## SEMI-TECHNICAL DESCRIPTION OF A TYPICAL FLOWERING PLANT

The distinguishing features of a plant family are crucial for identification, and these characteristics are primarily derived from floral traits such as flower sexuality, symmetry, and ovary position in relation to floral whorls, presence of bracts, and the state of the calyx, corolla, androecium, and gynoecium. To facilitate a systematic examination and expedite the understanding of these diagnostic features within a family, they are symbolized and organized into a floral formula. Additionally, floral diagrams are created to provide supplementary information, including details about placentation, the position of the mother axis, and aestivation. The respective family descriptions later in the chapter include floral formulae and diagrams to aid in a comprehensive understanding of these characteristics.

### Symbols Used In Floral Formula

Position, number, structures, cohesion, adhesion of different parts of flower are represented as a formula through specific signs. It is called floral formula.

**Bracts (Br)**

| | |
|---|---|
| Br | Bracteate |
| Ebr | Ebracteate |

**Bracteoles (Brl)**

| | |
|---|---|
| Brl | Bracteolate |
| Ebrl | Ebracteolate |

**Symmetry of the flower**

| | |
|---|---|
| ⊕ | Actinomorphic |
| ⊕ Or % | Zygomorphic |

**Sex**

| | |
|---|---|
| ♂ | Staminate (male) |
| ♀ | Pistillate (female) |
| ⚥ | Hermaphrodite |

**Calyx (K)**

| | |
|---|---|
| $K_5$ | 5 sepals, polysepalous |
| $K_{(5)}$ | 5 sepals, gamosepalous |
| $K_{2+2}$ | 4 sepals in 2 whorls of 2 each |

**Corolla (C)**

| | |
|---|---|
| $C_5$ | 5 petals, polypetalous |
| $C_{(5)}$ | 5 petals, gamosepalous |
| $C_{2+2}$ | 4 petals in 2 whorls of 2 each |

**Perianth (P)**

| | |
|---|---|
| $P_6$ | 6 tepals, polytepalous |
| $P_{(3+3)}$ | 6 tepals, in 2 whorls of 3 each, gamotepalous |
| $P_{3+3}$ | 6 tepals, in 2 whorls of 3 each |

**Androecium (A)**

| | |
|---|---|
| $A_6$ | 6 stamens, polyandrous |
| $A_{2+4}$ | 6 stamens in 2 short and 4 long |
| $A_0$ | stamens absent |
| $A_\alpha$ | stamens indefinite |
| $A_{(\alpha)}$ | monoadelphous |
| $A_{1+(9)}$ | diadelphous |
| $A_{(5)}$ | 5 stamens, syngenesious / synandrous |

$\widehat{CA}$ Epipetalous

$\widehat{PA}$ Epiphyllous

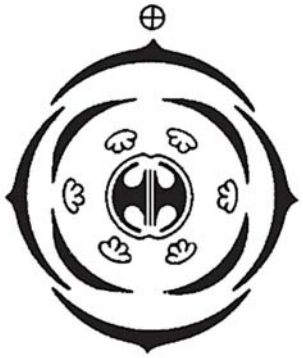
**Gynoecium**

| | |
|---|---|
| $G_0$ | Gynoecium absent |
| $G_2$ | 2 carpels, apocarpous |
| $G_{(2)}$ | 2 carpels, syncarpous |
| $\underline{G}_{(2)}$ | bicarpellary, syncarpous, superior |
| $G_{(2)}$ — | bicarpellary, syncarpous, semi-inferior |

$\overline{G}_{(2)}$ Bicarpellary, syncarpous, inferior.

**Distinctive Features of the Brassicaceae Family:**

- The inflorescence is either corymb or corymbose-raceme.
- Flowers exhibit a tetramerous arrangement.
- The corolla adopts a cruciform (cross-like) structure.
- Stamens are in a tetradynamous condition, occasionally didynamous.
- The ovary is bicarpellary, syncarpous, superior, and initially unilocular but becomes bilocular due to a false septum or replum. Parietal placentation is observed, and the stigma is bifid.
- The fruit type is either a siliqua or a silicula.



**(Floral Diagram)**

**Fig. :** *Brassica campestris*