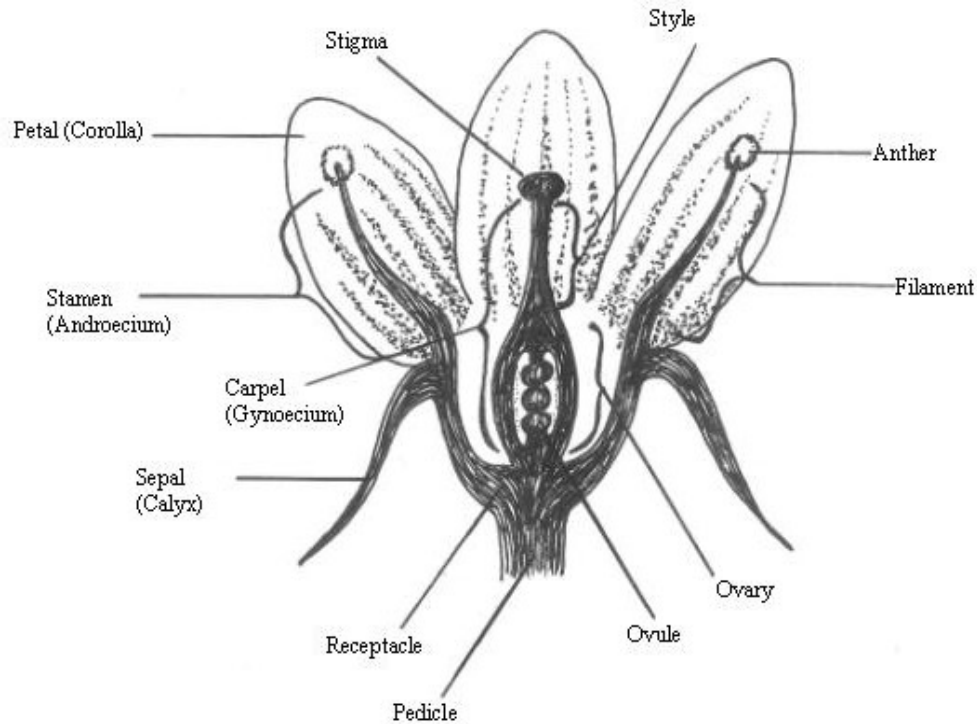




## Flower Structure and Function

### I. Basic parts of a flower:



1

Flowers have three major parts:

1. The **gynoecium** (jī-nee-see-um) is all of the parts that make up the female part of the flower. This includes the carpel(s) and all of their parts (stigma, style, ovary and ovule).
2. The **androecium** (an-dree-see-um) is all of the parts that make up the male part of the flower. This includes the stamens and all of their parts (filament, anther and pollen).
3. The **perianth** is the outer protective cover, which includes the often showy petals and sepals. The **corolla** is all of the petals together. The **calyx** is all of the sepals together.

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<sup>1</sup> Drawings by artist and FTG volunteer Betty Packler

## II. Males and Females:

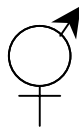
Some flowers have only a gynoecium (pl. gynoecia), meaning they are “female” flowers. We call these **carpellate** (sometimes called **pistillate**) flowers. Carpellate flowers produce fruit.



Some flowers have only androecium (pl. androecia), meaning they are “male” flowers. We call these **staminate** flowers. Staminate flowers produce only pollen and are not capable of producing fruit.



Flowers that have both male and female parts, like the one in the diagram on the first page, are called **perfect** flowers. Perfect flowers produce fruit. Most plants have perfect flowers.



Plants that do *not* have perfect flowers, but have separate carpellate and staminate flowers are divided into two categories:

- Plants that have carpellate and staminate flowers on a single individual are called **monoecious** (mō–nee–shus).

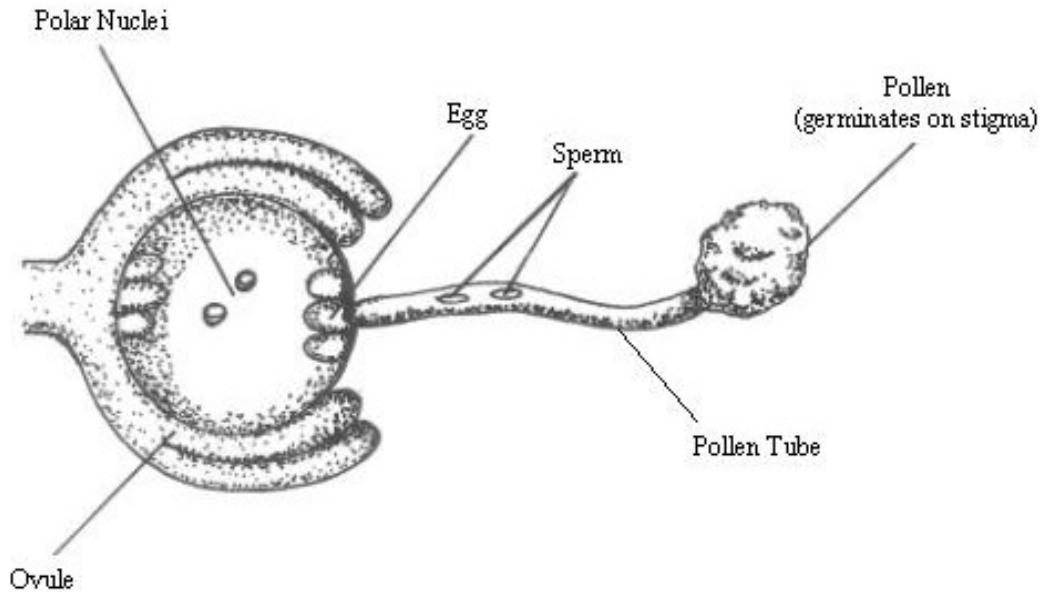


- Plants that have carpellate and staminate flowers on separate individual plants are called **dioecious** (dī–ee–shus). In these plants, only the individuals with carpellate flowers will produce fruit. The staminate individuals, lacking ovaries, never will.

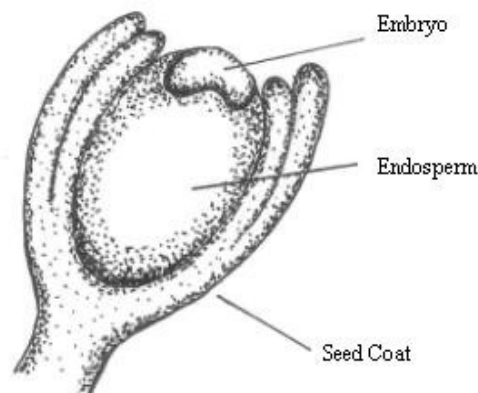


### III. Floral Function

The basic function of a flower is reproduction. A flower is pollinated when **pollen** from an **anther** is delivered to a **stigma**. The pollen germinates on the stigma and forms a **pollen tube** that delivers sperm to the egg within the **ovule**.



The fertilized egg develops into an **embryo**. The polar nuclei are also fertilized and develop into **endosperm**, which is nutritive tissue for the embryo. The seed is the embryo plus the endosperm.



Flowering plants package their seeds into fruits. A fruit develops from an ovary when the ovules have been fertilized by pollen. The fruit can function to protect the seeds and, sometimes, to attract animals who will eat the fruit and disperse the seeds to another location.