**PLANT REPRODUCTION**

The way plants reproduce is a totally fascinating process. Out of the more than 300,000 different kinds of plants, more than half are seed plants. Seed plants make their own seeds from which new plants grow. Other ways plants can make new plants are from spores, rhizomes, bulbs, tubers, corms, cuttings, grafts, and buds. Seeds are made by flowers in some plants and by cones in other plants.

Flower parts contain specialized cells, called ovules, which have the job of making the seeds. Different kinds of flowers have many different parts. Basically, most plants--trees, vegetables, and even grass--sprout flowers. Some of these flowers are beautiful and colorful while others are so tiny one can hardly see them, but all plants produce new plants.

Botanists classify the reproduction of plants as ones with perfect and imperfect flowers. Perfect flowers are the ones that contain both the male and female parts. Imperfect flowers are the ones that contain only male or only female parts. So, of course, these different flowers have to find different ways to propagate themselves.

The stamen is the male part of a flower and has an anther on a stalk. The anther's job is to produce the pollen. Then there is the pistil, or female part. The pistil contains the flower's ovary, the style, and the stigma. Inside the ovary are the ovules. Each ovule contains an egg cell. So when an egg cell joins with a pollen cell, a seed may be produced.

The ovary is at the base of the plant. The stigma is at the top, and between them is the style. So, the pollen from the anther has to land on the stigma. When that happens, the pollen germinates and makes its way down into the ovary. Inside the ovary are the ovules, which contain egg cells. When an egg cell joins with a pollen cell, a seed may be produced. Then the ovary becomes a fruit. So a fruit is a mature ovary holding the seeds.

In fruits, like the pears, the pear's core is the seedpod of the pear tree. Acorns are the seedpods of oak trees. And the tomato is the seedpod of the tomato plant.

A flower garden is alive with insects. They are all after the sweet liquid called nectar, which the flowers produce, near the bottom of the pistil. Flowers produce the nectar to draw the insects to them. Insects--like butterflies, wasps, and bees--come to get the nectar. Some, like butterflies and wasps, use the nectar for food; some, like bees, make it into honey and store it in their hives.

If you look closely at the body of a butterfly or bee, you will notice it is covered with tiny hairs. As they land on the flower to collect the nectar, some of the pollen is brushed on these hairs. Then the insect carries the pollen to the next flower, and pollination takes place.

Some plants, like corn, or flowers of an oak tree, rely on the wind to spread their pollen. So these kinds of plants don't produce pretty flowers since they don't need to attract insects to come and pollinate them.

Some plants need long tongues to pollinate them. Their flowers are usually tubular, like the trumpet creeper vine. These kinds of flowers are best pollinated by hummingbirds or by moths that have long tongues. And flowers that open at night do so because they need the specialized pollination provided by certain moths. Even the color of plants makes a difference. Birds, like the hummingbird, usually pollinate plants that are red. Night insects pollinate white and pale yellow flowers, which are seen better at night.

Trees that have needle-like leaves are called conifers. Conifers produce cones instead of flowers. Under each scale of a cone is a part that produces either pollen or an ovule. But a cone cannot produce both. The very small cones produce the pollen in the spring. The wind carries the pollen to the larger cone, which has the ovule producing part. Then, the pollen producing cones fall off while the fertilized ovules grow larger. Eventually, they open and release the seeds, and some of the seeds sprout. Some plants, like tulips, grow from bulbs. Bulbs produce plants very easily by reproducing underground.

Plants can be grown without seeds by cuttings. A cutting can be from any part of the fully-grown plant, and when it is placed in soil, it may produce a new plant. You can increase your own houseplants by this method, and here is the way to do it. With a sharp knife, cut a piece of stem from the houseplant you want to use. Pull off any leaves or flowers from the stem's lower part. Stick the stem in some clean, moist sand. Cover the flowerpot with a clear, plastic bag. Place in a well-lit place. After a few weeks, lift the stem out of the sand. Are the roots beginning to grow? Now you can plant it in a pot with potting soil. Keep the soil moist, and soon, the new plant will begin to grow.

When cuttings from trees and other woody stems are attached to another plant, this is known as grafting. Grafts are another way of growing plants without using seeds.

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