Different Type of Flowers

A Photo Handbook and Guide

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Botanists, horticulturists and gardeners the world over have marveled at the many strange and wonderful forms of flowers. Adapted over many generations to their ecosystems and climates, each flower is perfectly evolved to take advantage of available systems of pollination, whether that is by insects or other animals, or something else entirely such as a prevailing wind at a certain time of year. This fascinating study holds amateurs and professionals alike in thrall.

Drought Smart Plants is proud to present this E-Book, A Different Type of Flowers to gardeners and plant lovers.

The Function of Flowers
Each plant has evolved a different type of flowers depending on their environment, available pollinators and climate.

This explains why some different kinds of flowers are so bizarre and strange. The flowers of orchids are distinctive in that they form certain parts of the flower specifically to attract the insects or in some cases, night flying bats to pollinate them.

This crucial part of the plants life means that for every different type of flowers, there is a method for pollination, geared to that individual type of flower.

‘Bee guides’ are an important method to steer bees and other insects to the right place on the flower – the nectaries where the nectar is stored, making the insect pass...
through the pollen holding anthers first.

Then the pollen is transferred to the stamens of another flower as the insect goes on to nectaries there.

Just so you have an idea how important the role of insect pollination is, the plant developed the nectar solely with the purpose of attracting insects – they don't use the nectar themselves.

**Flower Forms**

The list of unusual flower forms is almost endless – how do they get that way?

When plants are grown in isolated pockets, the adaptations and evolutions are unique to that population. If the only way to get your flowers pollinated is by night flying moths, then you'll evolve a way of attracting this insect in the dark – how about by scent? This explains why Cereus peruviana, the night blooming Cereus has such a powerful perfume in its short lived nocturnal flowers.

Other night blooming plants with an intoxicating scent are Nicotiana, and Evening Scented Stocks. Another interesting adaptation is the development of white or pale green colours in night blooming plants.

Can you make a wild guess as to what they depend on for pollination? You'd be safe to say, some kind of nocturnal insect such as moths, which are attracted to scent as well as pale colours.

Landing pad types of flowers are formed to provide a convenient place for butterflies and other beneficial insects to bask, feed and view their domain. The flat pad of many compositae such as Aster, Gallardia and other daisy like blooms is specifically designed for butterflies with their wide wings. Achillea and Sedum spectabile flowers are shaped the same way.

Umbelliferous flowers such as dill, carrots and other plants provide a lot of small blooms easily accessibly for foraging bees, wasps and many other beneficial insects. They are also attractive to aphids and other pests, giving the beneficial insects even more reasons to visit – protein on the hoof as well as pollen and nectar.
A plant with a completely different type of flowers is the spectacular form of Passiflora, the Passion Flower. These don't look real – the incredibly formed blooms are impossible to forget once seen.

In a similar fashion, Sempervivum has almost as gorgeous a flower. Granted, they're a lot smaller, but equally as intricate in a macro photograph.

Unique and really weird are the Batflower, Clitoria and Cobaea. Each one is fascinating, specialized and functioning perfectly in their niche.
Funnel or trumpet flowers such as Ipomaea, the Morning Glory are attractive to hummingbirds, which will pollinate these along with other long tubelike blooms with their long beak and tongue.

Other plants that are formed into a trumpet shape are Petunia, Nicotiana, Campanula, Campsis and many more. The evolution of creatures such as hummingbirds enabled them to specialize in pollination of this type of flowers, in pursuit of their food source. The two life forms, the flower and the pollinator, evolved in a symbiotic relationship; the pollinator gets a reward of pollen and nectar, and the flower achieves pollination, and the fertilization of the seeds.

The Anatomy of a Flower
Flowers have certain parts that all perform a function.
Each individual piece of a flower may not appear at first glance to be anything more than just a beautiful work of art.
However, closer inspection reveals a fascinating fact; each part of plant is individually crafted for a specific purpose.
In this diagram, you can see the parts labeled; you'll refer to this image often, as you become more familiar with the different parts and their function.

Not all flowers are 'perfect' — that is, they're not always complete as in the illustration above.

Many plants are 'dioecious' which means they have two different kinds of flowers on separate plants, one with the pollen part (anthers) and the other with the seed part (ovary). These are also referred to as male and female flowers. Ilex species (Holly) is this type — it requires one male plant to pollinate several female plants to get the desirable red berries of this shrub.

Other plants are 'monocious' or having two kinds of flowers on the same plant.

Corylus, the hazel or filbert has this type of flowers.

The male flower is the catkin; its dangling pollen producing anthers release the pollen on warmer days in early spring, and the odd little filaments of bright red which are the female flowers eventually (if they are successfully pollinated of course) form into a cluster of delicious hazel nuts.

In other cases, the male and female flowers are formed only on different trees or plants.

Some plants such as the huge family of grasses use wind to pollinate their flowers. Yes, they do have flowers, odd though that might seem. Generally referred to as 'inflorescences' they too have pollen, produced by anthers, and ovaries which receive the windborn prize.

Corn is a prime example of this form of pollination. It's advised by the experts to plant your corn in a block to assist in the pollination, as this is the only way you'll get kernels of corn forming.

Grains of all kinds from wheat to rice, from barley to oats rely on this method of getting their pollen from one place to another.
type of willow, just a male clone doing his natural spring ritual. The female plant releases copious amounts of fuzzy down later in the spring, making them highly unpopular as ornamental plants. This explains why male willows are preferred as garden shrubs. Find out more about this fascinating topic on Wikipedia.

How do flowers attract pollinators?

Some of the many mysterious ways that flowers will attract their special pollinators are by scent; by offering an exchange of pollen and nectar for the service; by the ultraviolet bee guides to those insects that use sight to find flowers (bees in particular). Some plants use one or several of these methods to ensure that the pollinators find them. As plants can't move, the pollinating insects have to locate the flower, so flowers have evolved an incredible array of methods to attract them.

Bee guides have been found to show a lot differently to a bees eyes, as it's known now that they see in ultraviolet light, unlike our eyes.

Bee guides, or nectar guides are darker splotches and lines in a pattern aiming directly at the throat of the flower.

Pollinators use these to locate the nectar – here's one that was successful.

All the Different Type of Flowers:

This list is of the many different kinds of flowers that you might see.

If you are gardening in a tropical place, with a warm climate, lots of rainfall and sun, there will be a whole different range of plants that will grow for you than if the climate is cold and snowy in the winter, and dry and warm in the summer.
Choosing the right plants for the climate will ensure the best success with the least amount of maintenance. Fiddling about and covering tender plants, or trying to deal with powdery mildew in a humid climate is just no fun.

Daisy like flowers that are common in northern hemisphere gardens in areas that experience a colder period are used for their enthusiastic and long lived blooms. Some that do well with little care are the alaska daisy, some of the simpler types of Chrysanthemum, Gaillardia (the blanket flower), and some of the cone flowers like Rudbeckia, Echinacea and Ratibida are formed the same way, with ray flowers and a cone instead of a disk.

This form is extremely attractive to many pollinators, and an added bonus is that they continue to bloom well into the fall.

Wildflowers have some of the most interesting forms. We don't have to look far for some absolutely unique and gorgeous flowers right in our own back yards.

**Umbelliferous flowers** such as many of the Sedum spectabile varieties are also attractive to many butterflies, and these also stand late in the autumn, in fact, the flowers will dry on the plant, providing winter interest and somewhere for the chrysalises to overwinter.

Some of the best Sedum are Sedum spurium varieties, which keep on blooming for all of July and August. Plant lots of different kinds for a [butterfly garden](#) that will provide for your lovely visitors for a long period of time.

**Spires of trumpet shaped flowers** like Penstemon are bee magnets. The lovely blue and purple flowers open in stages through the summer, providing a long season of nectar.

Others that have a similar habit are some of the pea like Lupines, common to many country style and cottage gardens; Agastache, which is a relative of mint so has a square stem (an easily recognizable characteristic) and Hyssop, an old fashioned favorite of gardeners everywhere. Even the common culinary sage, Salvia officianalis has flowers that magnetically attract bees.

Illustration 6: Rare wildflower, unknown species
Some spire like blooms provide nectar to many wild bees and pollinators, including skippers and butterflies. One of the very best is Stachys lanata, the wooly Lambs Ears. The tiny blooms open in sequence up the stem, giving the bees several weeks to get their fill.

Orchids are in many different forms ranging from Corilarhizae striata – striped coral root, to Calypso bulbosum - the fairy slipper, to C montanum, the gorgeous and delicate mountain ladyslipper. Many tropical orchids emulate moths, or other insects, are highly scented, and bloom over a long period of time to give the insects or other pollinators time to come and visit.

Some very odd flowers are **Stapelia and Heurnia**, also called carrion flowers which have flowers that smell of rotting meat to attract the flies that pollinate them. The flowers are usually in dark colours, burgundy or red, and some have incredible marbling and veining.

The red colouring is thought to resemble blood, which attracts these types of insects as they investigate any source of food.

Each of these flowers has some strategies to get themselves pollinated.

When is a flower not a flower? Answer: When it is a **bract**.
Bracts are colourful modified leaves that frame a non-descript flower to attract the insects attention. Some are bright red, such as the Poinsettia, Euphorbia pulcherima. Other Euphorbia species have equally vibrant coloured bracts, such as the vivid acid green Euphorbia polychroma.

**What role does colour play in the function of flowers?**

Colour, though important to us, plays a very different role in the pollination of flowers. Insects see light differently than we do, and mostly in the ultraviolet range. Flowers have evolved to place themselves perfectly to attract exactly the right insects to pollinate them.

As you can see in all the pictures of flowers in this e-book, the forms of flowers are varied, and the colours equally so.

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