

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

URTICACEAE

By Pedro Acevedo-Rodríguez (Jun 2020)



Urera lianoides, photo by R. Foster

A primarily tropical and subtropical family extending into the northern temperate region, with 58 genera and about 2,126 species of herbs, shrubs, trees, and occasionally lianas. In the Neotropics, there are 19 genera and 670 species, of which only 5 consistently are reported as climbers (lianas and vines). For the most part, they are found in moist to wet lowland forest, from Mexico south to southern Brazil.

Diagnostics: Scrambling vines or lianas; stems furrowed or cylindrical, unarmed; leaves alternate, often 3-veined or nearly 3-veined from base, serrate margins and long, unequal petioles; stipules lateral, free, often early caducous; flowers and fruits minute.

General Characters

1. **STEMS.** Smooth, herbaceous or with moderate secondary growth, furrowed, turning cylindrical with age, 3-15 m in length and 0.5-1.5 cm in diam.; cross section with regular vascular anatomy, with a large medulla and numerous narrow rays.
2. **EXUDATES.** Watery and abundant in *Urera* or not visible in *Pouzolzia*.
3. **CLIMBING MECHANISMS.** All climbing Urticaceae are **scramblers**.
4. **LEAVES.** Alternate, simple, membranaceous, subtrinnerved (lateral veins don't reach the apex of the blade), with serrate margins in *Urera* or entire margins in *Pouzolzia*; petioles short and of similar size in *Pouzolzia*, long and unequal in *Urera* (fig. 1 a & b); stipules lateral, free, commonly early caducous.
5. **INFLORESCENCE.** Axillary spikes with flowers in glomerules in *Pouzolzia* (fig. 2b), axillary or cauliflorous, dichotomous cymes in *Urera* (fig. 2a).
6. **PEDICELS.** Short or absent.
7. **FLOWERS.** Unisexual, actinomorphic or zygomorphic, small, greenish or whitish; tepals 3-5; stamens 3-5, antitepalous, the filaments inflexed in bud; ovary superior, syncarpous, bi-carpellate, unilocular, with a single ovule.
8. **FRUIT.** A small, dry or fleshy achene, white, green or orange; seeds small.

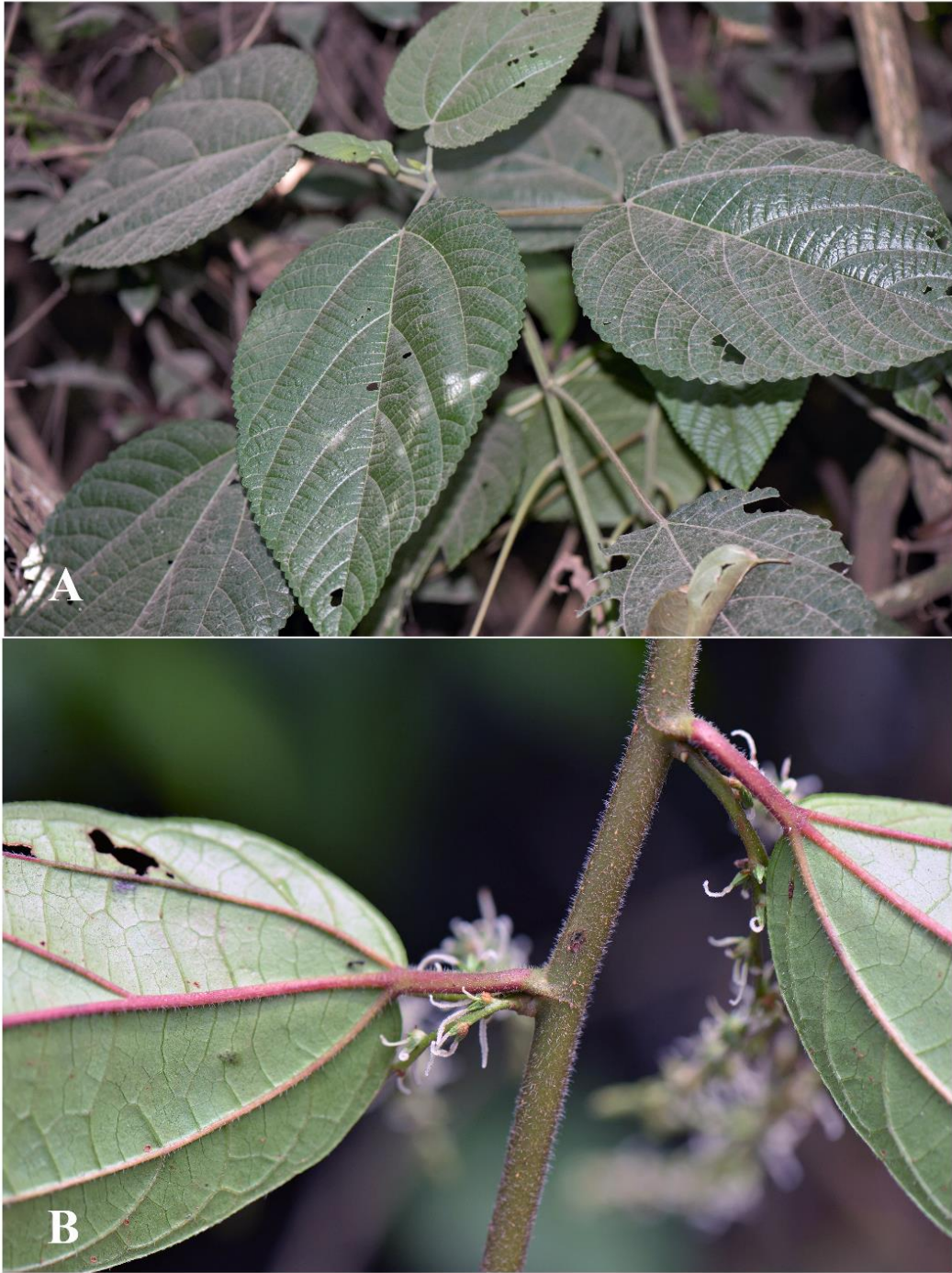


Figure 1. Foliage of climbing Urticaceae. **A.** *Ureca caracasana*. **B.** *Pouzolzia formicaria*. Photos by P. Acevedo.



Figure 2. Inflorescences in Urticaceae. **A.** *Ureca caracasana*. **B.** *Pouzolzia formicaria*. Photos by P. Acevedo.

KEY TO THE GENERA

1. Plant woody, reaching 5-25 m in length; leaves serrate; inflorescence of dichotomous cymes, axillary or cauliflorous*Urera*
1. Plant herbaceous, reaching 3 m in length; leaves entire; inflorescence of axillary spikes of glomeruli.....*Pouzolzia*

GENERIC DESCRIPTIONS

POUZOLZIA Gaudichaud in Freycinet, Voyage Monde Bot. 503. 1830 ['1826'].



P. formicaria, photo by P. Acevedo

Monoecious erect herb or shrubs, or rarely clambering shrubs. Stems cylindrical, simple, with regular anatomy. *Pouzolzia formicaria* (Poepp. ex Wedd.) Wedd., the only climbing species in the Neotropics, is recognized in the following way. Leaves alternate, sub-triangular, with entire margins; petioles ca. 1 cm long, often reddish tinged. Inflorescences erect spikes with flowers in dispersed glomerules, axillary or distal on short lateral branches. Flowers actinomorphic; staminate flowers: perianth of 4, free tepals; stamens 4; pistillate flower: tepals green, connate into a trigonous tube, the stigma long-exserted, white, plumose. Fruit an achene involved by a persistent perianth.

Distinctive features: Distinctively Urticaceae, leaves subtrinnerved, with entire margins, spikes ascending with minute cream to whitish flowers in glomerules.

Distribution: A pantropical genus of about 57 species, 12 of which are native to the Neotropics. *Pouzolzia formicaria*, the only climbing species, is restricted to the Amazon basin, commonly found along river margins in seasonally flooded forests.

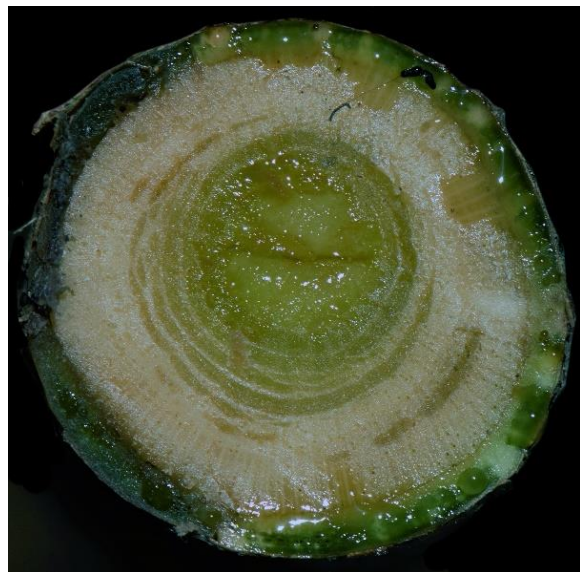
URERA Gaudichaud in Freycinet, Voyage Monde Bot. 496. 1830 [1826].



U. caracasana, photo by P. Acevedo

chartaceous, simple, sub-trinnerved, with serrate margins; petioles long and commonly of variable length within individual plants. Inflorescences axillary or cauliflorous, pedunculate, bifurcated cymes, shorter than the

Monoecious or dioecious shrubs or small trees, occasionally scrambling lianas with some species reaching 25 m in length and about 1.5 cm in diam. Foliage and young branches commonly with painfully stinging hairs (not so much in the climbing species). Stems furrowed to cylindrical, climbing species unarmed, simple with regular anatomy showing a large medulla and numerous narrow rays; exudate watery and abundant. Leaves alternate,



Stem cross section of *U. caracasana*, photo by P. Acevedo

subtending leaf. Flowers minute, actinomorphic; staminate flowers: perianth of 4-5 tepals; stamens 4-5; pistillate flowers: perianth of 4 free tepals, the stigma plumose. Achenes globose, commonly covered by an acrescent, fleshy perianth.

Distinctive features: Scrambling lianas 5-15 m long, with alternate, simple, leaves with serrate margins, often with at least scattered stinging hairs; petioles commonly of unequal lengths; inflorescence of short corymbose, bifurcate cymes, either axillary or cauliflorous.

Distribution: A tropical genus of 45 species shared between the African and American tropics, with 24 species in the Neotropics, 5 of which are consistently reported as lianas; distributed from Mexico to southeastern Brazil in wet or seasonal moist forests.

RELEVANT LITERATURE

- Monro, A.K. and A. Rodríguez. 2009. Three New Species and a Nomenclatural Synopsis of *Urera* (Urticaceae) from Mesoamerica. *Annals of the Missouri Botanical Garden*. 96: 268-285.
- Todzia, C.A. 2001. Urticaceae. In: W.D. Stevens, C. Ulloa Ulloa, A. Pool and O.M. Montiel (eds), *Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden*. 85(3): 2474-2495.

PICTURE VOUCHERS

Figure 1.

- A. *Urera caracasana* (Jacq.) Griseb. (Acevedo 16958).
B. *Pouzolzia formicaria* (Poepp. ex Wedd.) Wedd. (Acevedo 17099)

Figure 2.

- A. *Urera caracasana* (Jacq.) Griseb. (Acevedo 16958).
B. *Pouzolzia formicaria* (Poepp. ex Wedd.) Wedd. (Acevedo 17099)