

Preliminary report by David Oldacre on Pollination Guelph's 11th Annual Pollination Symposium

Nurturing Pollinators from the Soil to the Tree-tops

9am-3:30pm March 10, 2018 Guelph Curling Club, 816 Woolwich St, Guelph

The summary notes I have prepared start on Page 2 below

Official Program for the Day

- 9:00am Registration, Information Displays, Photo Contest Voting, Seed Exchange, Book Sales, Refreshments
Sponsored by Wild Birds Unlimited
- 9:30 Welcome & Updates on Pollination Guelph – Victoria MacPhail, Pollination Guelph
Sponsored by Grand Moraine Growers
- 10:00 Making Lemonade or What Happened after the Buckthorn was Gone:
The Silvercreek Park Hydro Corridor Project –
Moritz Sanio, Trees for Guelph, and Lisa Mactaggart, OALA, Arium Design Group
Sponsored by Not So Hollow Farm
- 10:40 Refreshment Break Sponsored by Ontario Beekeepers' Association
- 11:00 Using Genetics to help Bees, and Bees to help Ecosystem Genetics –
Dr. Clement Kent, York University - Sponsored by Escape Designs
- 11:40 Natural Heritage Action Plan:
Implementation of Natural Heritage and Watershed Planning Policies –
Adèle Labbé, City of Guelph - Sponsored by Borealis Grille & Bar
- 12:20pm LUNCH - Sponsored by Fiona Rintoul and Associates
- 1:10 Keynote presentation: Casa Arboreal: The Important Role of Trees & Shrubs in the Lives of Pollinators
Sean Fox, The Arboretum at the University of Guelph
Sponsored by Dougan and Associates Ecological Consulting and Design
- 2:10 Refreshment break - Sponsored by RWDI
- 2:30 - 3:15 Workshops
- 2:30 Workshop session #1
- 2:55pm Workshop session #2
- Workshop A (offered at 2:30pm and 2:55pm; max 25 people per session):
Starting a Native Plant Pollinator Garden From Seed –Judy Brisson, Nature Guelph
Wildflower Society. Sponsored by Brock Road Nursery
- Workshop B (offered at 2:30pm and 2:55pm; max 25 people per session):
Creating and Maintaining Bee Condos – Vicki Beard Sponsored by Quiet Nature Ltd.
- Workshop C (ongoing from 2:30-3:15pm):
Designing and Trouble-Shooting a Pollinator-Friendly Garden –
Karen McKeown, Alison Maxwell and Karin Davidson-Taylor, Pollination Guelph
Sponsored by B Sweet Honey Nature Co.
- 3:20 Wrap-up and Announcements
Additional event sponsorship by rlb chartered professional accountants.
- 3:30pm End
- Throughout the Day: Sale Items, Display Booths, Photo Contest, Seed Exchange (don't forget to bring your own seeds; donations in lieu of seeds are also accepted for swapping), Networking, and More!
Copies of books by our 2016 keynote, Heather Holm, "[Bees: An Identification and Native Plant Forage Guide](#)" (published February, 2017) and "[Pollinators of Native Plants](#)" will be available for sale at the event. All proceeds go to Pollination Guelph.

Here is a summary of my notes on each of the talks presented to the Symposium

Welcome & Updates on Pollination Guelph – Victoria MacPhail, Pollination Guelph

This was primarily a review of the history and achievements of Pollination Guelph since its formation 12 years ago and it was interesting to go back over time to follow the progress since the idea of forming some kind of interest group for the study of pollinators was first mooted. The review of their activities for each year of since 2007, demonstrated that they certainly have had a significant number of really successful projects over this time.

Unfortunately Victoria's presentation was somewhat spoiled by the fact that she could not access her foil presentation so had to use a PDF file. As a result a number of photographs were not available and some foils had no text.

Making Lemonade or What Happened after the Buckthorn was Gone: The Silvercreek Park Hydro Corridor Project Moritz Sanio, Trees for Guelph, and Lisa Mactaggart, OALA, Arium Design Group

This was an excellent presentation on an interesting and successful co-operative project about the clearing of 1.6 hectares of ground along the Hydro Quebec right of way south of the Speed River near the junction of Edinburgh and Wellington roads. There was a walking trail under the hydro pylons which was fringed with buckthorn and other non compliant shrubs. The original proposal was for Hydro Quebec to completely clear the land, and leave it like that. However when community groups and the owners of the houses in adjacent subdivision heard about it, major objections were raised, and in the end, the City of Guelph and Hydro Quebec agreed to transform it into a wild prairie area using native plants..

The amazing thing about this project was that it attracted a large number of organizations outside of Guelph and was highly successful as a cooperative venture, initiated and it was clearly an exciting one to take part in. The differences between the area before the clearing, the area immediately after clearing by Hydro, and as it is now, a year after the project was completed. A triumph and a model of what can be done to restore land to a natural state after it can no longer be used for anything else.

Using Genetics to help Bees, and Bees to help Ecosystem Genetics

Dr. Clement Kent, York University

This was an interesting talk in which Dr Kent explained the basic genetics of the worker and drone bees in a healthy bee hive, explaining that sex of the bee is determined by the CSD (Complementary Sex Determinant) chromosome. There are three sexes – the female, the worker, and in a healthy bee hive there are up to 16 different types of CSD chromosomes, but in a declining population the number of these different CSDs becomes smaller and smaller, particularly in the drone population which results in a phenomenon known as the Diploid Male vortex and the eventual collapse of the hive population. The rest of Dr Kent's talk was about the extent of the problem in North America and the steps which can be taken to ameliorate it particularly as it relates to the the Yellow Banded Bumble bee - *Bombus terricola* which belongs to the Subgenus *Bombus (sensu stricto)*.

This was a highly technical discussion and I have great difficulty understanding much of the genetics. Perhaps when I document my notes on the subject it will become clearer.

Natural Heritage Action Plan: Implementation of Natural Heritage and Watershed Planning Policies –

Adèle Labbé, City of Guelph

This was a talk about the plans to develop a new action Natural Heritage plan for the City of Guelph. In her talk Adèle explained that the current actions are distributed among several City of Guelph departments and are therefore often rather unco-ordinated and occasionally at cross purposes. So this initiative had to start from basic principles.

In the first part of the talk she described the basic natural heritage sites in the city of Guelph, explaining that 20% of the city includes about 2000 hectares of woodland, wetlands, meadows, and thickets. The major challenges which have to be faced in managing these heritage areas are primarily due to urban pressures such as population intensification, change of land use, storm water management, encroachment, wild life disturbance and climate change particularly winter melt, and a reduced snow pack

The official plan will cover eco-system services, tree canopy habitat, ecosystems and on going management, with specific focus on actions to ensure sustainability and resilience, watershed planning, and biodiversity conservation. During the course of her talk, she described the process her team had to go through to develop the plan (some 36 draft documents have been prepared so far by various working groups) and described some of the specific actions which are currently under consideration.

In many ways this was a rather high level view as to what is being planned, perhaps one could consider many of these as rather like “boiler plate”, so that much more detail is required before any meaningful projects are initiated. In thinking about the usefulness of the action plan, I suppose that the most important thing about it was the process the project team had to go through in evaluating the alternatives and attempting to common up with a consensus which City Council can accept

Keynote presentation: Casa Arboreal: The Important Role of Trees & Shrubs in the Lives of Pollinators

Sean Fox, The Arboretum at the University of Guelph

This talk was a review of important natural trees growing in the surrounding areas around the City of Guelph, which insects they support – in all phases of their development – eggs, larvae, pupae, and adult. The first part of the talk was a

review of the major genus of trees native to this area – *Quercus*, *Prunus*, *Salix*, *Betula*, *Populus*, *Malus* and *Vaccinium*, and a review of the most important species of the first three. Two of the references which are most important to his work are:

- *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* by Douglas W Tallamy
Latest version published in April 2009 ISBN-10: 0881929921
- *Insects that Feed on Trees and Shrubs Hardcover* – by Warren T. Johnson and Howard H. Lyon
This was first published in July 1991 ISBN-10: 0801426022

The speaker then proceeded to describe the ranges, attributes, life cycle of the trees which intrigue him the most and the native insects which rely on the tree for their survival. These included

- The Hop Tree (*Ptelea trifoliata*) Spicebush Swallowtail
- The Pawpaw (*Arsimina*) Zebra Swallowtail
- Cucumber Tree (*Magnolia Acuminato*) Eastern Swallowtail, Leaf-footed bug and Gyron pennsylvanic - a parasitic wasp which feeds on the larva of the Leaf footed bug
- Other favourites included Witch Hazel, Staghorn Sumac, Fragrant Sumac, and Shining Sumac.

At the conclusion of his talk he recommended some steps which he thought would be useful in ensuring the population of these trees could be maintained, and there was a lively question and answer period. My notes on this talk will of course be documented in my formal report on this symposium

Workshop B: Creating and Maintaining Bee Condos – Vicki Beard

This was an informal workshop presented by Vicki Beard on the design of various kinds of Bee Condos she has developed and made available to various organizations in Guelph. Some of these were quite original and used very simple materials using lengths of hollow stalks for native pollinators to lay their eggs prior where they could be protected over the winter and could mature into adults in the early spring. The one I particularly liked was the use of glass bottles for bottling such things as fruits, syrups, soups, and so on using netting held down by the cap to hold the stalks in position and to use piano wire for hanging in a tree which allowed the stalks to face downwards without being affected by rain water

Workshop A: Starting a Native Plant Pollinator Garden From Seed – Judy Brisson, Nature Guelph Wildflower Society.

This was another informal workshop where the speaker discussed relationship between native plants which are adaptive to our climate, and the insects which they attract and which they depend upon for pollination. She was strongly in favour of not cleaning up in the fall so that birds can live off the seeds and insects can be protected in the native environment in the winter. She discussed the importance of the stratification of the seeds for native plants, how to collect seeds, how to store them over the winter, and provided us with Ziploc bags of seeds which she had collected and containers of garden soil where the seeds and develop into seedlings. I have stored mine in my fridge, and will certainly be interested to see what happens when I deal with them in the early spring.