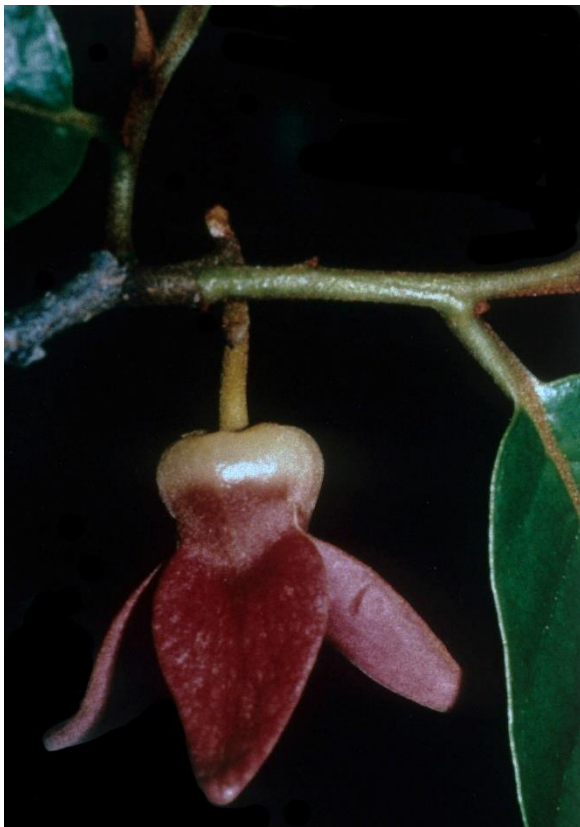


GUIDE TO THE GENERA OF LIANAS AND CLIMBING PLANTS IN THE NEOTROPICS

ANNONACEAE

By Pedro Acevedo-Rodríguez (Jun 2020)



Annona haemantha, photo by M.F. Prevost

Largely a pantropical family of trees, shrubs or rarely lianas, with about 113 genera and 430 species. Lianas are found in about 7 genera which for the most part are comprised of species of trees or shrubs. In the Neotropics, the family is represented by 34 genera and about 886 species. Of these, only two genera (i.e., *Annona* and *Guatteria*) contain a total of 10 species of vines. For the most part, climbing Annonaceae are found above in moist, or wet forest, in flooded or non-flooded habitats at low elevations.

Diagnosics: Scrambling lianas with fibrous bark; leaves simple, alternate, with entire margins; stem cross sections with numerous conspicuous rays; flowers fleshy.

General Characters

1. STEMS. Smooth, glabrous or pubescence of simple hairs; woody with moderate secondary growth, developing cylindrical (fig. 1a & b), 10-15 m long and about 3 cm in

diam.; cross sections with *regular* vascular anatomy, with numerous conspicuous rays and wide vessels (fig. 1a & b); bark smooth, lenticellate, fibrous.

2. EXUDATES. Watery or no visible exudates.
3. CLIMBING MECHANISMS. Climbing Annonaceae in the Neotropics are scramblers, often with short, lateral branches (fig. 1d).
4. LEAVES. Alternate, simple, with pinnate venation and entire margins, chartaceous to coriaceous, exstipulate; petioles short, glandless, adaxially canaliculate, articulate above the base in *Annona* (e.g. *A. hypoglauca*).
5. INFLORESCENCE. Axillary, intermodal, leaf-opposed or cauliflorous, few-flowered cymes.
6. PEDICELS. Often long.
7. FLOWERS. Bisexual, actinomorphic, fleshy; sepals 3; petals 6 in two series; stamens numerous, the anthers with apical expansion; ovary superior, apocarpous, with several to numerous free carpels with 1 to several ovules.
8. FRUIT. Of several, free, stipitate fruitlets, syncarpous or partly syncarpous fruits.
9. SEEDS. Medium to large, with ruminant endosperm.

KEY TO THE GENERA

1. Inflorescence inter-nodal or leaf-opposed; fruits syncarpous, of numerous fused carpels
.....*Annona*
1. Inflorescence axillary or cauliflorous; fruits apocarpous, with several stipitate, free fruitlets.
.....*Guatteria*

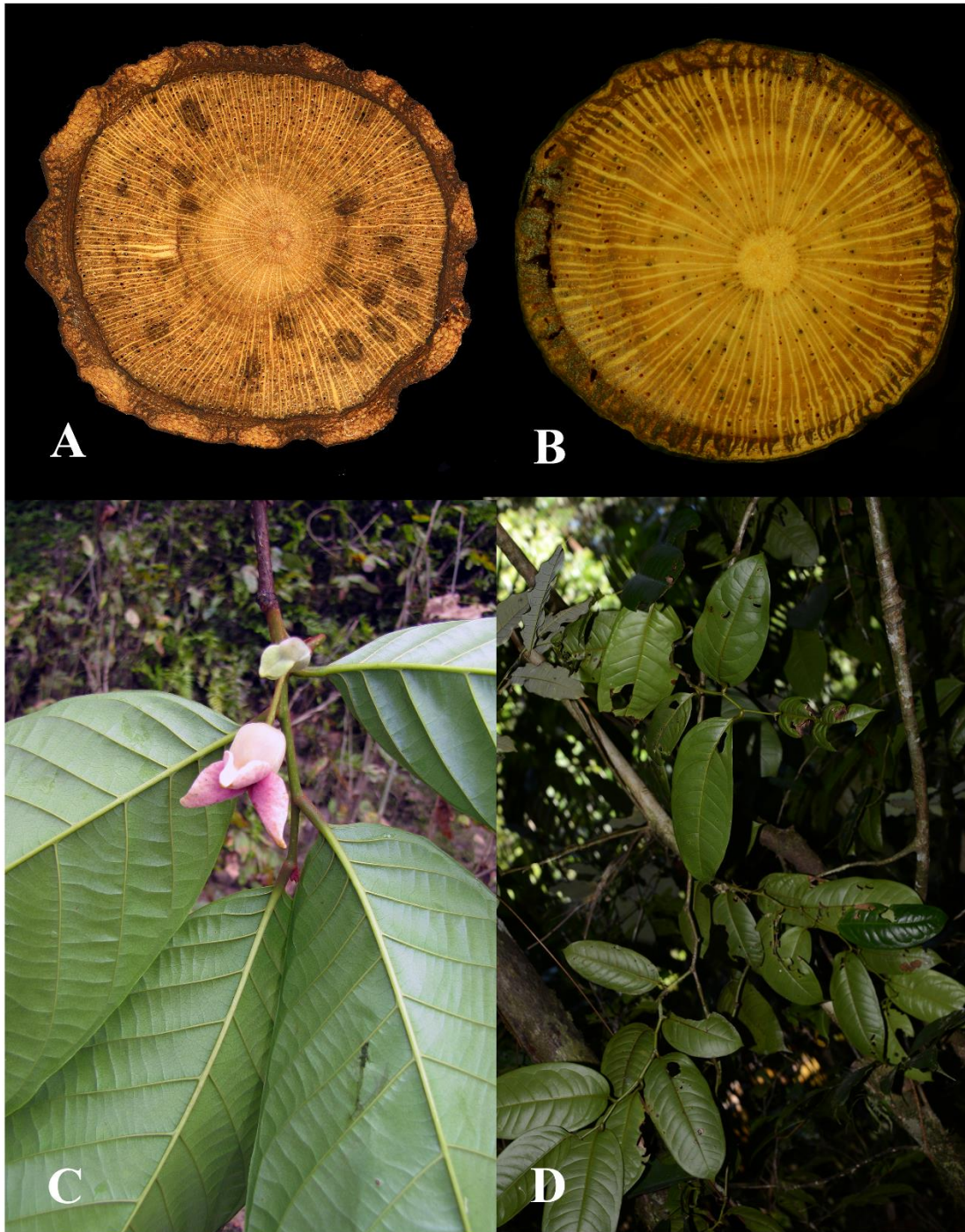


Figure 1. **A** Stem cross section of *Annona hypoglauca* (10392). **B.** Stem cross section of *Guatteria scandens* (16088). **C.** Hanging branch of *Annona ambotay*. **D.** Scrambling habit of *Guatteria scandens*. Photos by: A, B & D by P. Acevedo; C by H, Medeiros.

GENERIC DESCRIPTIONS

ANNONA Linnaeus, Sp. Pl. 536. 1753.

Trees, shrubs or exceptionally scrambling shrubs; stems cylindrical, reaching 10-15 m



A. ambotay, photo by H. Medeiros

long and up to 3 cm in diam., the bark smooth to slightly rough; cross section with regular anatomy, with numerous conspicuous rays; no visible exudate; lateral branches short, alternate. Leaves simple, alternate, tertiary venation sub-clathrate; exstipulate; petioles short, stout, articulate above the base in some species (e.g., *A. hypoglauca* Mart.). Inflorescences internodal, or leaf-opposed, few-flowered cymes; bracteoles minute, persistent. Flowers bisexual, fleshy; sepals 3, valvate; petals 6 in two series, outer petals valvate, inner petals imbricate; stamens numerous; ovary syncarpous or partly syncarpous. Fruit fleshy, syncarpous or partly-syncarpous, with numerous seeds.

Distinctive features: Scrambling vines with alternate, exstipulate, simple leaves; flowers fleshy, commonly pendulous.

Distribution: A genus of about 180 species predominantly distributed in the Neotropics, with a few native species in Africa. Only 7 species reported as lianas; these distributed throughout the Amazon region, in lowland wet forests.

GUATTERIA Ruiz & Pavón, Prodr. 85. 1794.



G. scandens, photo by P. Acevedo

Small to medium sized trees, with a single species (*G. scandens*) known to be a scrambling liana at maturity. Stems woody, cylindrical up to 15 m in length and about 5 cm in diam.; cross section with numerous conspicuous rays and wide vessels; exudate slightly mucilaginous; inner bark fibrous. Leaves alternate, simple, entire, with impressed

venation along adaxial surface; stipules absent; petioles very short, canaliculate. Inflorescence axillary or cauliflorous, few- to many-flowered cymes. Flowers actinomorphic, bisexual, fleshy, carpels free, several. Fruitlets ellipsoid, stipitate, maturing purplish, in clusters of 25-40 per flower on a reddish receptacle, seed one per fruitlet.

Distinctive features: Scrambling lianas with short, lateral, flexuose branches; leaf blades with impressed venation and broadly revolute margins.

Distribution: A Neotropical genus of 177 species, with only three species reported as lianas, occurring in wet forest of the Amazon region.

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.

Hoffman, B. and S. Ruyschaert. 2017. Lianas of the Guianas. A guide to woody climbers in the tropical forests of Guyana, Suriname and French Guiana. L.M. Publisher, The Netherlands. 623 pages.

PICTURE VOUCHERS

Figure 1.

- A. *Annona hypoglauca* Mart. (Acevedo 10392).
- B. *Guatteria scandens* Ducke (Acevedo 16088).
- C. *Annona ambotay* Aubl. (Medeiros 694)
- D. *Guatteria scandens* Ducke (Acevedo 16088).