

GUIDE TO THE GENERA OF LIANAS AND CLIMBING PLANTS IN THE NEOTROPICS

LAURACEAE

By Pedro Acevedo-Rodríguez (Oct 2020)

A family of trees and shrubs with 55 genera and about 2,500 species with pantropical distribution extending into warm temperate areas and higher elevations within the tropics. Lauraceae is not commonly associated with climbing plants, however, *Cassytha* and *Aiouea* are known to have species of twining or scrambling vines. The family occupies a wide range of biomes but it is more diverse in lowland and montane forests of the Neotropics.

General Characters

1. STEMS. Cylindrical, herbaceous and thin in *Cassytha* and woody with substantial secondary growth in *Aiouea*, reaching 2-12 m in length; cross section with **regular** anatomy forming a continuous vascular cylinder traversed by narrow rays in *Aiouea*.
2. EXUDATES. No visible exudate.
3. CLIMBING MECHANISM. Scramblers, with short plageotropic branches, often with short brachyblasts that end with a sharp spine, helping in clinging on to host plants.
4. LEAVES. Leaves simple, alternate, distichous, reduced to scales in *Cassytha* and large, coriaceous in *Aiouea* with entire margins and pinnate venation; petioles short, glandless; stipules absent.
5. INFLORESCENCES. Paniculate cymes, terminal on branchlets in *Aiouea* and axillary spikes in *Cassytha*.

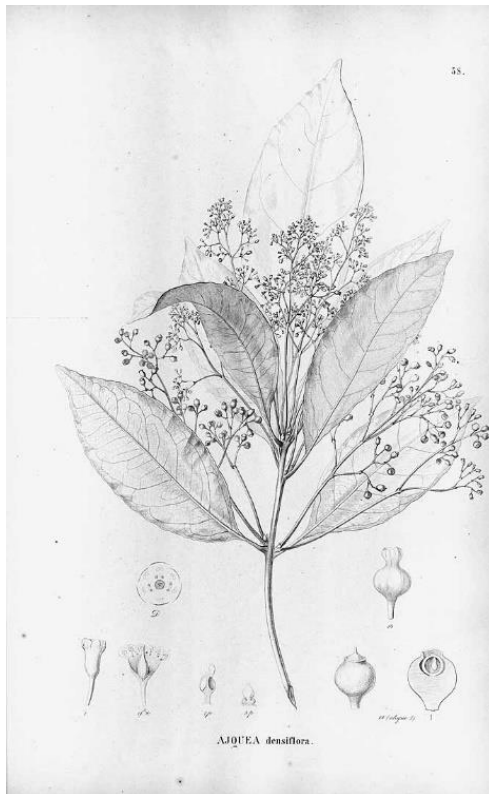
6. FLOWERS. Actinomorphic, bisexual; pedicelled; tepals 6, free; stamens 9 or 12, filaments free, anthers opening by one or two pairs of hinged valves; ovary superior, unilocular with a single pendulous ovule, style terminal, stigma capitate.
7. FRUITS. A fleshy berry, with a single seed.

KEY TO THE GENERA

1. Autotrophic, woody, scrambling shrubs reaching 15 m in length; leaves coriaceous, elliptic, > 10 cm long; inflorescence a many-flowered paniculate cyme.....*Aiouea*
1. Parasitic, herbaceous, twining vines with haustoria, reaching up to 5 m long; leaves scale-like, 1-2 mm long; inflorescence a short, few-flowered spike*Cassytha*

GENERIC DESCRIPTIONS

AIOUEA Aublet, Pl. Guian. 1: 310. 1775.



A. laevis (Mart.) Kosterm., from Martius, Fl. Bras. 5: fasc. 41, t. 58. 1866

Trees or less often erect or scrambling shrubs; stems cylindrical, more or less rigid, with regular anatomy, xylem with inconspicuous narrow rays, reaching 15 m in length. Leaves alternate, distichous, simple, coriaceous, 12-16 (22) cm long, pinnately veined, with entire margins; stipules absent. Inflorescences paniculate cymes, distal on lateral branchlets. Flowers bisexual, obconical to campanulate, cream to yellowish green; tepals 6, connate at the base forming a tube that is as long or shorter than the lobes; stamens 12, included, in 4 whorls, sometimes with 2 sessile glands at the base, the filaments slender, the anthers with a pair of upward opening hinged valves; ovary ovoid to globose, the style cylindrical. Berries black, 1-2 cm long, ellipsoid, with shallow, red cupule at base.

Distinctive features: A scrambling unarmed liana, with alternate, distichous, coriaceous leaves with ranalian smell; berries subtended by a cupule.

Distribution: *Aiouea* is a neotropical genus of trees with 72 species distributed from Mexico to southern Brazil including the West Indies. Only two species (*A. guianensis* Aubl. and *A. laevis* (Mart.) Kosterm.) are reported as sometimes leaning or scrambling shrubs or lianas. *Aiouea guianensis* occurs in Trinidad and the Guianas, while *A. laevis* has a wider distribution, found in Trinidad, the Guianas and Brazil (Amapá, Amazonas, and Bahia); predominantly in terra firme, moist forests, at low elevations.

CASSYTHA Osbeck ex Linnaeus, Sp. Pl. 35. 1753.



Inflorescence in *C. filiformis* L., photo by P. Acevedo

Herbaceous, twining, parasitic vines, 1-5 m long, densely branched, adhering to host by haustoria; stems cylindrical, to 3 mm diam., yellowish or yellow-green, glabrous. Leaves 1-2 mm long, scale-like, or absent. Spikes erect, few-flowered, sometimes head-like. Flowers bisexual, sessile; tepals 6, white, ovate, in 2 unequal series; fertile stamens 9, in 3 whorls, anthers with a pair of upward opening hinged valves; ovary globose, hidden by the perianth parts. Berries fleshy, globose, light green or white, 5-7 mm diam.

Distinctive features: Parasitic, twining vines with haustoria. Often confused with the genus *Cuscuta* (Convolvulaceae) as they both are parasitic, twining vines. However, stems in *Cassytha* are green to yellowish green, the tepals nearly free, and the anthers with a pair of upward

opening hinged valves, while in *Cuscuta* the stems are golden to pale yellow, the calyx and corolla are tubular, and the anthers open through longitudinal slits.

Distribution: A pantropical genus of about 20 species, of which only *Cassytha filiformis* L. is present in the Neotropics, distributed from Mexico to southern Brazil, in lowland, semi deciduous forests, and coastal forests.

RELEVANT LITERATURE

- Acevedo-Rodríguez, P. 2005. Vines and climbing plants of Puerto Rico and the Virgin Islands. Contrib. United States National Herbarium 51: 1-483.
- Renner, S. 1982. *Aiouea*, pages 85-116 in: K. Kubitzki and S. Renner, Lauraceae I (*Aniba* and *Aiouea*). Flora Neotropica vol. 31.