

## LOGANIACEAE

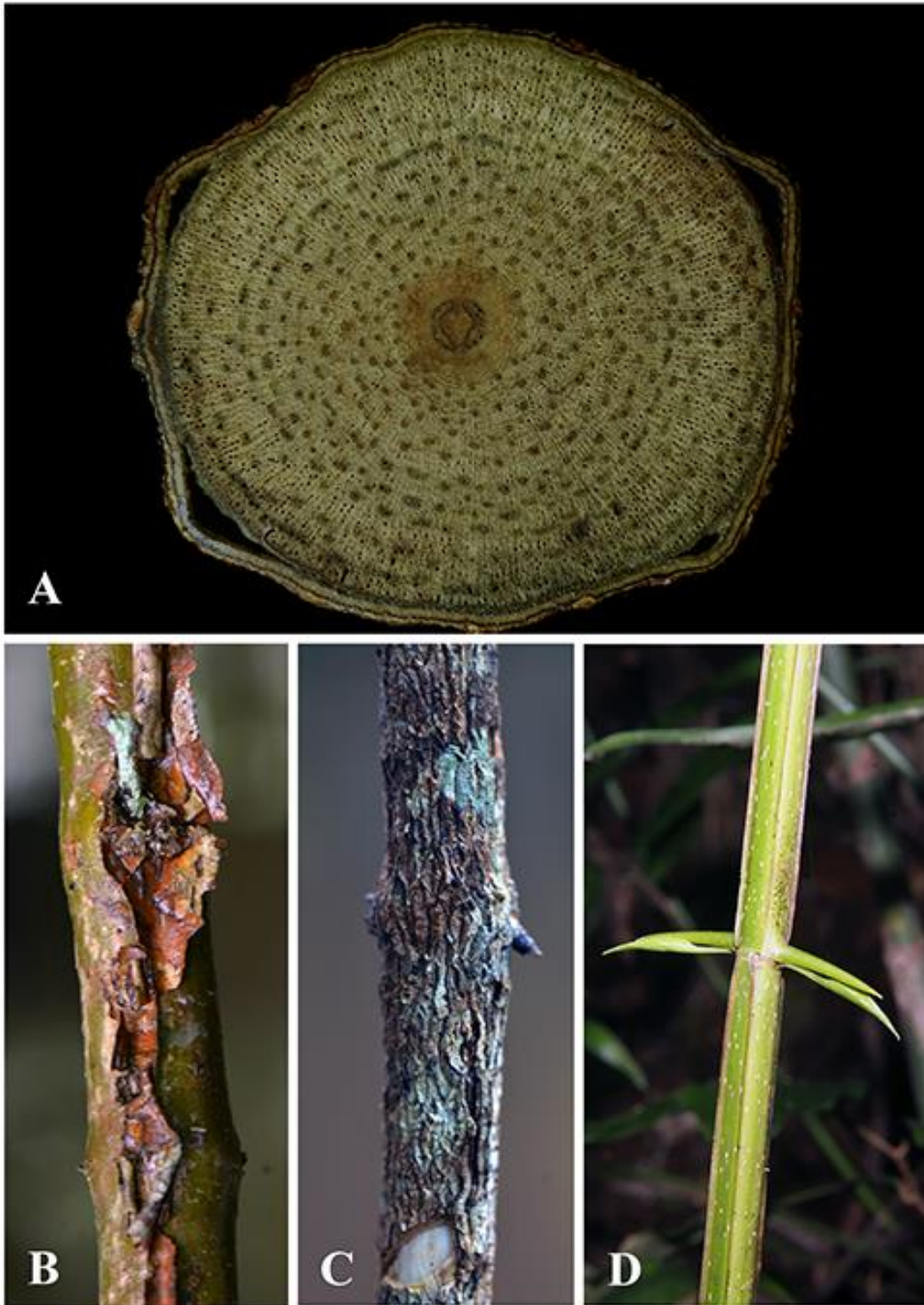
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A pantropical to subtropical family of herbs, shrubs, and tendrilled lianas. The family contains 12 genera and ~400 species; in the Neotropics the family is represented by 5 genera and ~179 species, of which 72 are lianas, all belonging to the genus *Strychnos*. The genus is found between 100 to 1,300 m elevation, predominantly in wet forests, including gallery forests, seasonally flooded formations such as igapó and varzea, and in non-flooded forests.

**Diagnosics:** See description of genus *Strychnos*.

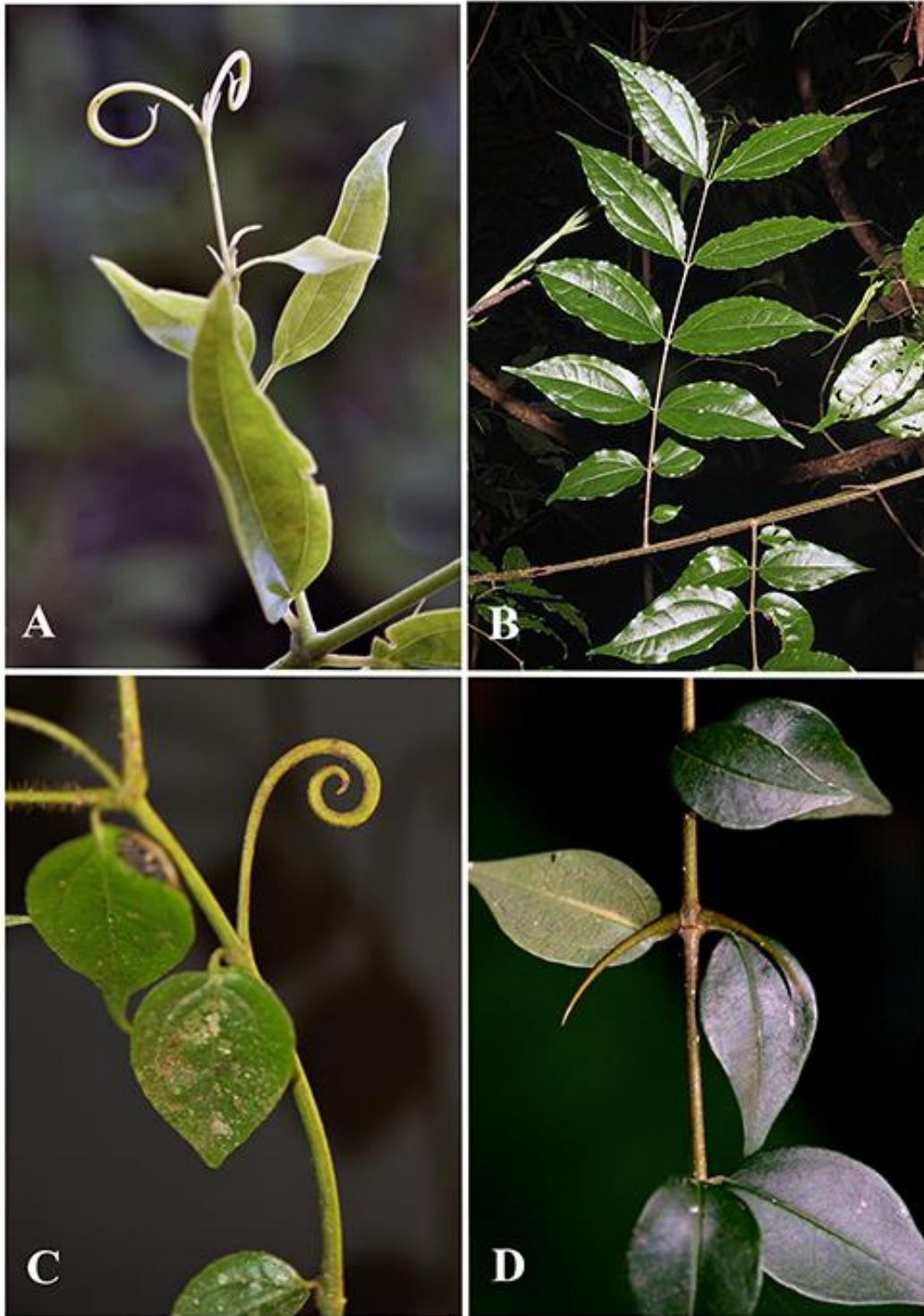
### General Characters

1. STEMS. Young stems are cylindrical or occasionally quadrangular (Figure 130D); mature stems are cylindrical, commonly with a rough bark (Figure 130C), or less often the bark papery scaly (Figure 130B); some species may have opposite short thorns of axillary origin (Figures 130D; 131B). Cross section with scattered interxylary phloem islands, and intraxylary phloem in the periphery of the medulla (Figure 130A).
2. EXUDATES. Odorless and colorless.



**Figure 130.** Stems in *Strychnos*. **A.** Cross section of *S. guianensis* showing scattered interxylary islands of phloem. **B.** Papery flaky bark of *Strychnos* sp. **C.** Rough bark of *Strychnos* sp. **D.** Young shoot with quadrangular stems and axillary, opposite thorns of *Strychnos* sp. Photos: A–C by P. Acevedo; D by J. Amith.

3. **CLIMBING MECHANISM.** Most climbing species of *Strychnos* climb by means of axillary, circinate tendrils of shoot origin (Figure 131A, C), and commonly become woody with age. *Strychnos brasiliensis* (Spreng.) Mart., on the other hand is a scrambler and has short, curved, axillary thorns that help the plant to hold on to host plants (Figure 131D).
4. **LEAVES.** Leaves are simple, opposite, with 3–7 main, acrodromous veins that radiate from the base or near the base of the lamina (Figure 131B); tertiary veins are often perpendicular to the main veins; petioles short to very short.
5. **INFLORESCENCES.** Axillary or terminal, racemose, paniculate or subumbellate thyrses with flowers often grouped in dichasia (Figure 132A).
6. **FLOWERS.** Actinomorphic, bisexual; sessile or pedicellate. Sepals 4 or 5, connate at the base; corolla white, light yellow or greenish yellow, gamopetalous, 4- or 5-merous, the tube often longer than the lobes; stamens 4 or 5, inserted on the corolla tube, and alternating with the corolla lobes, the filaments short, the anthers inserted or projected beyond the corolla tube; gynoecium superior or partly inferior, syncarpous, 2-carpellate, with numerous axial ovules per carpel, the style terminal, elongated, the stigma usually capitate.
7. **FRUITS.** Globose, to turbinate leathery berries, small to very large (1–10 cm diam.), green, orange, or yellow (Figure 132B).
8. **SEEDS.** Numerous, prismatic to discoid, embedded in a white fleshy pulp; endosperm abundant.



**Figure 131.** Climbing mechanisms in *Strychnos*. **A.** Two tendrils on distal portion of a young shoot. **B.** Scrambling vine with short, lateral branches. **C.** Axillary, woody tendril, appearing as leaf-opposed because one leaf of the pair is missing. **D.** Two axillary, curved thorns of *Strychnos brasiliensis*. Photos: A, C, D by P. Acevedo; B by J. Amith.

## USES

The pulp contained in the fruits is said to be edible, although the stems of many species are known to contain toxic alkaloids, used in the preparation of arrow poisons and fish stupefactants. Alkaloids extracted from various species of *Strychnos* have shown antiplasmodial activity and promising in the control and eradication of chloroquine resistant plasmodial malaria (Frédérich et al. 2002).

**STRYCHNOS** Linnaeus, Sp. Pl. 189. 1753.

Tendrilled lianas, scrambling or erect shrubs or less often trees. Branches often short, opposite and divaricate. Stems cylindrical or quadrangular when young, smooth or less often with slightly curved opposite thorns, reaching up to 10 cm in diam. and 20–25 m in length. Tendrils simple, circinate, axillary (sometimes appearing as leaf-opposed because one of the leaf of the pair is missing); old tendrils sometimes becoming woody and hook-shaped. Leaves simple, opposite, with entire margins with acrodromous venation of 3–7 arcuate main veins that are borne at or near the base, in many species tertiary venation perpendicular to the main veins; petioles often short; stipules represented by an interpetiolar ochrea-like ridge. Inflorescence axillary or distal on short branches, racemiform, paniculate or subumbellate thyrses, with flowers in dichasia. Flowers 1–3 cm long; corolla white, yellowish or greenish white.

**Distinctive features** Easily recognized by the simple opposite leaves with 3–11 acrodromous main veins, the presence of axillary circinate tendrils that often become woody, and stem cross sections with scattered interxylary phloem islands and commonly with intraxylary phloem in the periphery of the medulla as well.

**Distribution:** A pantropical genus of ~190 species, 133 of which are found in the lowlands of the Neotropics. Of these, 72 species have been reported as lianas; distributed from Mexico south to southern Brazil, in moist, flooded and non-flooded forests.



**Figure 132.** **A.** Inflorescences in *Strychnos* sp. **B.** Fruit of *Strychnos panamensis*. Photos: A by J. Amith; B by P. Acevedo.