

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

PHYTOLACCACEAE

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Agdestis clematidea, photo by P. Acevedo

A tropical and warm temperate family with most species in the Americas. The family consists of 4 genera and 30 species of herbs, shrubs, lianas or less often trees or epiphytes, for a total of 9 genera and 22 species. Lianas are restricted to the genus *Ercilla* with 2 species in Chile, and to *Agdestis* with a single species distributed in Mexico and Mesoamerica; found in dry to moist forests between 30-1200 m elevations.

Diagnosics: Twining vine, leaves alternate, simple, with strong garlic-fetid smell.

General Characters

1. **STEMS.** Sub-cylindrical, herbaceous, reaching 3-15 m in length and about 1 cm in diam.; cross sections with *successive cambia* that produce discontinuous concentric arcs of xylem and phloem (see picture in description).
2. **EXUDATES.** No visible exudate.
3. **CLIMBING MECHANISMS.** *Agdestis* is a *twining* vine.

4. LEAVES. Alternate, exstipulate, chartaceous, simple, crenulate, nearly cordiform; petioles as long as the blade, glandless.
5. INFLORESCENCE. Axillary racemiform or paniculate thyrses.
6. PEDICELS. Long.
7. FLOWERS. Bisexual, zygomorphic; calyx of 4 free, petaloid sepals; corolla absent; stamens 13-20, the filaments free; ovary partly inferior, 4-locular, with a single basal ovule per locule, the style short, stout, with 4, divaricate to reflexed stigmatic branches.
8. FRUIT. Coriaceous, indehiscent, with persistent spreading sepals at the base.

GENERIC DESCRIPTION

AGDESTIS Moçino & Sessé ex de Candolle, Syst. Nat. 1: 511, 543. 1817 ['1818'].



Stem cross section of *A. clematidea*, photo by P. Acevedo

Twining vine, herbaceous, reaching 15 m in length. Stems angular, reddish, striate, puberulent. Leaves with a strong, disagreeable odor, alternate, chartaceous, ovate or broadly ovate, 3-9 × 3-7.5 cm, the apex obtuse or short-acuminate, mucronate, the base deeply cordiform or hastate, the margins crenulate; upper surface dark green, dull, with minute dots; lower surface light green, dull, puberulent, with prominent venation; petioles 1.5-9 cm long, with a reddish tinge, sulcate; stipules absent. Flowers bisexual, white, in axillary racemose or paniculate thyrses, 6-17 cm long; peduncles glabrous or puberulent; pedicels 1-2 mm long. Sepals 4, white, 3-5 mm long, free, oblong or oblanceolate, spreading; corolla absent; stamens 13-20; ovary partially inferior, the style conical, with 4 recurved or spreading stigmatic branches. Fruits coriaceous, indehiscent, turbinate, ca. 3 mm long, with the sepals turning green and persistent at the base. Seeds elliptical.



Figure 1. *Agdestis clematidea*, flowering branch. Photo by J. Amith.



Figure 2. *Agdestis clematidea*, young fruits with persistent sepals. Photo by J. Amith.

Distinctive features: Twining vine with alternate, cordiform leaves and strong garlic-fetid smell; stems reddish tinged.

Distribution: A single species, naturally distributed from Mexico south to Nicaragua, occasionally cultivated in the Antilles and South America.

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.

Baillon, H. 1873. Histoire des plantes. Vol 4. XXV. Phytolaccacées. Paris.

PICTURE VOUCHERS

Figure 1 & 2.

A. *Agdestis clematidea* DC. (Amith 31396).