THE IMPORTANCE OF BEES

point there aren't enough bees to pollinate the early blooming crops that flower in spring. Beekeepers are vital because they care for bees, so that when the spring blossom season comes, there are enough honeybees to pollinate all of the crops that need them.

(7) Besides helping us create crops for human food consumption, honeybees are also needed to pollinate crops that we feed to our livestock. Most livestock are herbivores so they must eat plants. Many of these plants could not be grown in large enough quantities without honeybees. Pollination is an example of an ecosystem service. An ecosystem service is any direct or indirect service provided by nature that contributes to human well-being and survival. For example, micro-organisms provide decomposition services, and geological processes provide soil formation and nutrient cycling services. We don't fully appreciate the value and necessity of these ecological services to our existence, and this lack of appreciation often leads us to damage these services.

(8) Beyond aiding humans, bees are also essential for natural ecosystems. Plants depend on bees to help them reproduce, and the fruit produced through pollination is consumed by a large number of animals other than humans.

Article Questions

1) What is a flower?
   A flower is the reproductive structure of a plant.(2)

2) The male reproductive organ of a flower is called the ___stamen (3)___ and the female reproductive organ of a flower is called the ___pistil (3)___. Another term for plant sperm is ___pollen (3)___ and it attaches to the sticky liquid on the ___stigma (3)___ of the pistil to achieve pollination. ___90 (4)___% of plants require animals to transfer pollen for them.

3) Describe three things that happen when the sperm fertilizes the eggs in the flower, to turn the flower into a fruit.
   1) The fertilized eggs become the seeds of the fruit.
   2) The tissues of the ovary become the flesh of the fruit.
   3) The petals of the flower shrivel and fall off. (3)

4) How do flowers attract pollinators?
   Flowers attract pollinators through the promise of nectar and pollen. (4)

5) What characteristics of the honeybee make it such a great pollinator of our crops?
   1) It has a hairy body which pollen easily sticks to.
   2) It has pollen baskets on its legs.
   3) It is a species that is easy for beekeepers to care for and manage. (5)

6) Why are natural bee populations inadequate at pollinating our crops?
   Natural bee population numbers are not high enough during the time when some of our most important food crops begin to bloom. It takes time for bees to build up their numbers after the winter die off and when bees are at the peak of their numbers, many food crops will have already finished blooming. (6)

7) What is an ecosystem service? Provide three examples.
   Ecosystem services are services provided by nature that benefit the well-being and survival of human beings. Any of three of these examples: 1) pollination services 2) decomposition services 3) soil formation services and 4) nutrient cycling services. (7)