

Pollination Problems in Suburbia

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Honey Bees and other Pollinators are dying, not just in agricultural areas, but also in Suburban and Urban areas. Gardeners are complaining because their plants have lots of flowers, but fewer and fewer of these flowers turn into fruit and vegetables. It is not bad soil, bad gardening or bad luck. It is because each flower did not get pollinated! Backyard Beekeepers understand pollination and can help local communities as they struggle with these issues.

Everyone who is concerned that pollinators have been disappearing are asking what can be done. Pollinator friendly gardens can be planted, non-aggressive bee populations can be increased, and homeowners can be educated about chemicals they use in their yards that affect pollinators and their food sources.

This is a local problem and unless we protect our local pollinators and their food sources in our own backyards, we cannot expect bountiful gardens, or fruit bushes/fruit trees that delight us with healthy hand-picked goodness, or song birds that wake us on spring mornings. Every neighborhood needs to mobilize, educate, and act. This is a very local problem, affecting everyone.

What can Municipalities and Concerned Citizens do?

When the settlers first arrived with their vegetables, fruit bushes and fruit trees from the old world, they also brought their pollinators, honey bees. Early Pilgrims had quickly learned that the native bees in the new world were not capable of pollinating their favored plants from the old world, and they learned that they could not survive as hunter gatherers, like native American Indians. Today, these pollinators are suffering from losses that are alarming. 30% to 50% of honey bee colonies are dying every winter. (40-50% in 2012-2013). This problem is not getting better and may get worse, as honey bees continue to suffer losses from foreign mites that have entered this country (from Asia and other parts of the world), and as hives suffer colony collapse from pathogens that spread through their populations in suburban and urban areas. These mites and their pathogens are also affecting wild honey bees that live in our natural habitat.

Agricultural communities have reacted by hiring Beekeepers to bring in managed hives for pollination, but what about suburban homeowners that are used to a bountiful garden, flower beds, song birds. Without pollinators in their neighborhoods, their plants, fruit bushes and fruit trees will decrease yields. Without flowers to produce seeds, song birds that feed on them will suffer. The colony collapse of honey bees and other pollinators impacts every suburban and urban neighborhood in the United States.

Municipalities are already at the forefront of solving local problems of storm water, trash/waste/recycling, and open space initiatives. Here too, municipalities can take the lead on being “green”, by ensuring their citizens are educated and proactive in protecting our pollinators. Municipalities can hire beekeepers to manage hives on municipal parkland and open spaces. Townhouse and other homeowner associations can identify residents that have an interest in protecting the environment and encourage them to become backyard beekeepers. It is safer and more rewarding than you would think. Schools, scouting organizations, civic organizations, garden clubs, and environmental groups can educate everyone to know the difference between non-aggressive honey bee colonies and aggressive wasps and ground nesting wasps. Homeowners can plant pollinator friendly gardens and learn the benefit of mulching grass and leaves (instead of blowing leaves to the curb, bagging grass clippings, and then having to add chemicals to fertilize).

10 ways for municipalities & concerned citizens to lead in helping honey bees and protecting our environment.

1. Increase awareness of the plight of Honey bees and other pollinators. Teach the public the difference between non-aggressive breeds (honey bees, bumble bees, etc.) and aggressive yellow jackets and ground wasps, so they don't spray or destroy these non-aggressive essential creatures. Talk to your local schools and plan to celebrate [National Honey Bee Day \(August 16, 2014\)](#)
2. Set a goal of having beekeeping hives in each neighborhood in every part of the municipality, by encouraging homeowners to become new backyard beekeepers
3. Advertise 4H programs for Kids in Beekeeping, available at many County Extension Services or encourage your local County Beekeeping Club to start one.
4. Teach Residents how to attract and feed Honey Bees in times of dearth (i.e. there is a dearth of nectar producing flowers that bloom in the heat of August), and plant pollinator friendly gardens.
5. Have existing local beekeepers talk to schools, churches, Rotary Clubs and other public service organizations, to generate interest in backyard beekeeping.
6. Have local Beekeepers display an observation hive, answer questions and sell local honey at township events, church fairs, and block parties.
7. Connect local scouting organizations with local beekeepers to visit their hives.
8. Educate Homeowners on how golf-course-like lawns kill pollinators, earthworms, and other beneficial insects; **and enable ticks and other pests to thrive.** Many lawn chemicals kill earthworms that feed robins and other song birds. Chemicals also kill beneficial nematodes in the soil, which control tick populations. Visit www.save-bees.org to learn more about these chemicals.
9. Encourage yellow, white and green lawns! Lawns with dandelions are a beautiful display of color variation. Dutch White clover adds nitrogen naturally to the soil. Think how boring a green Christmas tree is without lights or colorful decorations. Who said clover was a weed? (*Answer: the chemical companies*). Instead, strive for a lawn of 25% clover, which is a more healthy lawn.
10. Encourage mulching lawn mowers, and:
 - a. mulch the grass (with its nitrogen), back into the soil, to avoid having to "feed" lawns with chemicals (which have a negative impact on beneficial insects).
 - b. shred leaves and leave them on the lawn over the winter, where they will naturally compost into the soil (providing organic matter that will protect grass roots in times of drought), and add nutrients into the soil. The earthworms will love it and aerate the lawn naturally.
 - c. Teach about cutting the grass to the perfect height of 3". Shorter = it dries out during droughts (and is good habitat for grubs). Longer = it shades roots, mats down, encourages diseases.

Is there a problem with Beekeeping in suburban municipalities?

No, but there is a natural fear of bees on the part of the general public. Many of us have learned from experience that bee stings hurt. This is nature's VERY effective natural deterrent, and teaches us to stay away from bees and other stinging insects.

The real problem is that many people don't understand the difference between docile Honey Bees, and aggressive Yellow Jackets/Ground bees/Wasps. Education can help, but there have been cases where a few people have preferred fear mongering, to listening to science and reason. Fear of Bees is a valid fear, but like dogs, not all species are the same. Honey bees are not aggressive and die when they sting, so they are genetically predisposed to not want to sting, except when crushed or when you disturb their hive.

Honey Bees do not live in the ground, and are often confused with yellow jackets. Even many **new** beekeepers themselves have a hard time telling the difference, when they see a bee on a flower.



Honey bees live in trees and managed hives and are not aggressive while away from the hive. My daughter amazes her friends by petting honey bees on flowers. Honey bees are sweet. They are vegetarians, not interested in attending our picnics. If you see a bee on your picnic table, it is probably a yellow jacket.

Beekeepers, concerned citizens and municipal officials need to educate neighbors, so they are not fearful of Honey Bees, Bumble Bees and other Non-aggressive bees.

A recent poll done by the Philadelphia Inquirer asked: “Would you be comfortable if your neighbors were beekeepers and the bees would potentially be around your property? 73.4% (387) responded yes. 26.6% said no. Clearly, $\frac{3}{4}$ of homeowners realize the benefits of honey bees, but that means that $\frac{1}{4}$ of homeowners are fearful of neighbors becoming backyard beekeepers, and they are the ones that need to be educated at how gentle and safe honey bees are. We need to do more education! Otherwise all the gardens in the neighborhood will suffer, because of the fear of a few.



Why are Honey bees so necessary in every one of our neighborhoods?

Many people don't understand the importance of honey bees in our local neighborhoods. They may realize the need for honey bees in agricultural zones, but do they belong in residential neighborhoods? They certainly do! Everyone wants songbirds and bountiful gardens. But as wild honey bees, bumble bees and other pollinators die off, most neighborhoods are experiencing a dearth of pollinators. Managed hives of honey bees are one of the few ways to stem this tide and replace pollinators where they are needed.

There are backyard beekeepers in some neighborhoods, but rarely are there enough available in each of the various neighborhoods where residents tend gardens and have fruit bushes and trees. (Bees are good at pollinating flowers within 1 mile of their hives, but they will go up to 2 miles when there is a dearth of nectar producing flowers).

Although managed honey bee colonies can be brought into boroughs and townships, and put in municipal parks and open spaces, there are two problems.

1. Not enough sites distributed evenly throughout the municipality.
2. Not enough experienced beekeepers to tend the hives

There has been an explosion of interest in backyard beekeeping since 2006 as many environmentally concerned families find this hobby to be safe, need little space in the backyard, and provides many benefits. Their kids learn about nature, watching young bees emerging from cells, building comb, cleaning the queen, and enjoying their own great tasting honey. Families find that backyard beekeeping is a great alternative to kids who are inclined to spend too much time with electronics and don't have an appreciation of nature; a vaccine for NDD (Nature Deficit Disorder).

Gardeners find that their love of honey bees fits well with their love of gardens and the entire neighborhood benefits from the managed honey bee colonies on their property.

If you want to do something to enhance your neighborhood, provide for a balanced ecosystem, and be amazed by this fascinating hobby, learn more about becoming a backyard beekeeper from your local County Bee Club or State College's Extension Service (most counties have a branch, which provides gardening and other information). Beekeeping is a safe, rewarding and incredibly interesting hobby for the entire family.

Why Protection of Honey Bees is Important

Naturally grown organic food is considered by many to be important to the health of their family. Growing one's own food is considered by many to be important to the economic security and well-being of their family. There is nothing safer than food you grow on your own property, where you know how it was grown.

The unfounded fear of a neighbor should not deter a homeowner from becoming a backyard beekeeper, no more than a fear of dogs should keep them from having a pet. We may not like it when a neighbor sprays chemicals on their lawns, and I may be fearful of the impact on my children, but they are free to do so, on their property. Similarly, one person's fear of bees should not affect all their neighbors, (many of whom are gardeners) from the benefit of growing their own organic food, and providing natural forage for birds and other pollinators. The rights of not just the backyard beekeeper are affected, but the rights of their neighbors to grow and enjoy good home-grown food is also at stake.

Songbirds rely on seeds from our flower gardens for food. Honey bees pollinate the flowers enabling flowers to create seeds. Everyone benefits from a healthy ecosystem in their local neighborhood.

How are Honey Bees, Bumble Bees, Ground Bees, and Wasps different?

Honey Bees over-winter as a small colony in a managed hive with honey stores that feed the worker bees and enable them to keep the queen alive, and protect the brood (babies). The Queen starts laying eggs in February, and the hive keeps the young warm as they mature. They form a ball (cluster) keeping the inside temperature of the hive 90 degrees by flexing their muscles and generating heat, even if the temperature outside is below 0 degrees. The bees take turns being on the outside of the ball, insulating the other bees from the cold, rotating back into the center to warm themselves. By March and April, when early fruiting trees and plants are flowering, the growing hive of honey bees is often the only pollinators in sufficient numbers to perform these duties. With other pollinators, the workers die over the winter and only the queen survives. She comes out of hibernation much later, and their populations take much longer to grow. Our ancestors with their imported vegetables and fruit trees understood this, and brought honey bees with them. Without honey bees, there are no native pollinators (in sufficient numbers) that can perform these tasks for apples, peas, strawberries, pears, peaches, and other early flowering trees, bushes and vegetables that we enjoy from our backyards.

Bumble bees (also a non-aggressive bee) are likewise suffering the same fate as honey bees but they are solitary bees, do not over-winter as a hive cluster and make individual nests in the ground. They do not exist in sufficient numbers to pollinate our vegetables, fruit bushes, fruit trees and flower gardens, until later in the season. Wild Honey Bee populations that live in our natural environment in our neighborhoods, are suffering from the same fate as managed hives, they too are disappearing. Other pollinators are similarly dwindling and it is difficult to stem the tide of their demise. With the number of pollinators dwindling, backyard gardeners in many neighborhoods are finding many flowers are failing to produce fruit and seeds.

To reverse this trend, concerned citizens are becoming backyard beekeepers. Honey bees can be safely managed in hives in tiny yards or on top of garages or decks, in urban and suburban neighborhoods. This is just one step in protecting our gardens, trees and plants.

Honey Bees are gentle creatures, who only sting once, and then they die. Therefore, they are genetically predisposed to not want to sting you. Honey Bees will only sting you if you crush them, or disturb their hive. Even if a hive is disturbed it can be done so that you don't get stung.

New Beekeepers learn how to open a hive using a smoker to distract the guard bees at the entrance. They can then open the hive safely, and remove frames, tasting the honey and tending to the bees.

Experienced beekeepers can do this with minimal protective clothing, and sometimes without a veil. Worker bees are not interested in stinging the Beekeeper (or you), they are interested in their task at hand, cleaning the hive, tending the Queen, etc.

Most people, who get stung, have no idea what kind of bee stung them. When a bee is flying toward you, you may not care. You just know that a sting will be painful, and you back away or run!



Is this a Honey Bee, Yellow Jacket, Ground Bee, or Squash Bee ?

Honey bees are vegetarians, and do not visit our picnics, because they are interested in flowers not meat. Honey Bees do **not** make nests in the ground.

It is Ground Bees that nest in the ground, which are hard to see, easy to disturb, and will aggressively attack in multiple numbers, and sting multiple times.

Most stings are from Yellow Jackets, Wasps, or Ground Bees. If you step on a honey bee in your bare feet, you will get stung. But you are much more likely to disturb a nest of Ground bees, because the honey bees are busy in your garden, not on your lawn. If you have a fear of Honey Bees, don't walk around in your bare feet. Regardless, you are more likely to get stung by ground bees, and they will sting you multiple times, and there will be multiple bees stinging you. These are not Honey Bees.

Yellow Jackets live in nests that are often hard to spot. Often under a window sill, in a lamp post, in an outside electrical receptacle. Their normal diet includes insects, but they will eat meat at a picnic. Yellow Jackets are aggressive, attack in multiple numbers, and each one can sting multiple times. As the summer ends, they sense their demise and become aggressive.

Honey Bees are not aggressive and live in the hollow of a tree or managed hives. They only sting to protect their hive or if you crush them. They are docile, even when foraging on flowers.



This is a Yellow Jacket, the bee on the previous page is a honey bee



Paper Wasps live in nests that can be the size of a basket ball and are grey in color, often under porch ceilings, or in trees. Standing in close proximity to the hive will draw wasps out of the hive, and they will attack you.

Ground Bees cause the most stings, usually when you cut the grass and step on the hive.

You might see Ground Bees coming and going from a hole along your house's foundation, and decide to leave them alone (theorizing that if you leave them alone, they will leave you alone). But in the late summer, they will become aggressive and may attack you. You can pass ground nesting bees all summer long, and never get attacked, but in the late summer, they no longer leave you alone. (They sense their coming demise).

Honey bees do not live in the ground and therefore you are unlikely to disturb their nests or be stung by them.

Some Bee experts have said that the presence of Honey bee hives may out-compete and displace other stinging insects. Having a gentle non-aggressive bee species in your neighborhood is better than having yellow jackets and wasps.





Beekeeping is a fascinating hobby. Yes it hurts when you get stung, and new beekeepers often start off with a full body suit, veil and gloves. After a while, we learn not to fear honey bees and often will tend the hive in the spring, in shorts, a t-shirt, and sometimes even without a veil.

Many families have learned that despite an initial misapprehension of the idea of being Backyard Beekeepers, that Beekeeping is a safe hobby. Their kids love the honey and visiting the bees. And as they learn about Honey Bees, they find out why these social insects have so much to teach us.

Why more Backyard Beekeepers are needed

Genetic diversity provides honey bees with the ability to adapt to mites and pathogens. As some colonies die off, some will survive and even flourish, as these hives adapt to these pests. These survivor bees will pass their genes on to their progeny. For example, some honey bees are learning how to remove varroa mites from their hives, and defend against hive beetles.

Having a thousand bee hives scattered through a region is better than having one location with 1,000 hives. If CCD were to wipe out a large apiary, numerous small hives scattered throughout the region would survive and could become the breeding stock of the next generation.

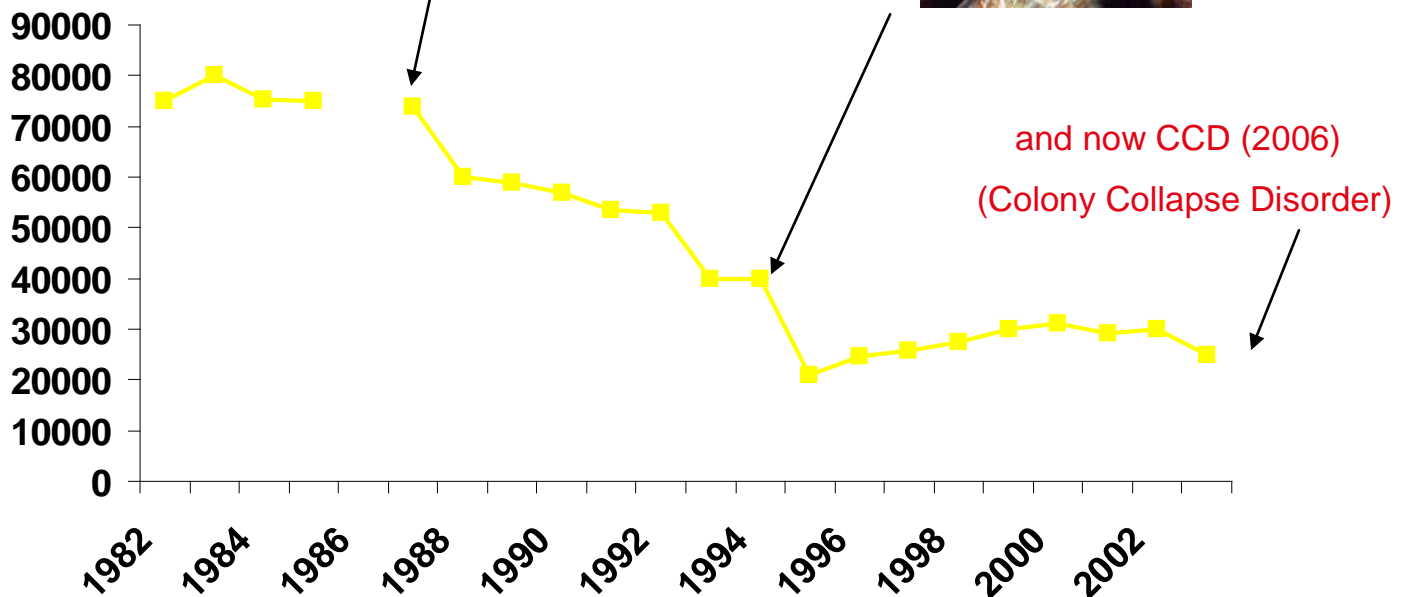
Honey bees have learned to adapt to pests in the past, but each pest has taken its toll.

The number of Managed Bee Colonies in PA is half of what they were in 1980s

Due to an invasion of Tracheal mites (1988)



Varoia mites (1994)



Benefits of Local Honey

Although there are few scientific studies that show the benefits of eating local honey to fight allergies (there has been no one with deep pockets, willing to fund a definitive study); there are decades of testimonials of allergy sufferers that attest to its efficacy. There are also many people who prefer honey because it is natural and not processed sugar. Then again there is the taste. (Yum). Local Honey is full of vitamins, enzymes, and flavoroids. Local honey tastes entirely different from store bought honey, because this specialty honey is extracted without heat and without ultra filtering, which would remove the beneficials.

Scientists at NIH and other researchers, on the other hand, are very interested in honey as an antibiotic, because of anti-biotic resistant bacteria. New Zealand honey from the Manuka plant has been shown to be effective against MRSA (Methicillin-Resistant Staphylococcus Aureus), a hospital bacterial infection that is resistant to modern antibiotics (<http://www.ncbi.nlm.nih.gov/pubmed/22382468>). It is interesting to note that despite the current popularity of its honey, Manuka was considered an invasive weed in New Zealand and was targeted for eradication in the 1950's. There has been a pilot study on the effects of Manuka honey on plaque and gingivitis. "These results suggest that there may be a potential therapeutic role for manuka honey confectionery in the treatment of gingivitis and periodontal disease" (<http://www.ncbi.nlm.nih.gov/pubmed/15125017>). Pasture Honey was likewise shown to be effective against Staphylococcus Aureus (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1297205/>). Scientific studies continue, but it is clear that "local" honeys have some interesting potentials. Honey from our own weeds may yield future benefits that we do not yet know about. Think of that the next time you spray weed killer, which affects bees, earth worms, etc.

Although in the city of Philadelphia, you can get honey by zipcode, choosing such micro flora local honey is probably not necessary for allergy sufferers (the goldenrod in the city is probably the same as the goldenrod in the suburbs), but you would be supporting your local beekeeper. The benefit of buying from your local backyard beekeeper (vs. store bought) is that you can verify with the beekeeper that they extract their honey to preserve the enzymes, pollen and other beneficials. Your local backyard beekeeper usually extracts their honey without heating it, and without the ultra filtration necessary to process store bought honey. (Think how thick honey is, and how long it would take to fill 100,000 honey jars without heating the honey to a thin liquid state and ultra filtering it). You can taste the difference of local honey from your local backyard beekeeper.

By supporting your local backyard beekeeper with honey purchases, you are helping them to defray their costs. After all, it is their honey bees that are benefiting your garden, fruit bushes, and fruit trees. If you are enjoying the benefits of local honey and are interested in helping Honey Bees, see the list of 10 ways you can do so (on page 2). You can also send me an email with "Yes, I support Backyard Beekeepers" in the subject line, and I will send you a bumper sticker. BackyardBeekeeper@yahoo.com

Honey Bee Behavior

Italian honey bees protect about one foot around their hives. Outside of this area, Italian honey bees are not defensive and will only sting if squeezed or stepped on.

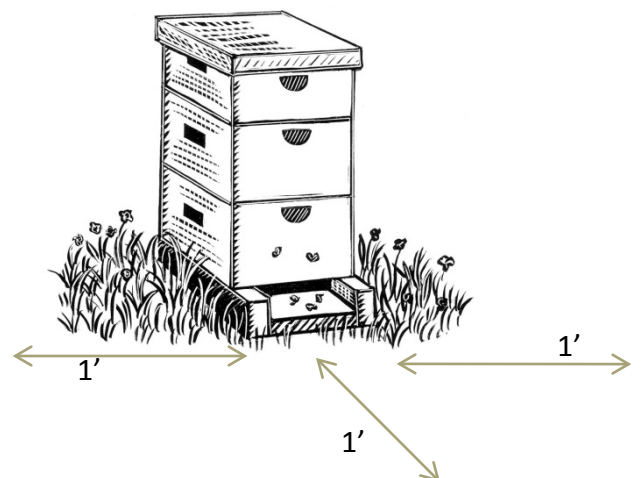
Only worker honey bees (females) will sting people. Male honey bees have no stinger.

Worker honey bees only leave their hives for a few reasons:

- Forage for nectar from flowers
- Forage for pollen from flowers
- Gather water
- Swarm (a reproduction technique)

Honey bees are not aggressive on flowers or water sources.

If disturbed, the bees will move to the next flower.



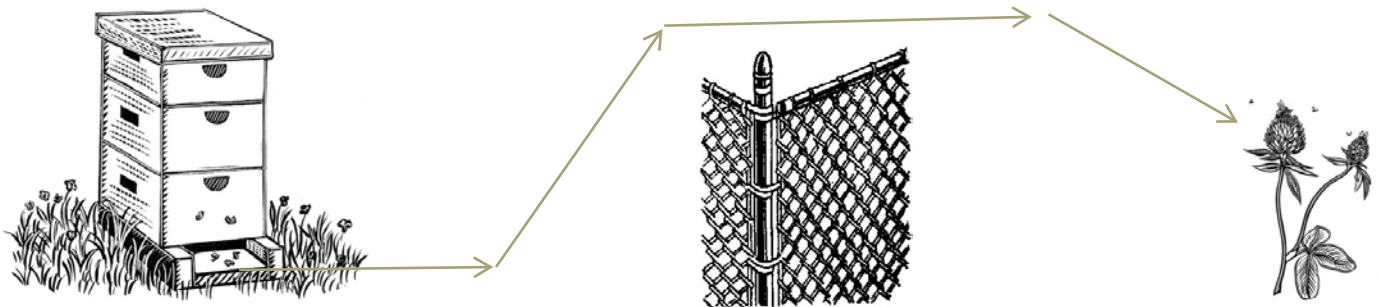
Honey Bee Waggle Dance:

Inside the hive, Honey bee scouts perform a dance to let other bees know where they found nectar and pollen. They dance in a figure 8, and shake their body to tell the other bees what direction to fly (where the flowers are in relation to the sun), and how far (the number of shakes).



Leaving the Hive:

When Honey Bees leave the hive, generally they fly out 6-10 feet and then zoom up to the tree tops, following instructions from other bees as to where the flowers are. Backyard Beekeepers often use a fence or vegetative buffer to raise the honey bees' flight path, (if the hive is facing a neighbor's property and is within 10 of the property line). Even a chain link fence can elevate the flight path, as honey bees see the mesh as an obstacle to fly around, not through. These foraging bees are preoccupied with getting to flowers, so even if you were standing in their way, they would consider you an obstacle to fly around.



Honey Bees do not congregate on the Beekeepers property or on neighbors' properties. They fan out, because they seek out diverse flowers and trees. In fact, a lot of the bees get nectar, pollen and propolis from the tree tops. Trees like Tulip Poplars (that you may not think of as a flower), have desirable qualities for honey bees.

Honey Bees also spread out because they do not want all their eggs in one basket. Their job is to bring back nectar and pollen, and if they only visited homes nearby, they would quickly deplete local flowers of their nectar and then waste time visiting flowers with no nectar.

On hot evenings they may congregate on the front of the hive. They do this to allow the hive to cool. You can often see bees at the entrance flapping their wings, directing air into the hive. Beekeepers find it fascinating to watch up close.

Swarms

Typically, in the spring, when the hive becomes too crowded, it is common for the hive to decide to split. The old queen and half the workers will fill-up on honey and swarm to a nearby tree or bush. There, they wait while scout bees look for a new location to set up a new hive. A hollow tree, or if the Beekeeper is prepared, they may move into a bait hive that a beekeeper has setup in a nearby tree.

Although a swarm looks menacing, it is a time when bees are most docile. They have no hive or brood (babies) to protect. .

Aside from Hollywood movies, away from the hive in this state, the



bees have no inclination to sting.

They are often gathered by a beekeeper without the use of a veil or other specialized clothing, and shaken into an empty cardboard box. The beekeeper will spray them with a sugar water (to discourage them from flying away), and will pour them into an empty hive at home.

[Swarm capture at Upper Dublin Lutheran Church.](#)

A bee man catching a swarm in the parking lot. No veil, no special clothes, no stings. There is no danger to nursery school kids watching from 20' away. A nature lesson the kids will never forget !



[Go to YouTube to see this video](#)

<http://www.youtube.com/watch?v=NXEyxaA2WpM>



If you are interested in supporting Honey Bees:

- 1) Send me an email with “Yes, I support Backyard Beekeepers” in the subject line, and I will send you a bumper sticker.
send it to: BackyardBeekeeper@yahoo.com
- 2) Talk to your schools, and plan to celebrate [National Honey Bee Day](#) (August 16, 2014)

Honey Bees as Neighbors

Honey Bees are great neighbors. They are quiet, will not disturb you, are fascinating to watch, and they will pollinate your vegetables, fruit trees and bushes and flower gardens.

They will not sting you, because to do so is more painful to them, than it is to you. They die if they sting you, with their abdomen being ripped out of their gut. They will avoid this, unless if you crush them or disturb the hive.

If you are concerned that you might be allergic, you should be aware of a number of facts:

1. If you are stung by a yellow jacket, wasp or another type of bee, and you have an allergic reaction, that does not mean that you are allergic to honey bees. The allergen in the venom is different for different types of bees.
2. You can be easily tested by your local allergy doctor to determine what you are allergic to. This is critical, because it is not good to be taking anti-venom drugs if you don't have to. You don't want to be taking such drugs if you are stung by a honey bee, but are allergic to yellow jackets!
3. Many people interpret a severe local reaction, to that of an allergic reaction. Being stung in the foot, and having it swell up, may be uncomfortable, but it is not an allergic reaction. However, if you think it is an allergic reaction, you should immediately go to the emergency room to be safe, don't wait to see if you have trouble breathing. Then you need to call an allergist, to get tested to determine if you are truly allergic, and to determine what types of bee(s) you are allergic to.
4. If you have trouble breathing, that is an allergic reaction, call 911 immediately.
5. If you are stung by a honey bee, remove the stinger from your skin as soon as you can. It will continue to pump venom into your skin for about 2 minutes. If you can't find a stinger, it was probably not a honey bee. You can scrape the stinger with your fingernail to remove it.
6. If you are getting multiple stings, get away as quickly as possible, because it is not a honey bee, and the yellow jackets or wasps will continue to sting you, until you get far away.

Urban and suburban communities successfully keep honey bees in densely populated areas. Some of these areas are residential areas, some are in commercial areas, and others are in very public places.



There is a hive above the Whole Foods Market in the Wynewood section of Phila, and dozens of hives at Morris Arboretum. There are hives at Awbury Arboretum, Wyck Historic House (museum), Bel Arbor Community Gardens, Penn Charter School, Plymouth Meeting, and The Philadelphia Business and Technology Center. All public places frequented by thousands of people.

Longwood Gardens has a Bee hive in one of their famous Tree houses, delighting their thousands of visitors.

These schools, parks and businesses all know about the plight of the Honey Bee and are doing something to benefit their neighborhoods, by providing homes for these valuable insects.

Anne Javsic, head of Plymouth Meeting Friends School, told about having hives on the school grounds, and the problems the school faced with stings from yellow jackets, which were attracted to kids eating lunch outside; yet not one sting from their Honey Bees. Asked how she knew if the stings were from yellow jackets and not Honey Bees, she explained that Honey Bees sting only once and leave the stinger in the skin. It was also pointed out that Honey Bees are vegetarians and are not attracted to the student lunches.



What can you do?

(see also: [10 ways](#) on page 2)

Don't be afraid of Honey Bees. They are gentle insects that rarely sting. New Beekeepers learn this and although they don't like being stung, they still persist with this safe, fascinating hobby. Talk to your local school and plan to celebrate [National Honey Bee Day \(August 16, 2014\)](#).

Rethink your use of chemicals outside. Even chemicals that claim to be "bee friendly" are rarely tested for their sub-lethal effects. A bee that brings such chemicals into the hive may not die of exposure, but it may kill bee brood (babies) or young nurse bees. This means less bees to forage for nectar or to overwinter. Such sub-lethal effects are thought to be one of the causes of CCD (Colony Collapse Disorder).

A landscaper or farmer that combines chemicals (to save time or money on application costs) is in effect creating a new chemical.

Just as both bleach and ammonia are safe to use as cleaning products (separately), but combined they make deadly chlorine gas. So too, combining chemicals and spraying them on your yard or on plants can have deadly results to local honey bees and other pollinators. Scientists refer to this as synergy, which in this case is bad.

Some chemicals such as neo-nicotinoids drain into the soil and can remain under the surface for years. These chemicals are on seeds and are designed to kill pests that eat the plant. But what about honey bees that gather nectar from the plants? Or Bumble Bees and earthworms that nest in the ground? There is concern that these chemicals suppress immune functions and memory in bees. The concern is on sub-lethal effects and the build up of the chemicals in the hives. Chemical applicators also use inert products that aid in the ability of the chemical to stick to the seeds. Inerts are also used to aid in spraying/distribution. These inerts have become suspects, and testing should be required by DEP.

If you do spray chemicals on your lawn, make sure to only use the concentrations that are recommended on the label. More is not necessarily better. A stronger dose may kill soil building organisms, beneficial insects in the soil, birds that eat them, and pollinators. Visit www.save-bees.org to learn more about these chemicals.

HomeOwners/Municipalities/Utilities need to rethink their weed spraying programs. Bees gather pollen and nectar not only from our pretty colored flowers in our gardens. An important source of nutrients for them comes from weeds on stream banks, vacant land, and along roadsides. Trees that have been struck by lightning, damaged by a storm, or have open cavities, are homes to honeybees, wood peckers, and other wildlife.

Honey Bees especially need plants that flower in the early spring, the fall, and during the hot summer dearth of flowers. By planting flowers, bushes & shrubs that bloom at these times, you will be helping local honey bees.

Top 15, From James Bobb, Master Gardener & renowned Bee Expert:

Early Spring- Eranthus, Crocuses

Summer- Herbs (especially Thyme) Anything in the mint family, Rudbeckia (Black-eyed Susan), Sunflowers, Milk weed (any type of asclepias), Lavender

Fall- Golden Rod (Solidago) there are lots of varieties, try "Fireworks", Aster (try New England Aster)

Winter-Hellebores (www.hellebores.org) These are fantastic plants that bloom in the winter

Trees: Basswood (Tilia Americana) for early summer and the Korean Bee Bee tree (Evodia daniellii) for mid-late summer.

Lawn: Dutch white clover for your front yard, and Dandelions- Yes I know, Dandelions!



Would you sit in a car with a box of Honey Bees on your lap?

You would if you knew it was safe.
This beekeeper just captured a swarm (a time when bees are most docile).



Sources of Additional Information:

1. Do you have Nature Deficit Disorder (NDD)?

Dennis vanEngelsdorp (the Acting State Apiarist for the PA Department of Agriculture) thinks that we might.... and that it may be contributing to CCD.... "Make Meadows Not Lawns" is one of his quotes, and it would make a great bumper sticker. He remarks that 11% of all pesticide use in the US goes to maintaining our lawns, which are sterile fields as far as the bees are concerned -- no pollen sources in evidence!

See his youtube video at **The Taste3 conference:**

[2007 video- The Joy of Bees](#)

[2008 video-Where Have the Bees Gone](#)

2. **YouTube video** showing swarm retrieval at Church with nursery school kids safely observing from 20' away. A nature lesson the kids will never forget!
<http://www.youtube.com/watch?v=NXEyxA2WpM>

3. **Websites:** <http://www.helpthehoneybees.com/>
<https://agdev.anr.udel.edu/maarec/>

4. **Movies**, on the importance of Bees:
[Vanishing of the Bees \(Movie Trailer\)](#) and
[Pollen Nation \(Movie Trailer\)](#)

5. Animal Planet's "**Overcoming One's Fear of Bees**" shows you can feed honey bees in the palm of your hand. <http://animal.discovery.com/videos/my-extreme-animal-phobia-man-scared-of-bees.html>

6. **2013 TED Talk by Bee Researcher Marla Spivak** draws the analogy that a Bee with a virus is like us with a virus, and how difficult it is for us to get to the grocery store when we have the flu, to get good nutrition. Then, what if (like the bee) we consumed a neuro-toxin that affected our ability to get home.
http://www.ted.com/talks/marla_spivak_why_bees_are_disappearing.html

7. **News Articles:**

a. Time Magazine (Sept 12 2013) "**Honeybees Are Still Hurting, But Backyard (and Rooftop) Beekeepers Can Help**"

<http://science.time.com/2013/09/12/honeybees-are-still-hurting-but-backyard-and-rooftop-beekeepers-can-help/>

b. Time Magazine (August 19, 2013) "**A World Without of Bees, The Price We'll Pay If We Don't Figure Out What's Killing the Honeybee**"

<http://content.time.com/time/magazine/article/0,9171,2149141,00.html>

c. NY Times (March 28, 2013)
"**Mystery Malady Kills More Bees**"
<http://www.nytimes.com/2013/03/29/science/earth/soaring-bee-deaths-in-2012-sound-alarm-on-malady.html?emc=eta1&r=0&pagewanted=all>

d. CNN, "**Disappearing Bees Threaten Ice Cream Sellers**" http://money.cnn.com/2008/02/17/news/companies/bees_icecream/

e. National Geographic, "**Bee decline May Spell End of Some Fruits, Vegetables**"
http://news.nationalgeographic.com/news/2004/10/1005_041005_honeybees_2.html

f. FOX NEWS, "**Following Honeybee Disappearance, Bumblebees Begin Vanishing Act**"
<http://www.foxnews.com/story/0,2933,299982,00.html>

g. NPR (National Public Radio) "**Bee Deaths, Loss of Navigation Cause Concern**"
<http://www.npr.org/templates/story/story.php?storyId=9972616>

h. IANR (Institute of Agriculture and Natural Resources), University of Nebraska
"**Help Disappearing Bees by being Sustainable, Having Diverse Resources**"
<http://ianrnews.unl.edu/static/0807301.shtml>

i. New York Times "**Honeybees Vanish, and Scientists Race for Reasons**"
<http://www.nytimes.com/2007/04/24/science/24bees.html?pagewanted=all>

j. **60 Minutes** "**What's Wrong With The Honeybees?**" <http://www.cbsnews.com/stories/2007/10/25/60minutes/main3407762.shtml>

k. **The Independent** (Britain) "**Why are honey bees disappearing, and What can Save Them?**"
<http://www.independent.co.uk/environment/nature/the-big-question-why-are-honey-bees-disappearing-and-what-can-be-done-to-save-them-813971.html>

If you are interested in supporting Honey Bees:

- 1) Send me an email with "Yes, I support Backyard Beekeepers" in the subject line, and I will send you a bumper sticker. BackyardBeekeeper@yahoo.com
- 2) Talk to your schools, and plan to celebrate [National Honey Bee Day \(August 16, 2014\)](#)