

# Difference Between Sepals and Petals

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## Key Difference – Sepals vs Petals

Flower is an important reproductive organ in [flowering plants](#). The [angiosperm](#) flower consists of different parts which contain specialized functions. Androecium and gynoecium are mainly involved in reproduction by the production of pollen grains, [germination](#) of pollen grains and [fertilization](#), respectively. The sepals and petals indirectly assist the above process. **Petals attract pollinators using their attractive colors and scents and help in pollination. Sepals are greener in color and are involved in providing protection to the flower during [bud](#) conditions.** This is the key difference between sepals and petals.

## What are Sepals?

Sepals can be defined as a part of the flower in flowering plants (angiosperms). Sepals are usually green in color. They protect the flower in the bud stage and act as a support for the blooming petals. The collective name for sepals is the calyx. Calyx is the external part, namely the whorl, which forms a flower. In flowers, the sepals and the petals are leaves after modification. The external sterile whorl of a flower is the sepals (calyx) and petals (corolla). These parts together form the perianth. The formed sepals may be a free structure called polysepalous or a fused structure which is called gamosepalous.

The calyx is no longer useful after flowering as it starts to wither. But, if retained in some plants, it will remain as a dry calyx consisting of thorns. Calyx becomes reduced and appears as scales or ridges in some plants until the fruit becomes mature. This becomes the protective coating for [fruits and seeds](#). Few species for such instances are *Acaena*, *Solanaceae*, and *Trapanatans* (water caltrop).



**Figure 01: Sepals of *Hibiscus* flower**

In plants with no prominent calyx, a bladder-like structure starts to grow, enclosing the fruit. This enclosure acts as an effective protective cover that protects the fruit from insects and birds. *Hibiscus trionum* and Cape gooseberry are few examples.

## **What are Petals?**

Petals are important structures of a flower. They are considered to be modified leaves which surround the reproductive units: androecium and gynoecium of the flower. The petals as a whorl are referred to as corolla. Sepals are present just below the corolla. They are distinguishable since the corolla or petals are brightly colored, and the sepals aren't. In some flowers, both sepals and petals have a similar [phenotype](#), making it hard to distinguish the parts. In such conditions, the petals and sepals are collectively termed as tepals. Petaloids are structures where undifferentiated tepals resemble petals.

Charles Darwin studied the evolution of petals. He put forward a theory which explains the origin of the petals. According to Charles Darwin, the origination

of the corolla is an elongated tube. The number of petals in [monocots and dicots](#) differ. In monocot flowers, petals are present in multiples of three whilst in [dicot flowers](#), the petals are present in multiples of four or five.



**Figure 02: Petals**

According to the arrangement of petals in the corolla, they can be classified into many types. If the petals are present individually and are free from each other in the corolla, they are referred to as Polypetalous. Partially fused petals in the corolla are known as gamopetalous. Fusion of tepals (petals and sepals) is referred to as synsepalous.

The main function of the petals is to attract pollinators. The pollen grains that are produced by the anther of the androecium need to be pollinated in order to facilitate pollination and successful germination at the stigma of the flower. The vibrant colors, scent, shape, and size of the petals attract different pollinating agents.

## What is the Difference Between Sepals and Petals?

### Sepals vs Petals

Sepal is the outer part of the angiosperm flower that provides protection for the flower during its bud stage.

Petals are a type of modified leaves which anatomically surrounds the reproductive units of flowers.

#### Function

Sepals provide protection to the flower during bud conditions.

Petals are involved in attracting pollinating agents.

#### Color

Sepals are mostly in green color.

Petals are brightly colored.

#### Collective Name

Sepals are collectively termed as a calyx.

Petals are collectively termed as a corolla.

### Summary – Sepals vs Petals

Sepals and petals are two structures present in flowers. They assist the process of reproduction and development of the flower. Sepals are the outermost part of the angiosperm flower and provide protection for the flower during its bud stages. Petals are a type of modified leaves which anatomically surround the reproductive units of flowers. The vibrant colors and different scents produced by petals effectively attract pollinators. The petals are collectively referred to as corolla and the sepals are collectively referred to as calyx. This is the difference between sepals and petals.

#### Reference:

1. Sauquet, Hervé, et al. "The ancestral flower of angiosperms and its early diversification." *Nature Communications*, vol. 8, Jan. 2017, [Available here](#).
2. Zimmermann, Martin Huldrych, and Arthur Cronquist. "Reproductive structures." *Encyclopædia Britannica*, Encyclopædia Britannica, inc., 18 Oct. 2016, [Available here](#).

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2. “2249397” (Public Domain) via [Pixabay](#)

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