CAPRIFOLIACEAE

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As currently recognized by APG-IV the family consists of 29 genera and ~890 species distributed throughout the northern hemisphere with few elements extending through the tropics to the southern hemisphere. In the Neotropics, the family is represented by 9 genera and ~214 species, of these only two genera (i.e., Lonicera and Valeriana) contain a total of 14 species of vines, 10 native species of Valeriana and four exotics species of Lonicera, some of which have become naturalized in the Neotropics. For the most part, they are found in moist to wet montane forests; > 1,000 m.

Diagnostics: Twining herbaceous or moderately woody vines, without any visible exudate; with opposite, simple or compound (trifoliolate or 5-pinnate), exstipulate leaves; flowers with gamopetalous corolla and inferior ovary.

General Characters

1. STEMS. Smooth, glabrous or pubescence of simple hairs; woody and hard in Lonicera although stems not very thick, developing cylindrical (Figure 74D), some species reaching 15 + m in length and ~3 cm in diam., e.g., Lonicera japonica Murray; cross sections with regular vascular anatomy, sometimes with ring-porosity (Figure 74D); bark papery flaky (Figure 74B). In Valeriana, herbaceous with scanty secondary growth.

2. EXUDATES. No visible exudate, however, many species of Valeriana have a strong fetid smell upon drying.

3. CLIMBING MECHANISMS. Climbing Caprifoliaceae are twiners (Figure 74B, C), in addition, some species of Valeriana (e.g., V. scandens L.) have prehensile petioles (Figure 74A).
4. LEAVES. Opposite, exstipulate, chartaceous to subfleshy, simple, sometimes trifoliolate to pinnate in *Valeriana*; blades entire, crenate, denticulate, serrate, or lobed; petioles short to long, glandless.

5. INFLORESCENCE. Axillary, racemes with bifurcate branching in *Valeriana* or axillary or terminal cymes in *Lonicera*; bracteoles often persistent.

6. PEDICELS. Short or absent (flower sessile).

7. FLOWERS. Bisexual or rarely unisexual, actinomorphic or subzygomorphic; calyx tubular, of 5–20 equal, short sepals; corolla tubular, longer than the calyx, with 5 equal or unequal lobes; stamens 3–5, the filaments adnate to the corolla throat, included or exserted, the anthers opening along longitudinal slits; ovary inferior, 2–3(5)-carpellate, with axile placentation, ovules pendulous, 1 or 3–8 per locule, the style elongate with capitate stigma in *Lonicera* and 2–3 lobate in *Valeriana*.

8. FRUIT. A few-seeded berry in *Lonicera* or a single-seeded, indehiscent achene with a crown of accrescent plumose sepals.
Key to the genera of climbing Caprifoliaceae

1. Plant woody or subwoody; bark papery flaky; leaves simple; corolla strongly (bilabiate) or slightly zygomorphic; fruit a fleshy berry with several seeds .............................................. *Lonicera*

1. Plant herbaceous; bark smooth; leaves simple, trifoliolate or 5-pinnate; corolla actinomorphic; fruit a dry, indehiscent achene with a crown of plumose sepals. .............................. *Valeriana*

**LONICERA** Linnaeus, Sp. Pl. 173. 1753.

Twining vines, shrubs or small trees; stems hard, cylindrical reaching up to 3 cm in diam., the bark papery flaky (Figure 74B); cross section with regular anatomy (Figure 74D), producing no exudate; branches opposite, decussate and short. Leaves simple, opposite; exstipulate; petioles short. Inflorescences of axillary or terminal few-flowered cymes; bracteoles minute, persistent. Flowers 5-merous, bisexual; calyx tubular, 5-dentate or rarely truncate at the apex; corolla zygomorphic, tubular, infundibuliform, or campanulate, with the limb bilabiate, with 2 long lobes and 3 short lobes or the lobes nearly equal; stamens 5, subequal, exserted, the filaments adnate to the corolla throat; ovary inferior, with 2–3(–5) locules, with axile or rarely parietal placentation, the ovules pendulous, 3–8 per locule. Fruit a fleshy berry, with few ovate seeds.

**Distinctive features:** Twining vines with papery flaky bark and opposite, simple, exstipulate leaves, with long tubular-bilabiate, fragrant corolla.
**Distribution**: A genus of ~200 species, the majority in the Northern Hemisphere. A single species native to Mexico and Guatemala; in addition, four exotic species have been introduced as ornamentals in the Neotropics, with *Lonicera japonica* Thunb. ex Murray becoming adventive in Hispaniola and Puerto Rico.

**VALERIANA** Linnaeus, Sp. Pl. 31. 1753.

Herbs or less frequently herbaceous twining vines (*V. scandens* known to have prehensile petioles), glabrous, pubescent to tomentose, usually with a fetid odor upon drying; often with woody or tuberous roots. Leaves opposite, simple, trifoliolate, 5-pinnate (in vine species), entire, dentate, crenate or lobed; stipules absent; petioles short to long. Flowers actinomorphic or slightly zygomorphic, bisexual or rarely unisexual, produced in terminal or axillary dichasial cymes; bracts and bracteoles persistent. Calyx tubular, with 5–20 lobes, dentate, persistent in fruit and developing into setose or plumose awns; corolla infundibuliform, campanulate, or hypocrateriform, the tube short, the lobes 5, expanded; stamens 3(4), adnate to the throat, included or exserted; ovary inferior, 3-carpellate, the carpels with a single ovule, stigma 2–3-lobate. Fruit a dry indehiscent achene with a single fertile carpel, with 3 dorsal, 1 ventral, and 2 marginal ribs, crowned by the plumose sepals.
**Distinctive features:** Twining herbaceous vines few m long, usually with fetid smell; leaves opposite simple or compound; flowers minute; fruits minute, wind dispersed (with plumose crown of awl-like sepals).

**Distribution:** A predominantly northern hemisphere genus of ~419 species; with 175 species in the Neotropics of which nine are reported as vines; these distributed from Mexico south to Peru and Brazil and in the Greater Antilles except for Jamaica; found in moist to wet forests.