

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

## RUTACEAE

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*Zanthoxylum foliosum*, photo by P. Acevedo

A pantropical family with about 150 genera and 1,600 species of trees or shrubs and occasionally herbs. In the Neotropics, there are about 50 genera and 452 species. Although the family is not normally associated with lianas, there is a

species of *Zanthoxylum* (i.e., *Z. foliosum* Donn. Sm.) that consistently grows as a scrambling liana with long flexible stems. *Zanthoxylum foliosum* is found in Mexico (Chiapas, Hidalgo), Guatemala, Honduras, El Salvador, and Nicaragua, in moist forests above 1200-1500 m elevation. According to Standley and Steyermark (1946), this species is a pest where it grows abundantly, as it forms impenetrable tangles with prickles.

**Diagnostics:** Scrambling slender liana; stems armed with conical prickles, leaves alternate, compound, imparipinnate; leaflets aromatic, with translucent oil glands; flowers minute, white.

## General Characters

1. **STEMS.** Branches slender, armed with conical, sharp prickles, reaching > 10 m in length, cylindrical and enlarging to about 1.5 cm in diam.; cross section simple with regular anatomy, with a large medulla and numerous narrow rays.
2. **EXUDATES.** Watery or no visible exudate.
3. **CLIMBING MECHANISMS.** This species is a *scrambler*, with armed stems that help the plant to secure its position among the host plants.
4. **LEAVES.** Alternate, imparipinnately compound up to 30 cm in length; leaflets 15-41, sessile, opposite, sub-opposite or less often alternate, shiny, elliptic, coriaceous, with crenate-serrate margins and a round gland at the sinus, the blade aromatic due to the presence of translucent oil glands, the rachis narrowly winged with sparse prickles; stipules absent.
5. **INFLORESCENCE.** Axillary or terminal paniculate thyrses, shorter than the subtending leaf, axes reddish, unarmed, flowers pedicelled, grouped in dichasia; bracts minute.
6. **FLOWERS.** Bisexual, ca. 5 mm long, cream, 4-merous; sepals and petals distinct; stamens 4, alternating with the petals, the filaments free; ovary superior, bicarpellate.
7. **FRUIT.** Of 1 or 2 basally connate follicles, with punctate verrucose exocarp.



**Figure 1.** *Zanthoxylum foliosum*. **A.** Fertile branch. **B.** Portion of inflorescence. **C.** Stem cross section showing a large medulla and conspicuous vessels and rays. Photos by P. Acevedo.

## GENERIC DESCRIPTION

**ZANTHOXYLUM** Linnaeus Sp. Pl. 270. 1753.

*Zanthoxylum* is a morphologically diverse genus with nearly all species representing trees or shrubs. For the purpose of this project, refer to the previous section which is entirely based on *Zanthoxylum foliosum*.

## RELEVANT LITERATURE

- Ibarra-Manríquez, G., F.J. Rendón-Sandoval, G. Cornejo-Tenorio and P. Carrillo-Reyes. 2015. Lianas of Mexico. *Botanical Sciences*. 93: 365-417.
- Kallunki, J. 2004 Rutaceae. In: N. Smith, et al. (eds.). *Flowering plants of the Neotropics*. Princeton University Press. N.J., U.S.A.
- Porter, D.M. 2001. *Zanthoxylum*. 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) 2300-2303.
- Standley, P.C. & J.A. Steyermark. 1946. *Flora of Guatemala*. Family Rutaceae. *Fieldiana Botany*. Vol 24 part V.

## PICTURE VOUCHERS

Figure 1.

A-C. *Zanthoxylum foliosum* Donn. Sm. (Acevedo 16405).