

## DICHAPETALACEAE

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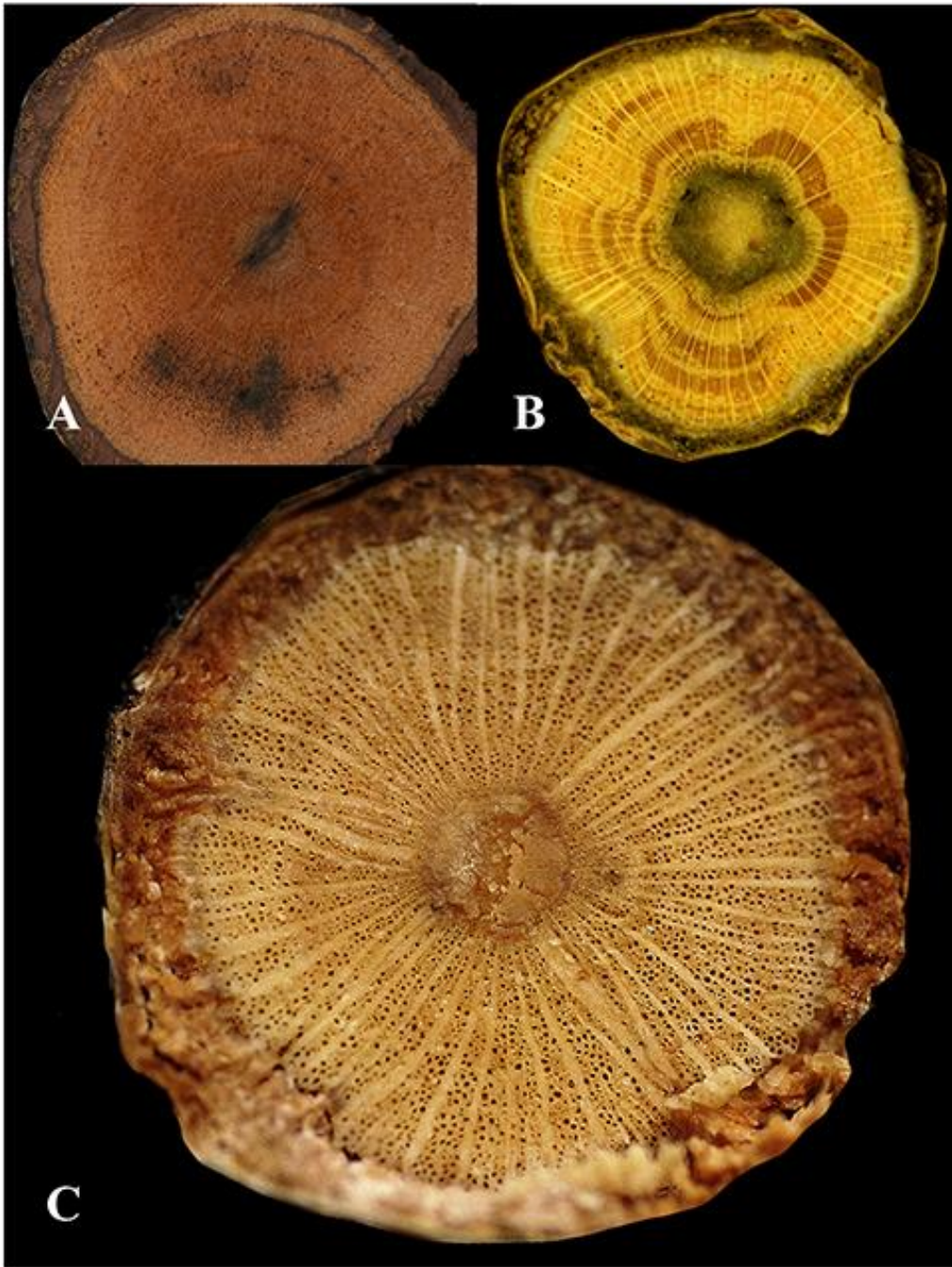
A pantropical family with three genera and ~220 species of trees, shrubs or less often lianas. In the Neotropics, the family is represented by all three genera, of which only *Dichapetalum* and *Tapura* are reported as having a total of 17 species of lianas. These are found throughout lowlands of the Neotropics from Mexico to Peru and the Brazilian Amazon, but not in the West Indies; in humid non-flooded forests.

**Diagnosics:** Twining lianas with simple, alternate, entire, stipulate leaves with asymmetrical bases; inflorescences dichotomously branched, axillary or adnate to the petiole, fasciculate, corymbose or paniculate cymes; petals or corolla lobes white, commonly bifurcated.

### General Characters

1. **STEMS.** Young stems are slightly angled and often striate, with various indument; mature stems are woody with substantial secondary growth and cylindrical. (Figure 99A–C); commonly reaching 10–20 m in length and few cm in diam.; cross sections with regular anatomy, with narrow to wide vessels, rays narrow (Figure 99A, B) to very wide, nearly dividing the vascular axial elements into radial segments (Figure 99C).
2. **EXUDATES.** Inconspicuous or clear exudates.
3. **CLIMBING MECHANISMS.** *Dichapetalum* climbs through the aid of twining stems, the climbing mechanism in *Tapura panamensis* Prance has not been reported but is either a twiner or a scrambler.
4. **LEAVES.** Alternate, simple, chartaceous to coriaceous with entire margins and pinnate venation, the base often asymmetrical; petioles short, canaliculate; stipules small to large, caducous, sometimes fimbriate at margins.

5. INFLORESCENCE. Axillary or terminal paniculate or corymbose cymes or sessile, axillary glomerules or often on distal portion of petioles.
6. PEDICELS. Short or flowers sometimes sessile.
7. FLOWERS. Bisexual or less often unisexual, actinomorphic or partly zygomorphic, 5-merous; calyx 5 distinct sepals; petals free, white, equal in *Dichapetalum*; 3 larger in *Tapura*, often bifurcate at apex; stamens 5, equal, the filaments free; ovary superior, of 2 or 3 connate carpels, 2–3-locular; ovules 2 per locule, pendulous; style 1–3, free or connate with 3 stigmatic branches.
8. FRUIT. A dry indehiscent drupe, 1–3-locular, with pubescent exocarp.



**Figure 99.** Stem cross sections in *Dichapetalum*. **A.** *D. pedunculatum* with regular anatomy, rays moderately conspicuous. **B.** *D. spruceanum*, cross section of dry stem, xylem with bands of aliform parenchyma. **C.** *D. rugosum* with wide vessels and very wide rays nearly dividing the vascular axial elements into radial segments. Photos by P. Acevedo.

## Key to the genera of climbing Dichapetalaceae

1. Inflorescences long-pedunculate, axillary, paniculate or corymbose cymes; corolla actinomorphic; petals of similar size.....*Dichapetalum*
1. Inflorescence a sessile glomerule developed at the apex of petiole; corolla zygomorphic, 3 petals larger.....*Tapura*

**DICHAPETALUM** Thouars, Gen. Nov. Madag. 23. 1806.

Trees, shrubs or less often twining lianas. Stems variable, often angled or striate, with various indument; mature stems cylindrical, some species reaching up to 20 m in length and ~2.5

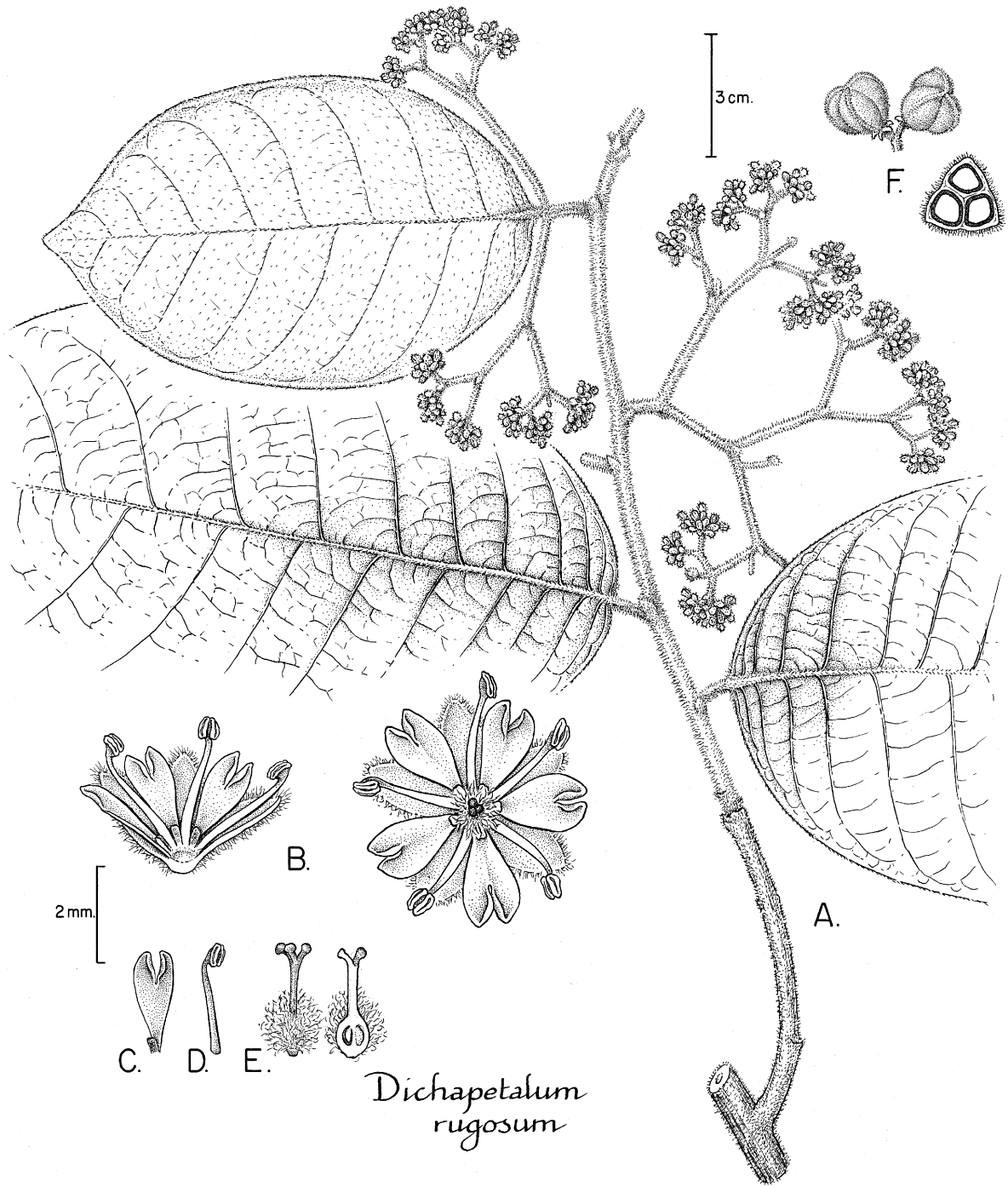


*Dichapetalum rugosum*, photo by P. Acevedo.

cm in diam.; bark pale, smooth and lenticellate; cross sections with regular anatomy, often with conspicuous rays, and sometimes with confluent bands of paratracheal and apotracheal parenchyma

(Figure 99). Leaves alternate,

chartaceous to coriaceous, simple, with entire margins and pinnate venation; petioles short or absent, without glands; stipules minute to small, caducous. Inflorescences axillary or terminal, “dichotomously” branched, paniculate or corymbose cymes. Flowers white or cream, actinomorphic, bisexual or less often unisexual, 5-merous; calyx of free or basally connate sepals with imbricate aestivation; petals free, commonly bifurcate at the apex; stamens 5, free; disc 5-



**Figure 100.** *Dichapetalum rugosum*. A. Flowering branch. B. Flower, longitudinal section & top view. C. Petal. D. Stamen. E. Gynoecium, lateral view & longitudinal section. F. Portion of infructescence & cross section of fruit. Drawing courtesy of Bobbi Angell.

lobed; ovary superior, 2–3-carpellate, with 2 ovules per carpel, the styles 1–3, free, or connate for most of their length; stigma capitate or punctiform; pistillode present in staminate flowers.

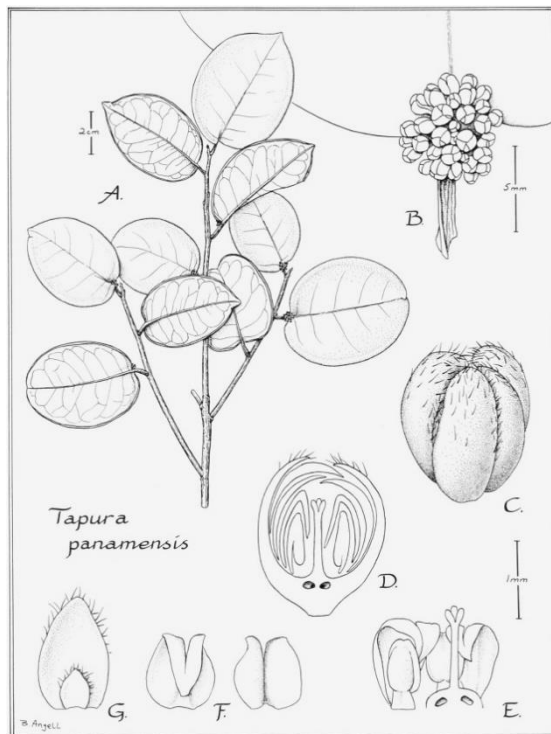
Fruit a dry, indehiscent, 1–3-locular, pubescent, green to yellowish brown drupe.

**Distinctive features:** Twining vines with simple, alternate, entire, stipulate leaves, inflorescences axillary or terminal cymes; flowers white, petals commonly bifurcate.

**Distribution:** A pantropical genus of 153 species, with 28 species found in the Neotropics, 16 of which are reported as lianas; distributed from Mexico to Peru and the Brazilian Amazon, in wet or moist non-flooded lowland forests.

**TAPURA** Aublet, Hist. Pl. Guiane 1: 126, t. 48. 1775.

[Trees or shrubs with only *T. panamensis* Prance reported as a liana in the Neotropics.



*Tapura panamensis*, drawing by B. Angell.

Climbing mechanism, dimensions, stem anatomy and fruit not reported in the literature. Leaves alternate, simple, entire, thick coriaceous, with pinnate venation, rounded to subcordate and unequal at base; petioles 4–6 mm long, puberulous, canaliculate. Inflorescence a sessile glomerule produced at the junction between petiole and blade. Flowers 5-merous, bisexual, sessile; sepals free, ovate, sparsely hispid toward the apex; petal margins ciliate; petals free, 3 larger and enveloping stamens; fertile stamens 3, alternating with corolla lobes;

ovary superior, trilocular with 2 ovules per locule, the style distal, with 3 stigmatic branches at apex.

**Distinctive features:** Liana with thick coriaceous subcordate leaves, inflorescence a sessile glomerule borne at the apex of petiole.

**Distribution:** A pantropical genus (Neotropics and central-east Africa) of 36 species, most of which (24 species) are found in the Neotropics, with only *T. panamensis* reported as a liana.

*Tapura panamensis* is known from central Panama and the Chocó region of Colombia; 100–300 m.