

Biology 12 Pollination Narration Transcript

In humans, successful reproduction does not occur unless a male sperm successfully fertilizes a female egg.

Much the same occurs in flowering plants, whereby pollen, the plant version of sperm, fertilizes the ovule, which is plant version of an egg.

However, plants differ from animals in that they cannot move so they have had to find creative ways to move pollen from one flower to the next to aid in fertilization.

This transfer of pollen from flower to flower is known as **pollination**. Insects, birds, and bats often perform this function of transporting pollen from one flower to another.

Attracted to the flower with its rewards of **nectar and pollen**, insects and other pollinators provide precise placement of pollen on the receptive portion of the female structures, increasing the probability of fertilization.



It is important to realize that pollination by animal agents is mutually beneficial to both the plant and the animals. The reproductive success of the plant is enhanced and the animal pollinator receives food in the form of nectar and pollen.

mutual benefit of pollination

animal benefit

provides food

plant benefit

successful reproduction

Lets look at the example of the common honeybee to illustrate the process of pollination.

Many of us enjoy honey, but in order to make honey, bees need to collect nectar. Bees are therefore attracted to plants by the color, smells, and sweet nectar of flowers. Attracted to a flower, the bee lands on a flower in search of nectar. While it is gathering nectar, **pollen** (illustrated purple) from the anthers gets stuck to the hairy body of the bee.



flower 1

When the bee flies off to another flower, it carries the **pollen** (illustrated purple) attached to its body with it. When it lands on another flower of the same species in order to gather more nectar, **some of the attached pollen rubs off** during the movement on the flower. Some of this pollen from the first flower that rubs off falls onto the sticky **stigma**.



flower 2

As the bee leaves that flower, the pollen is ready to begin its journey down the style to the ovary.

With this, the process of pollination is complete. The stage is now set for reproduction.