

## CALCEOLARIACEAE

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Essentially a New-World family of shrubs or subshrubs with 2 genera and ~272 species. The vast majority of the species are subshrubs up to 2 m tall with annual shoots that arise from a perennial woody base. Climbers in the Neotropics are found only in *Calceolaria*, a genus with 268 recognized species, of which 45 species are consistently reported as vines that reach 2–5(8) m in length. For the most part, these species occur between (1,800) 2,000–3,500 m elevation in montane moist scrubs, cloud forests or paramo.

**Diagnosics:** Scrambling or twining herbaceous to subwoody vines with opposite simple, serrate or lobed leaves with sunken pinnate venation; corolla commonly yellow with red spots, bilabiate, the upper lip hooded, the lower lip forming a large pouch (saccate). Vegetatively similar to some species of *Mikania* (Asteraceae) but distinguished by the leaves with serrate margins.

### General Characters

1. STEMS. Mostly with perennial woody base that produce annual shoots 0.5–2 m tall; a few species with elongated twining or scrambling stems, reaching 2–5(8) m in length.
2. EXUDATES. Watery or no visible exudates.
3. CLIMBING MECHANISMS. Scrambling or twining herbaceous vines; commonly with short plagiotropic branches.
4. LEAVES. Opposite, decussate, simple, pinnately veined, with biserrate or lobulate margins, commonly chartaceous to coriaceous; exstipulate; petioles short or absent, glandless, adaxially canaliculate.

5. INFLORESCENCE. Axillary or terminal, decussate cymes with main pseudo-dichotomous main axis or simple cymes.
6. FLOWERS. Bisexual, zygomorphic; calyx of 4 free sepals; corolla bilabiate, the upper lip hooded, lower lip saccate (a large pouch) with a dorsal infolded lobe with glandular oil-producing trichomes; stamens 2 with divaricate thecae (t-shaped), the filament inserted on the corolla; ovary superior or semi-inferior, bilocular, with numerous ovules per locule, the style simple, capitate.
7. FRUIT. A septicial, 4-valved capsule with numerous seeds.

**CALCEOLARIA** Linnaeus, Vet. Acad. Handl. Stockholm 31: 286. 1770 (nom. cons.).

Shrubs, subshrubs or herbs, mostly with perennial woody base that produce annual shoots



*Calceolaria boliviana*, photo by P. Acevedo.

0.5–2 m tall; a few species with elongated twining or scrambling stems, reaching 2–5(8) m in length; branches often plagiotropic, short, decussate and somewhat cylindrical; node often swollen. Leaves opposite, chartaceous or less often alternate or verticillate or coriaceous, the blade double serrate or lobulate, with pinnate venation, extipulate; petioles moderately long, adaxially canaliculate or leaves sessile. Inflorescences axillary or terminal, decussate cymes with main pseudo-dichotomous main axis.

Flowers yellow, orange or reddish, bisexual,

zygomorphic; calyx of 4 free sepals; corolla bilabiate, the upper lip hooded, lower lip saccate (a

large pouch) with a dorsal infolded lobe with glandular oil-producing trichomes; stamens 2 with divaricate thecae (t-shaped), the filament inserted on the corolla; ovary superior or semi-inferior, bilocular, with numerous ovules per locule, the style simple, capitate. Fruit a dry septicidal capsule opening by 4 valves. Seeds minute, wind dispersed.

**Distinctive features:** Scrambling or twining vines with distinctive flowers, the lower lip of the corolla modified into a saccate pouch.

**Distribution:** A genus of ~268 species distributed from Mexico to Chile through the Andes Range. Of these, 40 species are consistently collected as vines that reach 2–5(8) m in length; montane moist scrubs, cloud forests and paramo; 1,800–3,500 m.