

CALOPHYLLACEAE

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A pantropical family of trees, shrubs and very rarely lianas. Worldwide, the family consists of 11–14 genera and ~460 species. In the Neotropics the family is represented by nine genera and ~120 species, of which three species of *Clusiella* are reported as sometimes climbing shrubs or lianas. These species are found below 300 m elevation, in swampy gallery forests.

Diagnosics: Species of *Clusiella* with climbing habit are scrambling shrubs, commonly with adventitious roots, decussate, divaricate lateral branches, white to yellow exudates, exstipulate, opposite, thick coriaceous leaves with fine, inconspicuous secondary venation and terminal (seemingly axillary) dichotomously branched cymes. Vegetatively similar to species of *Clusia* but distinguished by the berry-like fruits (not capsular)

General Characters

1. **STEMS.** Stems and branches are cylindrical, in some species known to reach up to 15 m in length. Cross sections with regular wood anatomy with inconspicuous rays.
2. **EXUDATES.** Exudates are thick, white or yellowish and commonly sparse.
3. **CLIMBING MECHANISM.** Climbing species of *Clusiella* are epiphytic vines with long, divaricate scrambling branches, commonly producing adventitious roots at the nodes that help them to secure their position on host plants.
4. **PUBESCENCE.** For the most part they are glabrous.
5. **LEAVES.** Simple, opposite, discolorous, thick coriaceous, exstipulate, with entire margins, with inconspicuous secondary venation, and short glandless petioles.
6. **INFLORESCENCES.** Terminal (seemingly axillary), short, 1–few-flowered, only at one side of the node, dichotomously branched cymes, with numerous decussate small bracts.

7. FLOWERS. Actinomorphic, unisexual; calyx of 5, small, imbricate sepals; corolla of 5 contorted, free, white or maroon petals; staminate flowers: stamens numerous, the filaments connate for most of their length into a column; pistillate flower: staminodia forming a collar that grades from resin glands to stamen-like, ovary superior, with 5–15 carpels, stigma sessile as many as the carpels.
8. FRUITS. A berry with 5–15 locules, with numerous, minute seeds, covered with a gelatinous, outer cover.

CLUSIELLA Planchon & Triana, Ann. Sci. Nat. Bot. sér. 4. 14: 253. 1860.

Dioecious, epiphytic shrubs or woody vines, that climb by means of scrambling branches,



Clusiella isthmensis, photo by C. Galdames.

and adventitious roots that secure them on to host plants; stems cylindrical, lenticellate, commonly < 1 cm in diam., and up to 15 m long, producing a white, yellow or clear, sticky exudate; cross section with a continuous xylem cylinder with inconspicuous narrow rays. Young branches perulate. Leaves opposite, simple, entire, commonly

discolorous, with minute dark glands and canals on both surfaces, the apex long-acuminate; secondary venation inconspicuous, fine, numerous, parallel, commonly ~45° from midvein; petioles short, glandless; stipules absent. Flowers unisexual, actinomorphic, produced terminal (seemingly axillary) 1–15-flowered cymes. Sepals 5, each with an abaxial gland; petals 5, free,

white or maroon; staminate flowers: stamens numerous, the filaments very short, connate into a cylinder and surrounded by a collar of resinous staminodia; pistillate flowers: ovary superior, surrounded by a collar of staminodia, 5–15 locular, with numerous ovules per locule, the stigmas 5–15, sessile. Fruit a berry with numerous, minute seeds.

Distinctive features: Epiphytic vines with scant sticky exudate (white, yellow or clear); branches opposite, divaricate, perulate; leaf secondary venation fine, numerous, inconspicuous; fruit a berry with numerous seeds.

Distribution: A neotropical genus of eight species, three of which (i.e., *C. axillaris* (Engl.) Cuatrec., *C. elegans* Planch. & Triana and *C. pendula* Cuatrec.) sometimes grow as climbing shrubs or epiphytic lianas.