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October 4, 2018

Research Paper

“If the bee disappeared off the face of the Earth, man would only have four years left to live.” This statement has been attributed to Albert Einstein – but it also has been disputed he ever said it. Nevertheless, there is no disputing the trouble bees have been having in society and the seriousness of CCD (Colony Collapse Disorder). Bees are critical pollinators responsible for pollinating 70 of the 100 crop species that feed 90% of the world. (Moate May 2014). Not only do bees pollinate plants but the plants they do pollinate often feed other animals. Animals that rely on bee pollinated plants would also suffer if bees disappeared. Surprisingly, bees also have a hand in the clothing we wear (cotton) and the fuel we burn (rapeseed and canola) as well as many medicines we take. Scientists all of the world understand the importance of bees in our world and are rushing to do their best to save our little pollinating friends.

Some people wonder how long bees have been around. The answer to that goes back to ancient Egypt. While excavating Egypt’s famous pyramids, archaeologists found honey in an ancient tomb—3,000 years ago. (*Honey in the Pyramids*). Even that many years ago, people tended bees and enjoyed honey. In 1923, many years later but still a long time ago, Rudolf Steiner (the father of biodynamic farming) wrote his nine lectures on bees. At that time, Rudolf Steiner predicted in fifty to eighty years the world would see the consequences of current farming and breeding queen bees artificially. (Steiner 12). To his point, eighty-three years later (in 2006) colony collapse disorder was named. In the six years leading up to 2013, more than 10 million beehives were lost, often to CCD. (3) On Monday, August 19, 2013, Time Magazine’s title read: A World Without Bees – the price we’ll pay if we don’t figure out what’s killing the honeybee. (Bryan). If one had to summarize all the articles written about our disappearing bees it might just be of what happened to the canaries in the coal mines. Many years ago, miners brought canaries down into the coal mines. These men knew when the canaries stopped singing and began to die, they needed to get out of the mines as the environment had become toxic. Today, bees are our canaries—and they are trying to tell us something. Something scary.

So now that we have all the bad news, here’s some good news. Bees need our help and there is no better place to start than at the education level where we can help bees by both keeping them on school properties and teaching young people: the importance of the bee’s contribution in our world, the impact of chemicals and pesticides on plants and food, and how both of these affect the overall health of insects and humans. Beekeepers and scientists all over the world are working to save the honeybee and the time has come where schools throughout the United States can step up to be part of that solution. Most all schools are great places for keeping beehives. In fact, rooftop beekeeping has become widely successful in New York City opening up the ability for city schools to also be part of this solution. One part of beekeeping is learning about bees: how they live among us, how they manage their resources, how pesticides affect them, how they survived since Egyptian times. This educational part of beekeeping is important in teaching children and young leaders how their choices in the world effects the environment. When our children understand why living with a few weeds in the garden is better than using Roundup on their lawn, we are beginning the long-needed process of moving towards adults making better decisions for the earth, the environment, and the generations following.

The next part of beekeeping is the actual keeping of the bees, which leads to the first and most often asked question: Is beekeeping safe? To answer the question, however—yes understanding that they have a natural instinct to protect themselves. Yet a honeybee, unlike a wasp or yellow jacket, die when they sting, as the stinger is connected to the bee’s entrails. So, when they respond to a threat, they know they have to make it count. (Kowal).

Beekeeping is safe as long as you follow proper protocol, are not allergic to bees, and are not apiphobia (terrified of bees)! Making sure students have the proper equipment (smoker, beekeeping outfit, boots, gloves, etc.) along with a senior beekeeper, ensures beekeeping is safe and enjoyable. Once a school has the equipment they need, pairing up with an experienced local beekeeper is essential to the success of the program. As there are beekeeping communities, clubs, and associations throughout the country, this is not difficult to arrange. To those who think beekeeping is dangerous – think of horses. There are dozens of schools throughout the country that provide equestrian programs. While this is not a scientific based statement, I would venture to guess the changes of getting hurt in equestrian programs is far greater than with beekeeping.

The cost of beekeeping can be initially significant. The good news is there are many grants available throughout the country to help schools start beekeeping. These grants will give schools the basic equipment they will need to begin the program and from there the costs to continuing the program are minimal and can be offset by the sale of honey and beeswax. The ongoing upkeep of beekeeping then becomes minimal, which is why bees make such great pets—they virtually take care of themselves. Some people may find referring to “bees” as “pets” odd, but quite honestly after eight years of beekeeping I do in fact look at my bees as pets and do everything I can to ensure that they survive and thrive.

From elementary schools to colleges, beekeeping is for all ages. It encourages children to get out of their classrooms, away from phones and electronics. It teaches them about the world of insects and the planet they live in. Beekeeping will not only focus students and young adults on the world inside the beehive, it will give them a totally new prospective about the world outside the beehive and why the decisions we make on how we treat our food and plants affect humans and the animals and insects around us.

There never has been a time where we need more people helping with the bees and being a voice for how we treat our planet. There is much debate over whether the chemicals used on our food affect bees. There is equal as much debate over GMO food and its effect on bees. Many officials have said there is no ill effect from these chemicals and GMO seeds. Yet to the point of honesty from officials, and on a totally different subject, standing in front of a television camera on September 8, 2006, Dr. Cate Jenkins said that some of the dust from the 9/11 fallout in New York City was “as caustic and alkaline as Drano.” (Klatell). In spite of this warning and many others, we saw officials such as Christine Todd Whitman downplay the health risks to first responders. Seventeen years later, the tragic results of not listening to the experts are taking lives at alarming rates. Monsanto and Bayer have deep financial investments into GMO products and pesticides. It is as important for the bees as it is for us humans that young people of all ages begin to look away from their electronics and into the environment so they can make their own decisions and be a voice in our political world to save not only the bees but ourselves.

By learning about bees and laws, students also learn about policies and government. They learn that laws are passed (for good or bad) by people we elect. By understanding how those laws affect their bees, they also learn about how important it is to make sure, when they become of voting age, they are involved in the voting process as their vote does indeed affect everything from big business down to what tiny bees feed upon.

By schools taking on the challenge of starting beekeeping clubs in their curriculum they are helping the environment, opening the eyes and minds of students, and placing themselves in the position of being a solution to the diminishing bee population. The start-up costs are low, the return is high, and the result will be helping young people and the planet for generations to come.

Works Cited

Moate, Maddie. “What would happen if bees went extinct?” *BBC*. May 4, 2014.

“Honey in the Pyramids.” *National Geographic*. November 2015.

Steiner, Rudolf. *Nine Lectures On Bees*. Schmidt Number S-5494. 2009.

Kowal, Monica. “Is beekeeping safe?” *the beelandy.wordpress.com/2010/07/09is-beekeeping-*

*safe/* July 9, 2010.

Holpuch, Benjamin. Buzzfeeds: The effects of colony collapse disorder and other bee news. *The Guardian*. August 21 2015.

Walsh, Bryan. “A world without bees.” *Time.* August 19, 2013.

Klatell, James. “EPA Lied About WTC Air.” *CBS News*. September 8, 2006.