



New combinations for the South American *Cissus striata* clade (Vitaceae)

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Introduction

Phylogenetic studies based on plastid and nuclear data (Soejima & Wen 2006, Wen *et al.* 2007, Ren *et al.* 2011, Nie *et al.* 2012, Rodrigues *et al.* 2014) have shown that *Ampelopsis* Michaux (1803: 159) and *Cissus* Linnaeus (1753: 117) (Vitaceae) are paraphyletic genera.

Nie *et al.* (2012) recognized three clades nested within the large *Ampelopsis* clade, the “North I” clade, including the pinnate leaved species of *Ampelopsis* sect. “*Leeaceifoliae*” (Galet 1967: 209), the “North II” clade, with the simple to palmate leaved species belonging to *A.* sect. “*Ampelopsis*”, and the “South group” comprising the species distributed in the southern hemisphere. Rodrigues *et al.* (2014) have shown that South American *Cissus* are not monophyletic and form three clades: *Cissus striata*, *Cissus trianae* Planchon (1887: 555), and core *Cissus*. A clear separation between the *Cissus striata* clade and the other *Cissus* species was observed based on molecular and morphological characters. Both authors have recognized the close relation of the *Cissus striata* clade to the Australian genus *Clematicissus* Planchon (1887: 422).

In a recent report, Wen *et al.* (2014) renamed the clade formed by *Ampelopsis* sect. “*Leeaceifoliae*” (“North I” clade, Nie *et al.* 2012) by resurrecting the genus *Nekemias* Rafinesque (1838: 87), so that both *Nekemias* and *Ampelopsis* ‘*sensu stricto*’ (“North II” clade, Nie *et al.* 2012) became monophyletic clades. The remaining “South group” of Nie *et al.* (2012) includes two clades, one with the *Rhoicissus* Planchon (1887: 463) species and one with the Australian *Clematicissus* and the South American *Cissus striata* clade.

Contributing to render all genera of Vitaceae monophyletic, we here propose a new combinations for the South American species of the *Cissus striata* clade under *Clematicissus*, making monophyletic all the branches of the *Ampelopsis* clade (Nie *et al.* 2012).

Synopsis and new combinations in *Clematicissus*

Clematicissus Planchon (1887: 422)

Type species: *Clematicissus angustissima* (Mueller 1859b: 141) Planchon (1887: 422).

Lianas, rootstock commonly present. Trichomes, when present, unbranched, eglandular. Tendrils leaf-opposed, mostly dichotomously branched, lacking adhesive discs. Leaves alternate, palmate, petiolate, stipulate, stipule adnate to petiole base. Inflorescences compound cymes, leaf-opposite, sometimes with tendrilous branches. Flowers pedicellate, bisexual, 4- (South American species) or 5-merous (Australian species); calyx cotyliform; corolla early caducous; stamens opposite to petals; disc intrastaminal, adnate to ovary base; ovary 2-locular, locules 2-ovuled, style short, conical, stigma rounded. Fruit berry, globose or spheroidal, purple, purple-black or green, 1–4 seeded. Seeds obovoid, chalaza marked on dorsal surface, two furrows on ventral surface.

Six species, two from Australia, four from South America, including the only Vitaceae species occurring in Chile (Jacks 1989, Lombardi 2000, Jackes & Rossetto 2006).

Clematicissus angustissima (F.Muell.) Planchon (1887: 422)

Basionym:—*Vitis angustissima* Mueller (1859b: 141).