

BEGONIACEAE

P. Acevedo-Rodríguez

A pantropical family of succulent herbs, erect, prostrate or climbing through the aid of adventitious roots. Worldwide the family contains two genera, the Hawaiian monotypic genus *Hillebrandia* and the widely spread *Begonia* with a total of ~1,923 species. *Begonia* is quite diverse in the Neotropics but only ~30 species are reported as root-climbing vines. The genus is most diverse in humid forests at elevations between 1,000 and 3,000 m with a few species in the lowlands.

Diagnosics: Monoecious, root-climbing, slender vines with succulent, alternate leaves and conspicuous, persistent or caducous stipules; flowers unisexual, zygomorphic, white, pink or red; fruits loculicidal, often asymmetrically winged capsules.

General Characters

1. STEMS. Slender (< 1 cm in diam.), cylindrical, rooting at nodes.
2. EXUDATES. Odorless and colorless.
3. CLIMBING MECHANISM. All climbing species of *Begonia* are root-climbers (Figure 55A, B).
4. LEAVES. Simple, alternate, distichous, succulent, with serrate, serrulate, dentate or lobed margins, and often with 3–5 main veins from base; petioles short to long, glandless; stipules often large, persistent or caducous.
5. INFLORESCENCES. Axillary, long-peduncled dichasial cymes.
6. FLOWERS. Zygomorphic, unisexual (plant monoecious); pedicelled. Staminate flowers of 2 petaloid sepals alternating with 2 petals, commonly white, cream or greenish, of similar size and shape, free, erect or reflexed at apex. Pistillate flowers: stamens 6 in two whorls,

the filaments free or less often connate into a tube; anthers opening by longitudinal slits; pistillode absent. Pistillate flowers: staminodes sometimes present; gynoecium superior, syncarpous, 3-carpellate, with 1 or 2 axial ovules per carpel, the style usually absent, the stigmas 3, reflexed.

7. FRUITS. Membranaceous to subfleshy capsules, 3-winged or less often with a single asymmetrical wing.
8. SEEDS. Prismatic, 1–3 per fruit.

BEGONIA Linnaeus, Sp. Pl. 1056. 1753.

Monoecious, rhizomatous or tuberous, erect or prostrate herbs, or seldom root-climbing vines. Stems slender, cylindrical, unarmed, < 1 cm in diam. and up to 5–6 m long. Leaves alternate, distichous, often 3–5-plinerved from base, often asymmetrical or deeply cordate at base; margins serrate, serrulate, dentate or lobed; petioles short to long, slender. Inflorescence of axillary, long-peduncled dichasial cymes; bracts and bracteoles minute, persistent. Flowers white, cream or pink. Staminate flowers: tepals 2 or 4, petaloid, inner tepals often smaller than the outer and alternating with them; stamens 4 to many, the filaments unequal, some connate at the base forming a dendroid structure, the anthers oblong, longitudinal dehiscent. Pistillate flowers: tepals 4–5, ovary inferior, commonly trilocular, with 3 unequal wings, placentation axile with numerous ovules, the styles 3, bifurcate. Fruit a trigonous loculicidal capsule, sometimes winged; seeds lenticular, numerous, small.

Distinctive features: Root-climbing vines with succulent stems and leaves and conspicuous stipules. Sometimes confused with climbing species of Piperaceae (*Piper* or *Manekia*), however,

in Piperaceae, the stipules are adnate to the petiole forming a sheath at the base (stipules free in *Begonia*) and the leaves with entire margins (commonly serrate, dentate, or lobed in *Begonia*).

Distribution: A pantropical genus with ~1,923 species. In the Neotropics, the genus is represented by 606 species of which only 30 are reported as root-climbing vines; these are found from Mexico south to Ecuador, Peru and Brazil, commonly in wet and moist forest; 300–2,000 m.

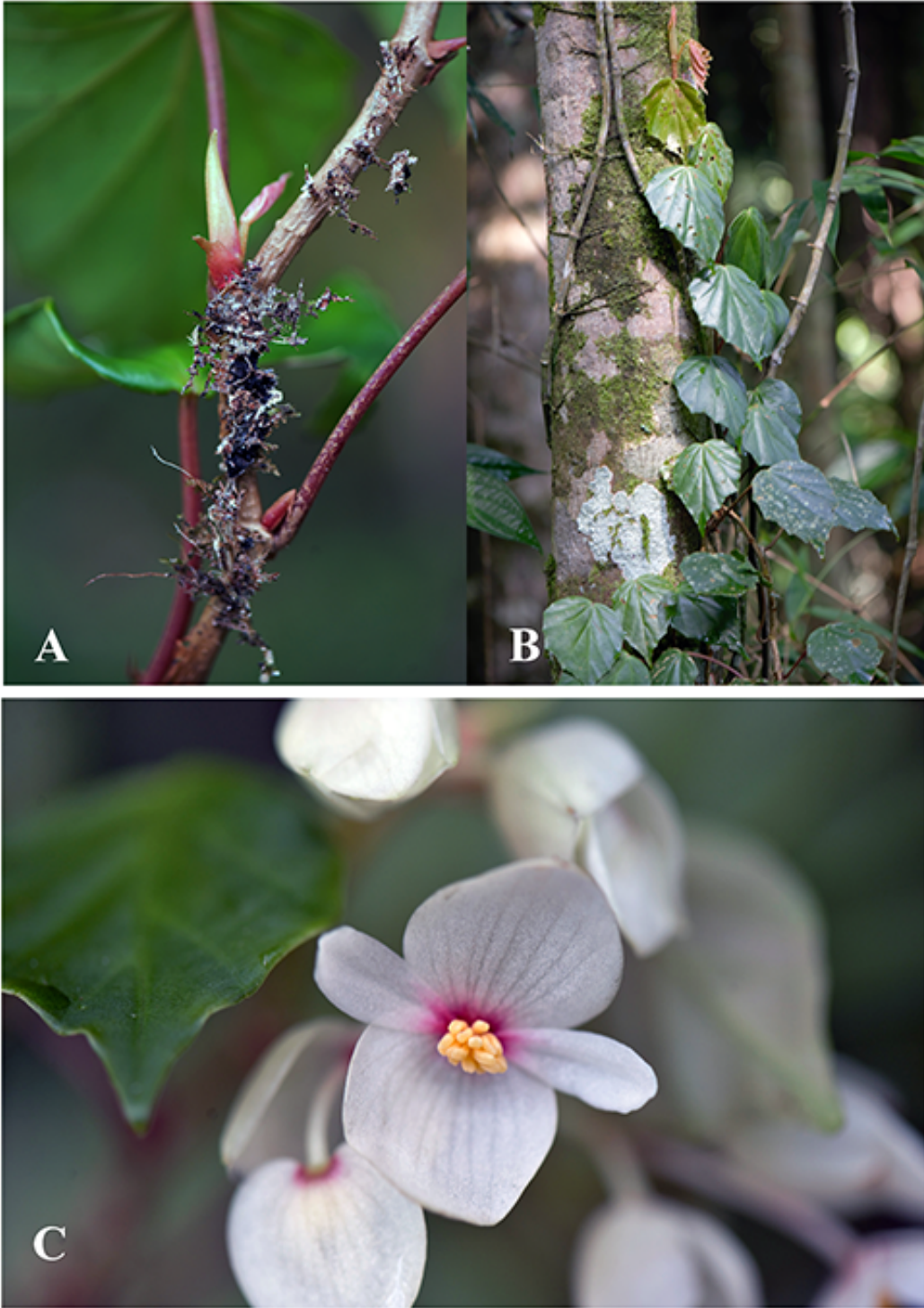


Figure 55. *Begonia solananthera*. **A.** Stem with adventitious roots. **B.** Plant showing root-climbing habit. **C.** Staminate flowers. Photos by P. Acevedo.