

ARALIACEAE

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A family of shrubs, trees, lianas, and occasionally herbs with pantropical distribution, some members extending into temperate zones of North America, Europe and the Southern Hemisphere. Worldwide, the family consists of ~43 genera and 1,450 species, with only 5 genera and ~500 species in the Neotropics (Ulloa Ulloa et al. 2018 onwards), of these, only 15 species of *Sciodaphyllum* and the introduced *Hedera* are root-climbing lianas or facultative epiphytic lianas. For the most part, these are found in moist forests; > 1,200 m. The root-climbing liana *Hedera helix* L. has been introduced and naturalized in various localities in the Neotropics, in moist mountainous areas.

Diagnosics: Root-climbing or scrambling lianas, often aromatic; leaves alternate palmately compound (simple in *Hedera*); fruits small, fleshy or dry drupes.

General Characters

1. **STEMS.** Cylindrical, older stems in *Hedera* with numerous adventitious roots (Figure 43B, D); mature stems reaching 4-6 cm in diam. and few m in length (>20 m in *Hedera*). Cross sections have regular wood anatomy, with abundant narrow rays in *Hedera* (Figure 43C).
2. **EXUDATES.** Not visible, watery.
3. **CLIMBING MECHANISM.** *Hedera* is a root-climber (with juvenile and adult plant forms); the climbing mechanism in *Sciodaphyllum* has been reported as a scrambler and it is expected to have root-climbing species as some are facultative climbers that sometimes grows as epiphytes with adventitious roots.
4. **PUBESCENCE.** Plant glabrous or with variable indument; leaves sometimes dotted and with stellate hairs in *Hedera*, in *Sciodaphyllum* the indument is variable.

5. LEAVES. Alternate, palmately compound (leaflets entire and petiolulate, radiating from the distal portion of petiole) in *Sciodaphyllum* or simple, with undulate to 5-lobed margins in *Hedera*; venation pinnate or palmate; petioles commonly longer than the leaflets, glandless, and expanded at base into a ligulate (stipule-like) sheath in *Sciodaphyllum*; stipules absent in *Hedera*.
6. INFLORESCENCES. Terminal racemes of heads or umbels.
7. FLOWERS. Actinomorphic, bisexual, 5-merous; pedicellate or sessile; sepals fused to the hypanthium; corolla of 5, connate petals forming a caducous calyptra in *Sciodaphyllum* or free and reflexed in *Hedera*; stamens 5, alternating with the petals; ovary inferior, 3–5-locular with a single pendulous ovule per locule.
8. FRUITS. A berry, globose or nearly so, sometimes ribbed or with locules longitudinally flattened (fruit star-shaped if viewed from the top) in *Sciodaphyllum*, or depressed-globose with a calyptrate scar on upper third in *Hedera*; seeds 4–5 per fruit.

USES

Hedera helix L., the common ivy, is a popular ornamental that thrives in shady areas and is commonly used as groundcover and to hide unsightly structures. The deep green and variegated forms provide an interesting color contrast in temperate gardens.

Key to the genera of climbing Araliaceae

1. Leaves simple; leaves not sheathed at base; petals free***Hedera***
1. Leaves compound; leaf sheath with 2 ligulate (stipule-like) prolongations; petals forming a caducous calyptra..... ***Sciodaphyllum***

HEDERA Linnaeus, Sp. Pl. 202. 1753.

Root-climbing lianas. Leaves alternate; blades simple with distinct juvenile and mature stages, the juvenile commonly with lobed leaves, the mature stage with unlobed leaves; petioles as long as the blade. Flowers 5-merous, bisexual, pedicellate, arranged in umbells; bracts minute. Calyx of minute sepals fused to the hypanthium; petals 5, free, reflexed; stamens 5, alternating with the petals; ovary inferior, 5-locular with a single pendulous ovule per locule, bearing a single style. Fruit a depressed-globose berry with 4–5 seeds.

Distinctive features: Root-climbing lianas with alternate, simple leaves, commonly variegated.

Distribution: A Mediterranean and subtemperate genus of 18 species naturally distributed from Europe to China; *H. helix* L. has been introduced as a garden plant and becoming naturalized in North America and parts of the Neotropics (Bolivia, Brazil, Colombia, Ecuador, Mexico, and Peru).



Figure 43. *Hedera helix* L. **A.** Inflorescence (immature fruits). **B.** Root-climbing stem with lobed leaves. **C.** Stem cross section with numerous narrow rays. **D.** Detail of stem with adventitious roots. Photos by P. Acevedo.

SCIODAPHYLLUM P. Browne, Civ. Nat. Hist. Jamaica 190. 1756.

Trees, epiphytic shrubs and root-climbing lianas. Lianas reaching up to 20 m in length;



Sciodaphyllum sprucei, from Acevedo 9057 (US).

stems cylindrical with regular anatomy (?).

Leaves alternate, palmately-compound, petioles

elongated, stout, enlarged at the base into a

ligulate sheath; leaflets long petiolulate, with

entire margins. Inflorescence large, terminal,

paniculate or racemose, flowers pedicellate,

sessile or sometimes connate to each other at

base, clustered in heads. Calyx truncate or

repando-dentate; petals 5, connate into a

caducous calyptra; stamens 5, anthers reniform,

dorsifixed; ovary inferior, 3–5 locular, styles free

or connate at base. Fruit a drupe, subglobose,

longitudinally ribbed or with locules longitudinally

flattened (fruit star-shaped when viewed from the

top); seeds one per locule, pendulous.

Distinctive features: Root-climbing or scrambling lianas with alternate, palmately compound leaves; petioles long, stout with a ligulate sheath at base; flowers grouped into heads; corolla a calyptra.

Distribution: A neotropical genus of ~139 species of trees or terrestrial or epiphytic shrubs, with 15 species that sometimes grow as root-climbing, scrambling or epiphytic lianas. These mostly occur in Colombia, Ecuador and Peru.

EXCLUDED TAXON

Oreopanax confusus Marchal is reported by Bernal et al. (2015 onwards) as sometimes growing as a liana in Colombia, however, its occurrence as a liana is sporadic and therefore it is not included in this treatment.