

NATURAL ARRANGEMENT OF PLANTS.

ORD. XLVII.—CAMPANULACEÆ.—THE BELL- FLOWER TRIBE.

Calyx growing from the ovary, 5-lobed, remaining till the fruit ripens; *corolla* of one petal, rising from the mouth of the calyx, 5-lobed, regular, withering on the fruit; *stamens* equalling in number the lobes of the corolla, and alternate with them; *anthers* not united (except in *Jasioné*); *ovary* inferior, of 2, or more, many-seeded cells; *style* 1, covered with hairs; *stigma* simple, or with as many lobes as the ovary has cells; *fruit* dry, crowned by the withered calyx and corolla, splitting, or opening by valves, at the side or top; *seeds* numerous, fixed to a central column.—Herbaceous or slightly shrubby plants, with a milky bitter juice, mostly alternate leaves without stipules, and showy blue or white flowers, inhabiting principally the temperate regions of the northern hemisphere. Many species are highly ornamental, but very few are valuable either as food or medicine. The roots of *Campánula Rapúnculus*, under the name of Rampion or Ramps,

were formerly cultivated in this country for the table, but are now scarcely known.

1. CAMPÁNULA (Bell-flower).—*Corolla* bell-shaped, with 5 broad and shallow lobes; *filaments* broad at the base; *stigma* 2—5 cleft; *capsule* 2—5 celled, opening by pores at the side. (Name from the Latin *campana*, a bell.)

2. SPECULARIA.—*Corolla* wheel-shaped, with 5 lobes; *filaments* broad at the base; *capsule* oblong, triangular, opening by pores near the top. (Name from *speculum*, a prism, from the prismatic or triangular shape of the capsule.)

3. PHYTEUMA (Rampion).—*Corolla* wheel-shaped, with 5 deep lobes; *filaments* broad at the base; *stigma* 2—3 cleft; *capsule* 2—3 celled, bursting at the side. (Name from the Greek *phyton*, a plant.)

4. JASIONÉ (Sheep's-Scabious).—*Corolla* wheel-shaped, with 5 long narrow segments; *anthers* united at the base; *stigma* 2-cleft; *capsule* 2-celled, opening at the top; *flowers* in heads. (Name of uncertain origin.)

1. CAMPANULA (*Bell-flower*).

1. *C. rotundifolia* (Hair-bell).—Smooth; *root-leaves* roundish kidney-shaped, notched, stalked, very soon withering; *stem-leaves* very narrow, tapering.—Heaths and dry meadows, abundant. The name Hair-bell is frequently, though not correctly, given to the Wild Hyacinth or Blue-bell (*Scilla nutans*, or *Hyacinthus non-scriptus*), a plant with a thick juicy flower-stalk; but when applied to this *Campánula* is most appropriate, its stalks being exceedingly slender and wiry. The specific name, *rotundifolia* (round-leaved), is far from being descriptive of the leaves which accompany the flower, as they are long and narrow, but is peculiarly applicable to the root leaves, as they appear in winter or early spring, at which season Linnæus is said to have

BELL-FLOWER TRIBE.

3

first observed them on the steps of the university at Upsal.—Fl. July—September. Perennial.



CAMPANULA ROTUNDIFOLIA (*Hair-bell*).

2. *C. Trachelium* (Nettle-leaved Bell-flower).—*Lower leaves* stalked, heart-shaped; *upper* nearly sessile, tapering to a sharp point, all strongly serrated and bristly; *flowers* in axillary clusters of 2—3.—Woods and hedges, not unfrequent. A remarkably rough plant, 2—3 feet high, with leaves very like those of the nettle, and large, deep blue, bell-shaped flowers, the stalks of which are recurved when in fruit.—Fl. July, August. Perennial.

3. *C. glomerata* (Clustered Bell-flower).—*Stem* simple, roughish; *leaves* oblong, tapering, crenate, rough, the lower stalked and heart-shaped at the base, the upper sessile, embracing the stem; *flowers* sessile, in heads.—Dry pastures, not unfrequent. A stiff, erect plant, 3—18 inches high, with terminal and (in large specimens) axillary heads of deep blue, funnel-shaped, erect flowers, which have a few clasping, taper-pointed bracts at the base.—Fl. July, August. Perennial.

4. *C. hederacea* (Ivy-leaved Bell-flower).—*Stem* straggling, thread-like; *leaves* stalked, roundish heart-shaped, angular, and toothed; *flowers* solitary, on long stalks.—Wet heaths and by the sides of streams in the south and west; very abundant in Cornwall. An exquisite little plant, generally growing with *Anagallis tenella*, and (in Cornwall) with *Sibthorpia Europæa*, plants certainly of a different habit, but scarcely less elegant than itself. The leaves are of a remarkably fine texture, and delicate green hue; the flowers of a pale blue, sometimes slightly drooping, and supported on long stalks scarcely thicker than a hair. Its usual height is 4—6 inches, but when it grows among grass or rushes, it climbs by their help to a height of 12 inches or more.—Fl. July—September. Perennial.

* Less common species of *Campánula* are *C. pátula* (Spreading Bell-flower), distinguished by its rough *stem*, and loose *panicles* of wide cup-shaped *flowers*: *C. Rapunculus* (Rampion Bell-flower), a tall species, 2—3 feet high, with clustered *panicles* of rather small, pale blue *flowers*, the *calyx* of which is divided into 5 awl-shaped segments: *C. latifolia* (Giant Bell-flower), common in woody glens in Scotland, but not frequent in England; a stout species, 3—4 feet high, with very large stalked *flowers*, which are deep blue, and hairy within: and *C. Rapunculoides* (Creeping Bell-flower), a very rare species, distinguished by its pale blue, drooping, axillary *flowers*, which grow all on one side of the stem.—Fl. July, August. Perennial.

BELL-FLOWER TRIBE.

5

2. SPECULARIA.

1. *S. híbrida*.—The only British species.—A small plant, 4—12 inches high, with a rough wiry stem, oblong, rough, wavy *leaves*, and a few small terminal purple *flowers*, the *calyx* of which is much longer than the *corolla*.—Corn-fields, not common. By some botanists this is called *Campánula híbrida* (Corn Bell-flower).—Fl. June—September. Annual.

3. PHYTEUMA (*Rampion*).

1. *P. orbicularé* (Round-headed Rampion).—*Flowers* in a round terminal head; *lower leaves* notched, heart-shaped, stalked; *upper* narrow, sessile.—Chalky downs, rare. A singular plant, consisting of a solitary, erect leafy stalk, 12—18 inches high, surmounted by a round head of blue flowers. The head when in fruit becomes oval.—Fl. July. Perennial.

* *P. spicatum* (Spiked Rampion) is found only in Sussex. It is much taller than the last, and bears its *flowers*, which are cream-coloured, in a terminal, oblong head.

4. JASIONÉ (*Sheep's Scabious*).

1. *J. montána* (Sheep's Scabious, Sheep's-bit).—The only British species.—Dry heathy places, common. Growing about a foot high, and having a strong resemblance to a Scabious, from which it may be at once distinguished by its united *anthers*; or to a Compound Flower, from which it differs in having a 2-celled capsule. The *leaves* are oblong, blunt, and hairy; the *flowers*, which are blue, grow in terminal *heads*, with a leafy *involucre* at the base. The whole plant, when

6

LOBELIACEÆ.

bruised, has a strong and disagreeable smell.—Fl. July,
 August. Biennial.



JASIONE MONTANA (*Sheep's Scabious, Sheep's-bit*).

ORD. XLVIII.—LOBELIACEÆ.—THE LOBELIA
 TRIBE.

Calyx growing from the ovary, 5-lobed, or entire ;
corolla of one petal, inserted in the calyx, 5-lobed, irreg-
 ular ; *stamens* equalling in number the lobes of the
 corolla, and alternate with them ; *anthers* united ; *ovary*

LOBELIA TRIBE.

7

inferior, of 1—3 many-seeded cells, opening at the top.
—The plants comprised in this Order resemble in many respects the Bell-flower Tribe, from which they are



LOBELIA DORTMANNA (*Water Lobelia*).

mainly distinguished by their irregular corolla and united anthers. Like them, they contain a milky juice, which, however, is more acrid, and they inhabit generally warmer regions. *Lobelia inflata* (Indian Tobacco) pos-

sesses powerful medicinal properties, and when given in over-doses is poisonous. *L. cardinalis* (Scarlet Cardinal), one of our most brilliantly-coloured garden flowers, is also very acrid; and the rare British species, *L. úrens* (Acrid Lobelia), derives its name from the blistering properties of its juice. Some species contain a considerable quantity of caoutchouc.

1. LOBELIA.—*Corolla* 2-lipped, the upper part split to the base of the tube. (Name from Matthias Lobel, a Flemish botanist.)

1. LOBELIA.

1. *L. Dortmanna* (Water Lobelia).—*Leaves* almost cylindrical, of 2 parallel tubes.—*Lakes* in the north, frequent. An aquatic plant, often forming a matted bed at the bottom of the water, and sending above the surface slender, almost leafless, stems, having a long cluster of distant, light blue, drooping flowers.—*Fl.* July, August. Perennial.

* *L. úrens* (Acrid Lobelia) is a very rare species, found only near Axminster, Devon; it has a roughish leafy stem, which contains a milky, acrid juice, and leafy clusters of purple flowers.

ORD. XLIX.—VACCINIÆÆ.—THE CRANBERRY TRIBE.

Calyx growing from the ovary, of 4—6 lobes, which are sometimes so shallow as to be scarcely perceptible; *corolla* of one petal, with as many lobes as the calyx; *stamens* not united, twice as many as the lobes of the corolla, inserted into the *disk* of the ovary; *anthers* opening by 2 pores, and often furnished with 2 bristles; *ovary* with a flat disk, 4—10 celled; *cells* 1 or many, seeded; *style* and *stigma* simple; *fruit* a berry crowned by the remains of the calyx, juicy, containing many small seeds.—Small shrubby plants, with undivided, alternate leaves, inhabiting temperate regions, especially

mountainous and marshy districts. By some botanists they are placed in the same order with the Heaths, from which they differ chiefly in having the ovary beneath the calyx. The leaves and bark are astringent, the berries slightly acid and agreeable to the taste. Under the name of Cranberries, they are imported largely from North America, and are used for making tarts. Many species are cultivated in gardens; more, however, for their pretty flowers than for the sake of their fruit.

1. *VACCINIUM* (Whortleberry, Cranberry, &c.)—*Calyx* 4—5 lobed, sometimes with the lobes so shallow as to be scarcely perceptible; *corolla* bell-shaped, or wheel-shaped, 4—5 cleft; *stamens* 8—10; *berry* globose, 4—5 celled, many seeded. (Name of doubtful etymology.)

VACCINIUM (*Whortleberry, Cranberry, &c.*)

* *Leaves not evergreen; anthers with two bristles at the back.*

1. *V. myrtillus* (Whortleberry, Bilberry, Whinberry).—*Stem* acutely angular; *leaves* egg-shaped, serrated; *flowers* solitary, drooping.—Heathy and mountainous places; abundant. A small branched shrub, 6—18 inches high, with nearly globular, flesh-coloured, waxy *flowers*, and black *berries*, which are covered with grey bloom. They are agreeable to the taste, and are often made into tarts; but when thus used are rather mawkish unless mixed with some more acid fruit. In the west of England they are popularly known by the name of *whorts*. Fl. May. Shrub.

2. *V. uliginosum* (Bog Whortleberry, or Great Bilberry).—*Stem* not angular; *leaves* inversely egg-shaped, entire, glaucous and veined beneath.—Mountainous bogs in Scotland and the north of England. Distinguished from the last by its more woody, rounded, stem, and by its strongly veined, glaucous leaves, which are broader

towards the extremity. The flowers are smaller and grow nearer together. Fl. May. Shrub.



VACCINIUM MYRTILLUS (*Whortleberry, Bilberry, Whinberry*).

** *Leaves evergreen ; anthers without bristles.*

3. *V. Vitis Idæa* (*Red Whortleberry, Cowberry*).—
Leaves inversely egg-shaped, dotted beneath, the margins