Modified Science Assignment 7th grade Week 8

Disappearing Honey Bees

You've probably seen a honey bee many times. You may have even run away from one in fear that it would sting you. You might not like honey bees at all, but have you ever thought about what would happen if they all disappeared? In recent years, the honey bee population has been decreasing in the United States. Some scientists fear that this decline will have lasting effects on the ecosystem if a solution to this problem is not found soon.

Decreasing Numbers

Honey bees have been in North America since the early 1600s. Since their arrival, many honey bees have been cared for by beekeepers, who raise the bees and collect honey and beeswax from their hives. In fact, there are over two million honey bee colonies owned by beekeepers in the United States today. That's a lot of bees! However, in 2005, some beekeepers noticed that during the winter, the number of honey bees in their hives decreased. Between 2005 and 2011, beekeepers reported an average beehive loss of over 30% each year. Some unlucky beekeepers lost as much as 90% of their hives. Since 2011, the number of hive losses has slightly dropped. Over the winter of 2013-2014, for instance, only 23% of honey bee colonies were lost. While this seems like an improvement, beekeepers and scientists are still worried about the decreasing numbers of honey bees across the country.

Growing Concerns

Honey bees can be annoying at times. Some people may not mind that they are disappearing, especially if they have been stung before! However, they are very important part of the ecosystem. Honey bees provide honey and beeswax, but more importantly, they are pollinators. About one-third of the foods we eat come from insect-pollinated plants, most of which are pollinated by bees. If there are less honey bees, the crops that depend on them for pollination may be affected. Without enough bees to pollinate food-producing plants, certain foods, like almonds, peaches, and broccoli, may become more expensive or in extreme cases-unavailable. Further, other organisms in the ecosystem will be negatively affected because they depend on honey bees for food, such as lizards and birds, which are predators of the honey bee. With such a large part to play in the ecosystem, it is essential that the honey bee does not disappear!

Should We Panic?

While some people worry that the honey bee decline will get worse and lead to severe consequences, others believe that there is no cause for fear. For example, there have been other cases of honey bee disappearances in the United States in the past, and the honey bee population has always been able to bounce back. Also, since the numbers of bee hive losses have improved in the past few years, CCD may be on the decline. In addition, honey production in the United States has been steady since 2006, and foods from bee-pollinated plants have stayed almost the same in price. Though large numbers of honey bees continue to disappear each winter, many people are confident that the effects will not be disastrous.

What Are We Doing to Help?

Scientists and the United States government have been working together to solve this problem since it first began. Scientists are conducting research to learn more about CCD and the other factors affecting the honey bee population. While they look for the causes of this problem, beekeepers are looking for solutions.

For example, many beekeepers rebuild their colonies each year to help increase the honey bee population. They usually do this by splitting a healthy bee colony into several new hives, each with its own queen bee. As new bees are born, beekeepers can replace the bees lost during the winter.

How Can YOU Help?

- Add some plants to your yard to encourage honey bees to visit and pollinate them!
- Don’t use harmful pesticides in your yard.
- Consider taking up beekeeping!
1. When did honey bees first arrive in North America?

2. Who typically cares for bees? (circle the correct answer)
   A. Scientists            B. U.S. Government          C. Beekeeper

3. What percentage of bees colonies were lost over the winter of 2013-2014? (circle the correct answer)
   A. 30%       B. 23%       C. 90%

4. According to the article, what are some of the problems that threaten the honey bee population? (Provide at least two threats)

5. Describe what happens in a hive when Colony Collapse Disorder (CCD) occurs?

6. What role do honey bees play in our ecosystem? (Refer to Growing Concerns paragraph)

7. List two examples of how the ecosystem will be impacted if the honey bee population continues to decline? (Refer to Growing Concerns paragraph)

8. Why should people be concerned about the disappearance of honey bees? (Refer to Should We Panic? paragraph)

9. What are scientists doing to solve the problem of the disappearing honey bee? (Refer to What are we doing to help? paragraph)

10. What can you do to help the honey bee population? (Look at the how you can help box in article)