suffered drastic declines since then.

Two separate studies undertaken by the University of Guelph in 1970s and again in the 2000s showed that 3 of the species studied had no significant change in population, 4 had decreased, and 3 were entirely absent. This last group included the Rusty Patched Bumble Bee, the American Bumble bee and the Gypsy Cuckoo bumble bee. There was mention of a book by Sheila R Colla a PhD graduate of York University: [“Handbook to the Declining Bumble Bees of Ontario”](#) which was published by Wildlife Preservation Canada in 2015. I could not find an ISBN for this publication but there were some copies available from Pollination Guelph at their 2018 Symposium.

As a result of these studies the Xerces society launched a campaign to persuade the Canadian Federal Government to declare the Bumble bee a species of concern. The COSEWIC and COSSARO got involved and In September 2015, the government issued a 90 day finding order, but it was not until March 2017 that the listing took effect.

Bumblebees in Canada are subject to one of more of the following threats

- Loss or fragmentation of habitat
- Pesticide Use
- Diseases, parasites, and other pathogens on managed honey bee and bumblebee populations
- Introduction of exotic species
- Climate change

The major thing which can be done to ameliorate these threats are to increase their habitat – even if it is only on a small scale. One of the organizations mentioned during the lively question and answer period is the Bumblebee watch organisation whose website is at <https://www.bumblebeewatch.org/>

Other references include

COSEWIC Committee on the Status of Endangered Wildlife in Canada. For further information see their website at <https://www.canada.ca/en/environment-climate-change/services/committee-status-endangered-wildlife.html>

COSSARO. Committee on the Status of Species at Risk in Ontario. For further information see their website at <https://www.ontario.ca/page/how-species-risk-are-listed>

Radek Odolczyk

Pollinators and the Alderville Black Oak Savanna First Nations

The main topic of the presentation was the First Nations plans and projects for the Ecological restoration and stewardship of 162 acres of the Alderville Black Oak Savanna (ABOS) First Nations reservation. The talk covered the following items
Introduction –The Alderville reservation is located on the SE shore of Rice Lake, south of Peterborough and N of Coburg.

The reservation itself is highly fragmented, of which one site, of about 162 acres is highly protected. It contains the largest remnant of tall grass prairie and black oak savannah in central southern Ontario. Their website is at:

<http://www.aldervillesavanna.ca/>

The site was important to the Iroquoian people who inhabited that area, which they maintained by prescribed burns, and sustained their existence by hunting, collecting for plants, medicinal plants, and fibres for tools, containers clothing and the other necessities of life.

Prairies and Savannas

These are endangered grasslands with less than 1% left of an area which once included 1 million square miles prior to European Colonization. The reason for this dramatic decline is fire suppression, agriculture and the spread of invasive non native plants. Using a somewhat controversial classification system, the following is a breakdown of the current area: Prairie <25%; Savanna 25%-35%; Woodland 35-60%; Forest >60%.

Flora and Fauna

Grasses – Big Bluestem, Indian Grass, Little Bluestem

Prairie Forbs – Asters, Milkweed, Wild lupins

Fauna – Monarch butterflies (feeds on Milkweed) , Mottled Dusty Wing (feeds on New Jersey Tea),

Management Practices

Prescribed fire burns

Removal of non-native plants (usually by hand)

Reseeding and restoring former agricultural land to its pre- colonization state

Expanding rarehabitats – originally only 50 acres, but now much larger

Biodiversity – This is name of the game at ABOS. 850+ species have been identified – about 25% of these are pollinators

Fire Benefits

Reduces introduced cool season grasses,

Removes dead standing plant material, provides nutrient recycling

Allows more water to reach plant roots, warms the soil

Reduces risk of wild fires

Pollinator Monitoring

Wild bees – Citizen science, visual monitoring, insect traps, partnership with University of Guelph,
Mottled Dusty Wing – Visual monitoring, GPS location and date, partnership with University of Guelph

Pollinator Habitat Restoration

Pollinator Patch – removal of invasive plants, planting of forbs, vegetation monitoring

Interpretative garden (Gitigaan) – planting of native species of forbs, trees, and shrubs.

Lil' patch gardens – provision of seeds for community members to plant prairie gardens around their homes

The Three Sisters Garden – which includes squash, beans, and corn

The presentation included an interesting schematic of the features of this type of garden.

Volunteer Effort

Past Training Wild Preservation Canada Bumble Bee watch

Native Plant gardening & traditional use of plants

Future Training Bee and insect hotels – citizen science, community monitoring, Lil' patch gardens

Native Plant gardening traditional use of plants

Summary & Questions

The reservation IS open to the public, but please call in advance

The protected area has never been more than 5%-7% of the reservation

Control of established invasive plants – pull by hand, mow affected areas, replanting with grasses and forbs, and the occasional use of herbicides.

Lorne Widmer Project Management Specialist. OMAFRA **Launch of Ontario's Pollination Health Action Plan**

The Plan was initiated by Jeff Leal, Minister of Agriculture, Food and Rural Affairs

A copy of this plan is at

http://www.omafra.gov.on.ca/english/pollinator/action_plan.htm

The speaker had some excellent foils accompanying of his presentation which were extensive and very interesting – however he only had a limited time to make the presentation so I missed a lot of the points he was making in his foils. I have included a copy of the foil presentation with this report, and it may be accessed at

The Action Plan focusses on the following topics:

Animal Pollinators

Estimated Value of pollinator services in Ontario is about \$1 billion

The importance of Pollinators

Stressors

Components of Strategy

Pollinator Health Action Plan

Bee mortality reduction

Pesticide Regulation

Regulation of Neonics – specifically corn and soybean treatment

Beekeeper inspections

Vision and Outcomes

Ontario is home to healthy pollinator populations that contribute to a sustainable food supply:

- Abundant and healthy pollinator habitats
- Adequate wild pollination of natural ecosystems and agricultural crops
- Beekeeping sector able to meet demand for pollination services, honey products and honey bees
- Reduction in acute-in season incidents and lower over-winter mortality rates of honey bees

The Goals

- Improved genetics, reduced impacts of disease and pests on pollinators
- Reduced level of exposure of pollinators to pesticides
- Improved habitats and nutrition for pollinators
- Increased resilience of pollinators to climate change and weather
- Improved understanding and evidence related to pollinator population and their health
- Increased awareness and knowledge about pollinators and ways to support them

Three Specific Targets

- To reduce overwinter mortality rates for managed honey bees to 15 per cent by 2020.
- To achieve an 80 per cent reduction in the number of acres planted with neonicotinoid-treated corn and soybean seed by 2017.
- To restore, enhance and protect one million acres of pollinator habitat in Ontario (

The Four Stressors

Studies show that pollinators are under increasing stress. Several causes or stressors are thought to be responsible for their decline and can be grouped into four broad categories:

- Diseases, Pests, Genetics
- Exposure to Pesticides
- Reduced Habitat and Poor Nutrition
- Climate Change and Weather

Addressing these stressors is a balancing act between farmers, and beekeepers. In particular

- the use of herbicides (to increase crop yield),
- the use of insecticides to control pests which cause severe damage to food crops,
- the use of neonics in particular some of which are highly toxic
- cosmetic pesticides for lawns, gardens, parks, and school yards

Diseases, Pests, Genetics

The management of honey bee and bumble bee diseases and pests is critical to addressing colony losses and minimizing the spread of pests and pathogens. The main ones are

Varroa mites, American foulbrood, the small hive beetle

Pathogen cross-over pests

Genetic improvements can improve bee health

*Exposure to Pesticides**Reduced Habitat and Poor Nutrition*

Habitat degradation, fragmentation

Every new road, every residential and commercial sectors play a part

Partnering with horticultural organizations, conservation authorities

Climate Change and weather

Temperature extremes, combined with an inconsistent food supply, can put intense pressure on pollinators and may lead to disease and death.

Research and Monitoring

About \$1 million has been assigned to New Directions research

Monitoring programs are taking place with respect to habitat, wild pollinators, and honey bees

The effects of pesticides on the environment.

Education and Awareness

The need is for a collaborative approach where all of us will receive benefits

What you can do (taken from the last two slides of the foil presentation)

1. Support the work of groups like Pollination Guelph and others, such as:
 - Ontario Nature and Ontario Nature Youth Council
 - Pollinator Partnership Canada
 - Wildlife Preservation Canada
 - North American Native Plant Society
 - David Suzuki Foundation (Milkweed campaign)
 ... and many others doing important work
2. Consider partnering with beecitycanada.org to make your community a “Bee City”.
3. Support Citizen Science projects, e.g.: Bumblebeewatch.org; Mission-monarch.org
4. Continue to educate yourself about the importance of pollinators and how you can help them; Encourage your family, friends, neighbours and elected officials to do the same.
5. If you have a garden – even a small one - Include a variety of species of plants that include different shapes, colours and sizes and that bloom successively throughout the season.
6. Replace some lawn with pollinator-friendly plants, including many native Ontario plants; you’ll be helping Ontario’s biodiversity in your neighbourhood.
7. Support projects in your community that provide habitat for pollinators.
8. Be aware of the effects of various types of pesticides and how they can harm pollinators. If you must use them, carefully follow the instructions on the label.
9. Buy Ontario honey to support Ontario beekeepers. Look for the Foodland Ontario logo.

Questions

Because time was pressing there was only time for a couple of questions

- Phragmites – the only effective long term pesticide against this very invasive plant is Roundup
- Greenery regulations – some cities have introduced greenery regulations, but there is nothing specifically included in the Ontario Action Plan on that matter.

Jen Baker and Beatrice Ekoko members of the Hamilton Naturalist Club

Hamilton Paradise Foundation

The talk was sponsored by Not So Hollow Farm

This was an interesting and quite informative presentation on the activities of the Hamilton Naturalist Club to create environmentally friendly and connected corridors for pollinators in the Hamilton urban area.

The Hamilton Naturalist Club was formed in 1919, and was originally the Hamilton Bird Protection Society. Its orientation is to getting kids out and to plant thousands of plants in cities which will continue to a highly managed landscape areas. Its website may be found at <http://hamiltonnature.org/>

The Hamilton Pollinators Paradise project is an initiative of the Hamilton Naturalist Club and Environment Hamilton whose website may be found at <http://www.environmenthamilton.org/> and the project started with a program to protect the habitat of the Monarch butterfly.

Below is a brief description of the major topics discussed in this presentation:

- 1) **Restoring Resilience** – the objectives is to build a number of pollinator corridors throughout the city. This is because urban environments with their landscaped garden and parks do have the capacity to support a large population of wild pollinators. This topic included a map of Hamilton showing existing pollinator gardens and city parks which have been adopted.
- 2) **Building Paradise** – this is essentially about developing habitats which have a wild natural look with plants in the ground. Some current activities include:
 - Community managed sites – where plantings have been made by local gardening clubs such as the Crown Point Garden Club in East Hamilton. So far they have developed three planting sites with the advice and assistance of the Hamilton Naturalist Club.
 - Another example is Victory Gardens Hamilton which is a not-for-profit team of community volunteers dedicated to alleviating hunger and food insecurity in Hamilton Ontario and local communities by using urban agriculture to provide fresh produce to local food banks and meal programs. Their website may be found at <https://www.hamiltonvictorygardens.org/> The general approach they are using is to plant vegetables in raised beds with new soil along with native plant in adjacent beds.
 - Another example is Hess Street School where school kids have been planting plants on the periphery of the school. This is an area where there is a large population of new Canadians and people walk a lot in that area
 - Organizing workshops on such things as Beebox making, designing your own garden, planting native plants.
 - Certification signs – such as “We are feeding pollinators”
 - The Hamilton Monarch Awards program which recognizes gardens and gardeners in Hamilton Ontario for their contribution to a bio-diverse, sustainable environment. Information about this program can be found at their website at <http://monarchawardshamilton.org/> According to their website the program “originated with a group of gardeners, the idea for an “alternative” garden awards program quickly gained momentum. The organizing committee includes staff from the Hamilton Naturalists Club, Environment Hamilton, along with volunteers from the Royal Botanical Gardens, the Crown Point Garden Club, as well as individuals.”
- 3) Policy and Strategy – this is currently work in process. This includes a group of politicians calling themselves “Politicians for Pollinators” who support the Hamilton Naturalist Society, The Hamilton Urban Official plan asll contributes to the development of these policies
- 4) Challenges – these include
 - City staff moving plants around
 - Maintaining each site – which requires dependable volunteers
 - The “messy” concept – which goes against the grain of “neat and tidy” gardens
- 5) Current plans for the future
 - Collecting seeds and starting plant in soil
 - No Mow signs
 - Planting with the city, and housing estates of Hamilton residents – Twelve are currently in progress
 - Maintenance of existing sites
 - April 29th (2017) Plant Faire and RBG Rock Garden Parking lot.

Question Period

This included questions on a number of interesting topics:

- How to start getting the interest of your municipality
- What are the most useful plants in the ground
- Working with ratepayer groups
- Working with schools – planting at schools can be hard – but every child needs to be able to access nature.

Lorraine Johnson Keynote Speaker
Pollination Gardens: Growing Edible Native Pollinators

This was by far the best talk of the conference. The speaker was wryly amusing, and gave an informative and detailed discussion on the topic peppered with a few choice comments about the way that politicians react to climate change and environmental issues.

Lorraine Johnson is the author of several native plant books including 100 Easy-To-Grow Native Plants and The New Ontario Naturalized Garden. Both are widely available in public library systems and book stores.

The following is a summary of the notes I took on the various topics discussed by Ms Johnson

Native Species Wildflower Gardens

Wildflower gardens of native species are really pollinator gardens, and many parts of native species are edible. Unfortunately the first response to the question “What are native plants?” is often “They are weeds!”. But in fact, the plants that are really weeds – such as switch grass, gout weed, and dandelions - are not native at all!

Pollinators of Native species of plants

These include many insects including bees, wasps, flies, etc. There are several books available on native species of plants:

- 100 easy to Grow Native Plants Lorraine Johnson
- Pollinators of Native Plants Heather Holm
- Bringing Nature Home Douglas M Tallamy

General Benefits of Native Plants

- They have survived over many eons in North America
- They tend to require lower maintenance – requiring little in the way of supplementary watering and can even survive in modern conditions (e.g. Black-eyed susans have even been found thriving in cracks in concrete!)
- They provide diversity – compared with a monoculture lawn
- Native plants attract all sorts of pollinators
- Native Plant gardening is deeply connected with history - for example a comfort Maple Tree living in Niagara Falls has been in existence since 1500. It is also a way to specificity – and a push back at development where an area has been completely stripped of soil, plants, and trees.
- Native gardening also connects with fauna – birds, insects, and other plants – and is also the subject of a great deal of citizen science.

Gardening tradition of North America

This is generally difficult with native plants – however woodland gardens do offer a possible way.

Specific practices which need to be avoided

- Plants for continuous blooms – so you have to suppress the tidiness instinct to take advantage of that
- Cleaning everything up in the Fall – this is terrible for pollinators!

So don't freak out about unsightly stuff! You have to accept the fact that you are not in control!

A good example is Red Bud trees – Leaf cutter bees that scallop the leaves - a great native pollinator - lucky you! One trick is to give a name to something e.g. signs help so use signs to label native plants – it makes people feel better!

Remember that if you plant native plants the pollinators will come! And with that observation she displayed a black and white photo of herself in her younger days in her small town garden of her house at Bathurst and Bloor just a few steps from Honest Eds store!

Many books are available on Foraged flowers, Edible Wild Plants and Edible Flowers. One useful website on this topic is <http://www.ediblewildfood.com/>. One example of a very useful native plant is *Atriplex Patula* which has many common names including Common Orache. The seeds can be eaten raw and the Wikipedia entry on this plant at https://en.wikipedia.org/wiki/Atriplex_patula indicates that it is “a ruderal, circumboreal species of annual herbaceous plants in the genus *Atriplex* naturalized in many temperate regions.”

Another article on the definition of “ruderal” states that “A ruderal species is a plant species that is first to colonize disturbed lands. The disturbance may be natural – for example, wildfires or avalanches – or a consequence of human activity, such as construction (of roads, of buildings, mining, etc.) or agriculture (abandoned fields, irrigation, etc.).” and that the word ruderal comes from the Latin “rudus” meaning rubble.

Native tree species

- Eastern Red Bud - *Cercis canadensis* (see https://en.wikipedia.org/wiki/Cercis_canadensis)
It is an early bloomer, its flowers are edible, it produces pods and attracts the leaf cutter bee. It is the perfect tree for an urban garden
- Serviceberry – *Amelanchier* (see <https://landscapeontario.com/amelanchier-serviceberry>)
It produces blue flowers and the leaves turn red in the fall.
- Paw Paw - *Asimina triloba* (see https://en.wikipedia.org/wiki/Asimina_triloba)
It has beautiful flowers, the fruits mature in early fall, and it is host to the Swallow tail butterfly
- Wild Plum – *Prunus americana* (see https://en.wikipedia.org/wiki/Prunus_americana)
Red cherry like fruit – beautiful leaves in the fall
- Chokeberry – *Aronia* (see <https://en.wikipedia.org/wiki/Aronia>)
A dark black fruit which has high anti-oxidant characteristics
- Choke Cherry - *Prunus Virginiana* (see https://en.wikipedia.org/wiki/Prunus_virginiana)
Produces cherry like fruit
- Hawthorn - *Crataegus* (see <https://en.wikipedia.org/wiki/Crataegus>)
Harbours larva of up to 80 different insects. The fruit can be made into jelly but they can have an awful smell!
- Nannyberry - *Viburnum lentago* (see <http://ontariotrees.com/main/species.php?id=2062>)
You can eat the berries raw, and some butterflies are attracted to it, but the tree is not generally available
- Sugar Maple - *Acer saccharum* (see <https://www.ontario.ca/page/sugar-maple>)
Maple Syrup is the main product – and who doesn't like maple syrup. There are lots of sugar maples growing in cities and you can even tap them for their sap. The tree is also a very important for butterflies and moths
- Paper Birch - *Betula papyrifera* (see https://en.wikipedia.org/wiki/Betula_papyrifera)
Many insects over winter in this tree and you can tap your own tree to produce birch syrup (I have never tried to do that though!)
- Shagbark Hickory - *Carya ovata* (see <https://www.ontario.ca/page/shagbark-hickory>)
The nuts are edible and it is a big tree
- Black Walnut – *Juglans nigra* (see https://en.wikipedia.org/wiki/Juglans_nigra)
This tree has a bad reputation in a vegetable garden because hardly anything can grow under it.
- American Beech - *Fagus grandifolia* (see https://en.wikipedia.org/wiki/Fagus_grandifolia)
- Northern Red Oak – *Quercus Rubra* (see https://en.wikipedia.org/wiki/Quercus_rubra)

Native shrubs

- Beaked Hazelnut - *Corylus cornuta* (see https://en.wikipedia.org/wiki/Corylus_cornuta)
- Elderberry – *Sambucus canadensis*
(see <http://www.hardyfruittrees.ca/catalog/berry/american-elderberry-sambucus-canadensis>)
This plant does not do well in droughts. The fruit is best cooked and can be used in wines and jellies
- New Jersey Tea - *Ceanothus americanus* (see https://en.wikipedia.org/wiki/Ceanothus_americanus)
- Spice bush – *Lindera benzoin* (see https://en.wikipedia.org/wiki/Lindera_benzoin)
Has yellow flowers and attracts the Spice bush swallow tail
- Staghorn Sumac – *Rhus Typhina* – (see https://en.wikipedia.org/wiki/Rhus_typhina)

This does is drought tolerant but it does sucker a lot. The fruit can be boiled to make a sort of tea or lemonade style drink. It has beautiful foliage in the fall.

- Smooth Rose – *Rosa blanda* (see https://en.wikipedia.org/wiki/Rosa_blanda)
- Honeysuckle *Diervilla lonicera* (see https://en.wikipedia.org/wiki/Diervilla_lonicera)
- Bearberry – *Arctostaphylos* (see <https://en.wikipedia.org/wiki/Bearberry>)
- High-bush Blueberry - *Vaccinium corymbosum* (see https://en.wikipedia.org/wiki/Vaccinium_corymbosum)
Attracts the Sphinx moth
- Northern Bay Berry - *Myrica pensylvanica* (see https://en.wikipedia.org/wiki/Myrica_pensylvanica)
- Wild Grape - *Vitis riparia* (see https://en.wikipedia.org/wiki/Vitis_riparia)
- Ground Nut – *Apios americana*
(see <https://www.gardeningknowhow.com/ornamental/vines/groundnut-vine/how-to-grow-groundnuts.htm>)
You can eat the tuber but it has to be boiled first
- Mayapple - *Podophyllum peltatum* (see <https://en.wikipedia.org/wiki/Podophyllum>)
This provides great ground cover in shady areas
- Canada violet - *Viola Canadensis* (see https://en.wikipedia.org/wiki/Viola_canadensis)
Has early blooming flowers
- Ostrich fern (Fiddle head fern) *Matteuccia* (see <https://en.wikipedia.org/wiki/Matteuccia>)
- Wild ginger - *Asarum canadense* (see https://en.wikipedia.org/wiki/Asarum_canadense)
Is a shady ground cover with flowers close to the ground. It provides an oily snack for ants – to move it to another place simply spread the plant out from the centre
- Wild Leek - *Allium tricoccum* (see https://en.wikipedia.org/wiki/Allium_tricoccum)
Early blooming plant all parts of which are edible Only grows properly in shady areas and need rich soil
- Virginia Waterleaf - *Hydrophyllum virginianum* (see https://en.wikipedia.org/wiki/Hydrophyllum_virginianum)
- False Solomons Seal - *Maianthemum racemosum*
(see https://en.wikipedia.org/wiki/Maianthemum_racemosum)
The young shoots are edible
- Hog Peanut - *Amphicarpaea bracteata* (see https://en.wikipedia.org/wiki/Amphicarpaea_bracteata)
Not readily available commercially
- Wild Hyacinth *Camassia scilloides* (See <https://www.ontario.ca/page/wild-hyacinth>)
Shave loving wood land plant

Sun loving native plants

- Wild Nodding Onion - *Allium cernuum*
See <http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=z580>
- Wild Strawberries – *Fragaria vesca* (see https://en.wikipedia.org/wiki/Fragaria_vesca)
- Smooth Ground Cherry - *Physalis subglabrata*
(see http://www.illinoiswildflowers.info/prairie/plantx/sg_cherryx.htm)
The ones you find in stores and restaurant are generally from the south!
- Virginia Mountain Mint - *Pycnanthemum virginianum*
(see <http://ontariowildflowers.com/main/species.php?id=565>)
Leaves can be used for teas
- Monarda Fistulosa* – Wild Bergamot (see https://en.wikipedia.org/wiki/Monarda_fistulosa)
Attracts bumble bees
- Bee Balm - *Monarda didyma* (see <http://www.wildflowersofontario.ca/beebealm.html>)
Attracts bees and humming birds
- Fireweed - *Chamaenerion angustifolium* (see https://en.wikipedia.org/wiki/Chamaenerion_angustifolium)
Vigorous and possibly an invasive plant
- Compass Plant - *Silphium laciniatum* (see https://en.wikipedia.org/wiki/Silphium_laciniatum)
- Cup Plant – *Silphium perfoliatum* (see https://en.wikipedia.org/wiki/Silphium_perfoliatum)
- Common Milkweed – *Asclepias syriaca* (see https://en.wikipedia.org/wiki/Asclepias_syriaca)

Native Plant sources

Grand Moraine Nursery

GRAND MORAIN GROWERS - NATIVE PLANTS & WILDFLOWERS

7369 12th Line, RR2 Alma, Ontario, Canada, N0B 1A0

<http://www.grandmorainegrowers.ca/>

Not So Hollow Farm

NOT SO HOLLOW FARM

Mulmur, ON L9V 0J7

<http://www.notsohollowfarm.ca>

St William's Nursery

St. Williams Nursery & Ecology Centre

St. Williams, ON, Canada

<https://stwilliamsnursery.com>

Native Plants of Claremont

Native Plants in Claremont

4965 Westney Road, Pickering (Claremont), Ontario L1Y 1A2

<http://www.nativeplants.ca/>

Wildflower Farm

Wildflower Farm

10195 Hwy 12 West, R.R.#2 , Coldwater, ON L0K 1E0

<http://www.wildflowerfarm.com/>

Kayanese (Six Nations)

993 Highway #54, P.O. Box 820, Ohsweken, ON, N0A 1M0

<https://kayanase.weebly.com/>

Native Plant Nurseries

All plants are grown in Pefferlaw & Tottenham, Ontario. Both nurseries are closed to the general public but can be visited by appointment only. Call 1-416-999-7654 or 1-416-768-2743

<https://www.nativeplantnurseries.ca/>

Grow Wild

Grow Wild Native Plant Nursery and Ecological Consulting Services

3784 Highway #7, Omemee, Ontario, K0L 2W0

<http://nativeplantnursery.ca/>

Christina Kingsbury & Anna Bowen Pollination Guelph volunteers**Remediate**

Christine and Anna are both volunteers with Pollination Guelph who are working on a project at the Eastview Pollination Park. They develop paper maché squares which they then sew together to make a large quilt to which they sew in seedlings of various native plants – such as asters, bee balm, rudbeckia, and golden rod. The quilt is then placed on the plant bed and covered with soil. When the seedlings have grown in size, they then plant them in openings in the quilt where they continue to grow to the normal size.

They explained that their rationale was a sort of thanksgiving to Mother Earth for all the blessing she bestows on mankind – and I have to admit I did not really understand what that was all about. Except that as a result of their efforts, they were very successful in developing a very colourful pollinator garden – compared with the other efforts to develop a natural pollinators space in another area of the Pollinator Park. Another feature of their project was the construction of a bee hotel.

Neither of my Halton MG companions were particularly impressed by this presentation – and the main reason I included it in this report is that they had some rewards for their efforts!

Here is a summary of my notes on this talk:

Christina Kingsbury

Christina reviewed the main influences on her view of life and her activities

Joseph Beuys (see: https://en.wikipedia.org/wiki/Joseph_Beuys)

Wikipedia describes him as “a sculptor, installation artist, graphic artist, art theorist, and pedagogue”

The work which inspired Christina was 7000 Oaks – in which Beuys planted 7,000 oak trees over several years in Kassel, Germany, each with an accompanying basalt stone.

Jacqui Brookner – (see: https://en.wikipedia.org/wiki/Jacqui_Brookner)

Prima Lingua - which is described in Wikipedia as “The first Biosculpture, Prima Lingua, was commissioned in 1995 by Appalachian State University for the exhibition “Views From Ground Level, Art and Ecology in the Late Nineties.” It is a large tongue that licks and cleans the polluted water in which it stands”

and which Christina described as a biosulphur chemical filter, concrete and volcanic rock

Janet Morton (see: https://en.wikipedia.org/wiki/Janet_Morton)

Cozy (1999-2000) See CCCA Canadian Art Database

http://cca.concordia.ca/artists/artist_info.html?languagePref=en&link_id=5793&artist=Janet+Morton

Using hand knitting, the artist joined over 800 previously worn off-white sweaters to cover a cottage on Ward Island (Toronto, Ontario)

Anna Bowen – writer and poet

The Remediate project as a collaborative effort between Christina and herself, which she described as a 2000 square foot paper quilt embedded with native plants which they installed at the Eastview Landfill site listening to poetry while they were doing the installation.

She considers it to be a “Gesture of Care” for a degraded period of land and site specific for this work. In this respect she mentioned the Boarding House Gallery in Guelph.

(see: http://artgalleryofguelph.ca/exhibitions_list/boarding-house-gallery/)

Where a description with photographs of the project may be found at

<http://artgalleryofguelph.ca/exhibitions-detail/remediate/>

According to Anna, the site was a wetlands used native peoples before the settlement of the area, which then became a dumping ground for waste in the 19th century. In 1950, this landfill site was sold to the city of Guelph and over the years 400,000 tons of landfill was placed in the area and fortunately the water table was protected by a layer of clay. She considers the work to have been a Palimpsest – a concert to bring back something to memory

During the project, they collected stories from local residents and told them in the form of the poetry in order to understand the land and get to love it. They never intended it to be a work of re-mediation, but more of a work to repair or restore our relationship with land which will never go back to being a wetland.

They used native seeds, collecting the seeds by hand, making the paper by hand, and sewing them into the quilt by hand. In this respect she made a number of points which described the underlying philosophy behind the work (which I admit that I did not quite understand.

- Building a ecological relationship with the land
- Recycling – saving and collecting of objects
- Quilting is a tribute to underpaid and under generalized workers whose labour is undervalued

The talk was followed by 2 short videos, one of which was how they prepared the ground for the quilt, and the other was about sewing the quilt. There are three photos on the article about the project – and one of the things

they included was the installation of a bee hotel. Looking at the results of the project it would seem that it has been a success.

Alison Maxwell, Karen McKeown, Kat Granger, Lorraine Johnson

Multipurpose Gardens: beauty, food, functionality, and pollinators

There were excellent short presentations by Alison, Karen, and Kat, with the four panellists responding to a number of interesting questions from the audience.

Alison Maxwell – arborist specializing in rain gardens

The major points which Alison made in her presentation were:

- A form of sustainable storm water management technology first developed in Maryland in the 1990s
- The formal description is a “Planted depression in the landscape into which water is conveyed and detained while infiltration occurs”.
- It will include plant material, mulch, and a filter bed, and should be in a sunny location where the soil can remain moist
- It reduces runoff into drains which empty into bodies of water such as Lake Erie where algal blooms are starting to be reduced after many years of problems
- It reduces flooding and erosion and the destruction of stream habitats
- It increases recharging of ground water
- Rain gardens can provide great habitats for pollinators
- Conditions are compatible with the larval stage of many insects and nectar of plants which attract butterflies.
- Some examples of plants and the pollinators they attract are:
 - Swamp Rose Mallow – Painted Lady Butterfly
 - Dogwoods – Spring Azure
 - Joe-Pye weed – Ruby Tiger Moth
 - Butterfly Milkweed – Monarch butterflies
- Additional benefits include:
 - Aesthetic appeal – lush and floriferous
 - Can be established quickly and easily – not watering and little weeding required
 - Tall plants can provide privacy – e.g. The Cup plant which grows 3-6ft in height
- Provides food to attract wildlife – also has the potential to provide food for humans as well
- Provides the context for experiential learning and nature appreciation
- Provides an awareness of environmental problems and is concrete action to address these.

Karen McKeown – Front Yard Gardening

The major points which Karen made in her presentation were:

- Front Yard gardens can provide curb appeal, can be sustainable, can attract pollinators, can increase property values and they can be used to grow food, and they are an alternative to lawns
- Some of the issues relating to front yards are:
 - They can be neglected and look unsightly
 - What will the neighbours think
- The development of front yard gardening
 - 16th century - Ground cover – camomile and thyme for sheep
 - 17th century – landscaping for the wealthy
 - 18th century – Golfing and bowls – according to Karen you can blame the Scottish for the creation of lawns!
 - 1830s – the initiation of the need to mow lawns!

- 20th century – Suburbia – with no greenery
- How can we get people away from monoculture?
 - What is so different about back yards and front yards? The logic here is that the front yard is the first thing people see and can make a statement about who lives in the property!
 - If a yard is designed for ecological or functional benefits it could be perceived as being “messy”
 - The ecological benefits of a native pollinator are not obvious to many neighbours!
- Cues to Care – some thoughts on how to make front yards more attractive
 - Mowing strips along bordering properties and provide pathways
 - Flowering plants and trees – use larger plants
 - Use Wild flowers and herbs
 - Use bold patterns, trim shrubs, plant in rows
 - Use fences and embellish with lawn ornaments
 - Foundation planting
 - Move away from evergreen shrubs
 - Provide ground cover such as clover and consider vegetables in the front yard.
- Development of Front Yard
 - Start with the boulevard
 - Use paths in front yard – can be quite decorative
 - Use planters and raised beds – avoids dogs doing their business!
 - Use signage such as “pollinator habitat”

This was a good presentation which emphasizes that the dominant culture needs a neat orderly landscape as a sign of neighbourliness. There is a need to change perceptions as to what a front yard can be used for and when walking around the more colour there is in a front yard the better!

Kat Grainger – Seeds of Imbolc – Heirloom organic seeds and plants

This presentation was about plants which will attract pollinators to a vegetable garden, and seeds for these plants are available at Seeds of Imbolc (see the website at <https://seedsofimbolc.ca/>)

- Indigo Rose Tomato – bumble bee visitors
- Tomato Hornworm - Five spotted hawk moth
- Onions – biennial – goprgoeus flowers – soldier beetle
- Boston Squash – Eastern cucurbit bee , squash bee
Peponapis Pruinosa – larva live in undergrowth
- Carrots – Pollinators are flies, solitary bees, honey bees
- Beans – Pole beans, Runner beans (scarlet runner), Broad beans – humming birds and bees
- Mixed vegetable gardens
 - Organic mulch
 - Larkspur and Blue Flag iris
 - Sunflowers
 - Herbs – basil and gill

If we provide for our pollinators they will reciprocate!

Questions

- 1: Do I need to kill the grass to plant native plants
No, but you should cut the grass very low. Cover with The Mercury (newspaper!), plant through holes and cover with mulch
- 2: Using rain water to water vegetable gardens
Collect water from the roof
- 3: Bog garden maintenance

Must be wet and moist all of the time. Use rain water. It can be sometimes wet, although it may dry out between rain events.

4: Size of rain gardens

This depends upon the size of the roof – there is a formula for calculating amount of water that can be obtained from the roof . The rain water must be kept a least 10-15 feet from the house, and it should not be collected between house either. One useful technique is to develop “whales” to divert the water to where you want it to go. You have to use gravity for that and the downspout can be below ground if necessary. You can also plant wet loving plants near down spouts

5: Boulevard Planting

The city can come in and throw plants out that it disapproves of – so do not use special plants in those areas. Some municipalities do not allow boulevard gardens .

You can incorporate garbage collection containers into a front yard boulevard. Mugho pines are good for boulevard gardens. There are sight line issue though with this shrub though

There was also radio program called”Lawn Gone” which was aired by CBC on May 23rd 2016 with Margaret Gallagher. The website for this program is at <http://www.cbc.ca/news/lawn-gone-1.3600403>

6: How to get rid of Vinca?

This is problematic in some natural areas – but they are relatively easy to pull out

7: Pollinator garden signs

Generally these are custom made although there are some certification signs available! A simple message such as “Native Plants Live Here” will usually signify the intention!