

GENERAL BOTANY Lecture 21 - Flowering Plants (Angiosperms) – Anthophyta / Magnoliophyta

- I. Flower structure - composed of four whorls of modified leaves (sepals, petals, stamens, and carpels)**
 - A. Receptacle - holds it all together**
 - B. Sepals (calyx) & petals (corolla) - together called the perianth**
 - C. Male (stamens) and female (pistil / carpels) parts**
 - 1. Male (androecium) - stamen: anther & filament**
 - 2. Female (gynoecium) - carpel or pistil: stigma, style, ovary & ovule**
- II. Variations in floral structure**
 - A. Completeness of flower**
 - 1. Complete flower - has all four sets of floral "leaves"**
 - 2. Incomplete flower - lacks one or more of the four sets**
 - B. Perfectness of flower**
 - 1. Perfect - has both male (staminate) and female (pistillate) parts**
 - a) If observed in whole plant, referred to as monoecious**
 - 2. Imperfect - lacks either the male or female part**
 - a) If observed in whole plant, referred to as dioecious**
 - C. Symmetry of flower**
 - 1. Regular or radial- petals are of similar shape and radiate from center of the flower**
 - 2. Bilateral - parts arranged so that perianth can be divided into two equal parts**
 - 3. Irregular**
 - a) Whorls with dissimilar flower parts**
 - b) Parts do not radiate from center**
 - c) Parts not equidistant from each other**
 - D. Ovary position**
 - 1. Superior ovary - gynoecium (female stuff) is above perianth and androecium (other stuff)**
 - 2. Inferior ovary - ovary appears to be below the perianth and stamens**
- III. Monocot vs. dicot**
 - A. Monocots in units of 3's**
 - B. Dicots in units of 4's or 5's**