

## *Flowers*

*by Rabbi Zev-Hayyim Feyer*

It is February, and, despite the continued cold weather, we are only a month away from the start of spring. And spring means flowers. So let us talk about flowers.

When speaking of flowers, most city-dwellers think of roses, carnations, gladioli, orchids, or similar popular (and expensive) flowers. Country folk are perhaps more likely to think of daisies, pansies, forget-me-nots. Actually, though, almost all fruit trees, and many other plants as well, bear flowers, and flowers – most of them, anyway – are among the most beautiful of G\*d's creations.

From ancient times people knew that fruit trees, nut trees, berry shrubs, and many vegetables burst into blossom in the spring or early summer. After the blossoms fade and die, fruits and nuts and berries appear in their place, at first tiny, but gradually growing to full size and ripeness. So people knew that fruits, nuts, and certain vegetables were the products of flowers, though they did not really understand the process by which it happened.

When early humans saw the pretty flowers in the fields, woodlands, meadows, and mountain slopes, they could think of no reason for their existence except that the Creator formed them for our pleasure, that we might feast our senses on their beauty – their many colors, their extraordinary shapes and forms, and, not least, their exquisite fragrance. Little did our earliest ancestors know that the colors, shapes, and fragrances were vitally important also to the flowers themselves.

Only about the end of the seventeenth century did botanists realize that plants reproduce themselves in much the same way as do animals. They realized then that some flowers were males and some were females, that they produced tiny cells, called, respectively, *pollen* and *ovules*, and that the pollen (a Latin word meaning *fine dust*) had to fall on the ovules (the part of a plant which develops into seeds) in order to produce seeds or seed-bearing fruits. This process is called *pollination*.

But it took another hundred years before botanists realized the importance of colors, shapes, and odors to the flowers themselves. They finally came to understand that a wonderful partnership existed between flowers and certain birds as well as bees, butterflies, moths, and other insects for whom the flowers provide food in the form of sweet-smelling liquid nectar. In return for this food, these winged messengers carry the pollen to other flowers on the same plant or to other plants. Without their help, many plants could not produce seeds or fruits. Now the mystery was solved. Certain flying creatures are attracted by certain colors and odors. Many flowers, especially in tropical countries, have long flower tubes and are bright red or orange in color. They attract hummingbirds and long-tongued moths. Other flowers, like mints and forget-me-nots, have different shades of purple or blue, which are especially attractive to certain types of bumblebees.

Some flowers open only at night, or become fragrant only at night, because their partnership is with night-flying insects. They are often white or pale in color, in order to be seen by the night-insects in the dark. Some flowers even have a disagreeable odor to attract insects that feed on decaying matter!

The importance of shape and form is best illustrated by the example of the orchid family. Some species, such as the lady-slipper, are formed so that a heavy insect must force its way into the top of the flower to obtain the nectar. But to get out again it must leave through a passage underneath, so small that the pollen clings to its body.

Strange and wonderful and many are the methods of pollination among the different kinds of flowers. But all point to the wonderful design and plan which G\*d implanted in Nature; all proclaim the infinite wisdom of the Creator.

Not all flowers depend on winged messengers for pollination. Some depend on the wind to carry the pollen; water flowers are helped by the water and waves. Since wind and water have no stomachs, no eyes, and no sense of smell, flowers that depend on them do not require fragrance or nectar or particularly bright colors. G\*d does not waste anything, and so these flowers are comparatively colorless and odorless.

Where would you expect to find a flower the size of a washtub? In the same places where you would find giant spiders and bats and elephants – in the dense jungles, Nature's own hot-houses. The Rafflesia, the largest flower of all, is a gigantic flower, without leaves or stems. It is a parasite growing upon the exposed roots of a certain kind of vine. Its own roots are buried entirely within the tissues of the plant on which it grows, so that all that is visible of the Rafflesia is its enormous cabbage-like bud and, later, its gigantic blossom, which often exceeds three feet in width.

When fully open, its thick, fleshy, curled-back petals – five in number – lie flat upon the ground. In their midst lies the shallow, bowl-shaped bloom, containing the pollen sacs. This bowl can hold two gallons of water. The weight of the whole blossom may reach fifteen pounds!

This monstrous blossom is colored blood-red, and it exhales a most disagreeable odor, like the stench of carrion. It consequently attracts a large number of flies and insects, who obligingly carry its pollen from one blossom to another. But the ripened seeds must be sown, and not just anywhere in the soil, but in the tissue of one particular vine. How is this done? The Creator has provided a way, you may be sure. G\*d made the seeds very sticky, and they stick to the feet of elephants, rhinoceroses, and other animals that roam the jungles. These beasts carry the seeds around until, eventually, they bruise the roots of the vine which is to serve as host, and then they leave a seed of Rafflesia in the damaged tissues, where the seed takes root and grows into another fantastic bloom.

Oh G\*d, how glorious is Thine handiwork throughout the world!