

Flower

A flower is defined as a modified reproductive shoot of determinate growth.

FLOWER PARTS:

The basic parts of a flower, from the base to the apex, are as follows.

The **pedicel** is the flower stalk. Flowers may be subtended by a bract, a modified, generally reduced leaf; a smaller or secondary **bract**, often borne on the side of a pedicel, is termed a **bracteole or bractlet** (also called a prophyll or prophyllum).

The **receptacle** is the tissue or region of a flower to which the other floral parts are attached. The receptacle is typically a small, obscure region (derived from the original apical meristem). From the receptacle arises the basic floral parts. The **perianth** (also termed the perigonium) is the outermost, non-reproductive group of modified leaves of a flower. If the perianth is relatively undifferentiated, or if its components intergrade in form, the individual leaf-like parts are termed **tepals**. In most flowers the perianth is differentiated into two groups. The **calyx** is the outermost series or whorl of modified leaves. Individual units of the calyx are **sepals**, which are typically green, leaf-like, and function to protect the young flower. The **corolla** is the innermost series or whorl of modified leaves in the perianth. Individual units of the corolla are **petals**, which are typically colored (non-green) and function as an attractant for pollination. Some flowers have a **hypanthium (floral tube)**, a cuplike or tubular structure, around or atop the ovary, bearing along its margin the sepals, petals, and stamens.

Many flowers have a **nectary**, a specialized structure that secretes nectar. Nectaries may develop on the perianth parts, within the receptacle, on or within the androecium or gynoecium (below), or as a separate structure altogether.

The **androecium** refers to all of the male organs of a flower, collectively all the **stamens**. A stamen is a microsporophyll, which characteristically bears two thecae (each theca comprising a pair of microsporangia). Stamens typically develop as a stalk-like filament, bearing the pollen-bearing anther, the latter generally equivalent to two fused thecae.

The **gynoecium** refers to all of the female organs of a flower, collectively all the **carpels**. A carpel is the unit of the gynoecium, consisting of a modified megasporophyll that encloses one or more ovules. A carpel consist of stigma, style and ovary.

FLOWER SEX AND PLANT SEX :

Flower sex refers to the presence or absence of male and female parts within a flower. Most flowers are **perfect or bisexual**, having both stamens and carpels. Bisexual flower sex is likely the ancestral condition in angiosperms. Many angiosperm taxa, however, have **imperfect or unisexual flower** sex. In this case, flowers are either pistillate/ female, in which only carpels develop, or staminate/ male, in which only stamens develop.

Plant sex refers to the presence and distribution of perfect or imperfect flowers on individuals of a species. A **hermaphroditic plant** is one with only **bisexual flowers**. A **monoecious** (mono, one + oikos, house) plant is one with only unisexual flowers, both staminate and pistillate on the same individual plant; e.g., *Quercus* spp., oaks. A **dioecious** (di, two + oikos, house) plant is one with unisexual flowers, but with staminate and pistillate on separate individual plants (i.e., having separate male and female individuals; e.g., *Salix* spp., willows).

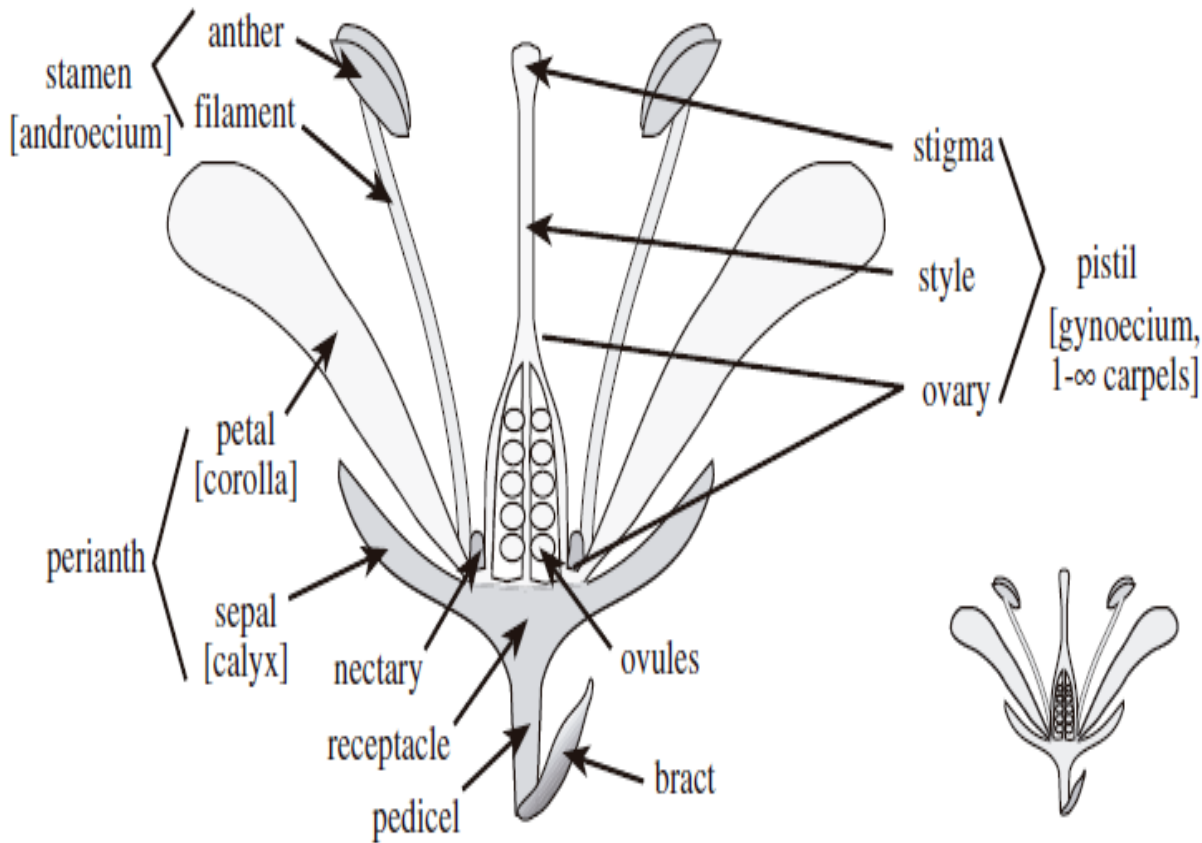
FLOWER ATTACHMENT:

Flower attachment is pedicellate, having a pedicel; sessile, lacking a pedicel; or subsessile, having a short, rudimentary pedicel.

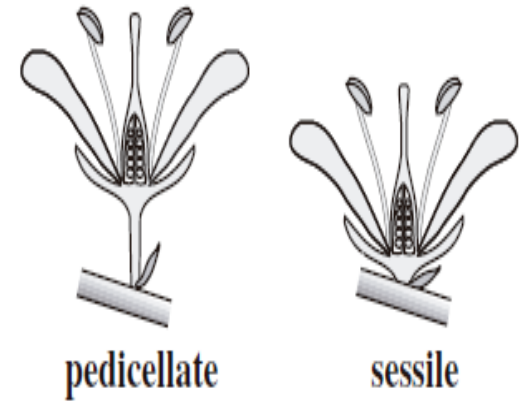
FLOWER CYCLY:

Flower cycly refers to the number of cycles (series or whorls) or floral parts. The two basic terms used are **complete**, for a flower having all four major series of parts (sepals, petals, stamens, and carpels) and **incomplete**, for a flowering lacking one or more of the four major whorls of parts.

Flower Parts



Flower Attachment



Flower Sex

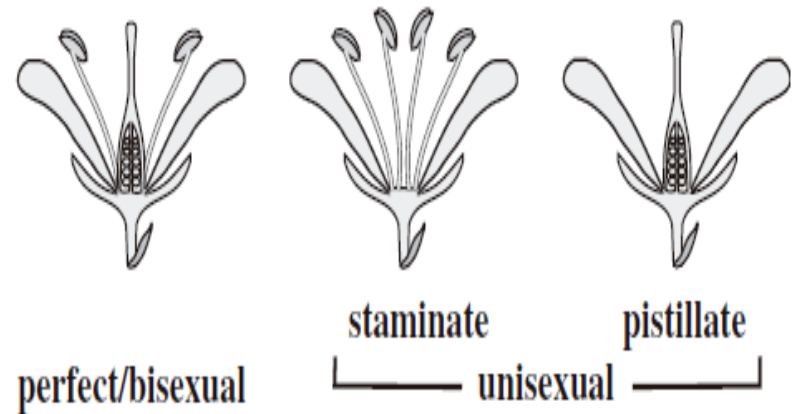


FIGURE 9.13 Flower parts, sex, and attachment.

THANKS.....