Local gardeners can play vital role in restoring the pollinating insect and bee populations

by Heather Anne Wakeling Lister

Ray Heeringa can be found most Saturdays at his honey booth at Sarnia Farmer's Market. Here his enthusiasm for nature's sweet treat, and educating customers regarding this fascinating insect makes for those, who take the time to ask, an interesting conversation. When it becomes known that one of every three mouthfuls of food consumed depends on pollinator insects such as bees, set next to this year's rapid dissemination of viable hives, a conversation with Heeringa expands to cover more than just a 'mounting concern' for the health of bee and other pollinator colonies, as he remarks that "the health of bee hives directly affects us all -- globally."

An afternoon with Heeringa offered an introductory lecture more valuable than most. When discussing the organizational life span and value of bees, Heeringa says, "You can't be an agnostic and keep bees. When you begin to understand the complexity and intelligence of the hive, you just know that there has to be a master plan to have engineered this insect." Bees, a symbol for achieving the impossible, their bodies unsuited for flight, reach speeds of approximately fifteen to twenty mph, and cover a two-mile radius around the home hive.

It takes approximately 90,000 miles, or three times around the world, to make one pound of honey. The queen lays 1,500 eggs per day, supported by drones (male) and worker bees (female) who basically work themselves to death in a relatively short warm-weather life span of about a month. The winter bees that live longer are the worker bees, having killed the drones prior to the winter season. Each insect is born with a specific task, and work together as a collective of intelligent thought, and direct action.

Heeringa, whose teenage years were spent on a Peterborough area dairy farm, understands all too well challenges farmers face while nurturing vast acreages to harvest viable crops. Driving by a farm with early plant growth, he explained by example just how pesticides play a role in allowing edible foods to mature. Alongside early vegetable growth were many inedible plants already crowding and towering above valuable plantings. These, if left untended soon overrun fields, effectively thwarting harvest yields and rendering farm finances unable to cover operating expenses. To control this unwanted growth, utilizing pesticide and fungicides are necessary.

However, balance that uncomfortable fact with his 33 years with Sarnia Fire Rescue, that provided cautious experience when dealing with chemicals, and their potential for harm. He asked, "When was the last time you saw an electricity wire lined with swallows? Think about it, they aren't there because they don't have enough insects to eat." So, he asks "just how can we hope to create a balance, a cooperative effort that will create a win-win for all involved, especially the insects and all the animals that depend on them for their food too?"

Heeringa's initial interest in apiculture began before retiring from the fire service. "My wife and I went to see some friends in South Carolina who happened to have some bees. I helped my friend move some of his hives." He began to ask questions, and "Joanne who is an educator, unbeknownst to me sent me the book 'Beekeeping for Dummies'. When I got home, it was in my mailbox. I read the book and I knew what I was going to do in my retirement."

Heeringa's daughter, Amy Veenendaal, also shared this interest, and is now the exceptionally hard-working and proud owner of Twin Bridge Honey. He said that "her interest began when I asked her for help with a honey harvest. She kind of fell in love with the concept of keeping bees, a deal was made when I was tired of beekeeping she would take over. She took over the small business in 2021."

Ray Heeringa with daughter Amy Veenendaal

"All of our hives are located in the rural part in the City of Sarnia. We do not share location of our bees because there's an issue with beehives being stolen because of what is going on with the losses across North America. The genetics of our bees is mostly Backfast bees, which were made by a brother Adam in England in the 1800s." These are non-aggressive bees, which as Heeringa demonstrated, were more interested in following their 'bee-lines' than stinging his hands when checking their hives.

Heeringa cites "that the statistics regarding bee hive population decline are alarming. The latest 2022 statistics on bee loss in North America was minimum of 50 per cent plus in most places. It's quite devastating the main reasons are numerous. One is the Varroa destructor. This mite lives on the bees and drinks its blood. It's life cycle starts in a cell with an egg in it and slowly sucks some of the fat and blood out from the bee grub. Then it injects the larvae with different types of viruses which in the long run will kill the bees. It's extremely difficult to find ways to kill a bug that lives on a bug."

Continuing, "another reason is poor nutrition from lack of flowers. The farming world has become either corn, soy-beans or wheat. Also in the mix is agricultural practises that are counterproductive to the bees. Such as insecticide fungicide and herbicides. When we combine a lot of these things together it is devastating to the bees. They can deal with one thing at a time, but put them all together it's devastating."

A complex issue, as Heeringa notes that "co-existences of farming and beekeeping in this day is difficult! The farmer has to make payments on very expensive land and equipment. There are really tight margins on the crops they grow. We, the beekeeper are beholding to the farmer who allows us to put our bees on their property. And here lies the issue at hand. When the farmers found out that the neonicotinoid seed coating's dust that comes off of the seed coating was a problem for the bees, with some legislation and some new best

practises for their neonicotinoid seed coatings the problem of mass bee losses has to some degree become less of a problem to the bees."

Explaining that, "we now find that some of the fungicide spraying is becoming the issue for our queen and over-wintering losses. All spraying of fungicides, insecticides and pesticides are covered by either provincial or federal legislation. I believe most progressive farmers follow the instructions on how and when to apply their sprays. And if there are issues with spraying, in time and common sense with the losses of our bees, we will figure this one out concerning fungicides."

He knows of one major, yet untapped resource: namely the avid gardener. Property yardage in Sarnia and vicinity often exceed what is available in most cities. Heeringa thinks that the interest in urban 'greening' gardening initiatives are vital to the well-being of the planet.

Logic offers that since home gardens are much smaller than farms, and can, with effort, be maintained organically, it is reasonable that an encouragement in a change of attitude towards organic gardening is preferable. Allowing a relatively small portion of yard for wild-flower or native plant growth, along with city by-laws allowing for naturalization, and the introduction of small bee hives placed every two or three miles, would do much to help nature recover and maintain rural food harvests.

"There are a lot of people in our community who are concerned for bee health. They plant flowers, they make bee friendly backyards. I believe it's to everybody's interest, especially my grandchildren's interest that we get a handle on our environment so we can leave our great great-grandchildren a better place to live."

Heeringa offers that "a lot of people are worried about the honeybee. The honeybee is not native to North America it was brought here by people from Europe. There are so many other insects that pollinate. A lot of these insects have disappeared in the last number of years because of what is going on in our environment. If we take some time to think about this, it's not sustainable. And if it's not sustainable for the animal kingdom, what's left for us? If we keep going the direction we're going, how sustainable is mankind? Something to think about. A lot of people have to put their heads together to get some direction to slow this down. I hope this can be done."

So, consider this a battle cry to gardeners -- those like myself, after last fall's dismal showing of seeds, who are willing to put spade to the ground and let nature flourish, allowing the wild-flower to flourish alongside those very pretty annuals.