

# *Senecio alatopetiolatus* (Compositae), a new record for the Colombian flora

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## Abstract

*SENECIO ALATOPETIOLATUS* (COMPOSITAE), A NEW RECORD FOR THE COLOMBIAN FLORA.— *Senecio alatopetiolatus* is recorded for the first time in Colombia. A discussion of its morphological variability and pictures of living plants are provided.

Key words: Andes; Asteraceae; Colombia; Ecuador; paramo; South America.

## Resumen

*SENECIO ALATOPETIOLATUS* (COMPOSITAE), UNA NUEVA CITA PARA LA FLORA COLOMBIANA.— *Senecio alatopetiolatus* se cita por primera vez en Colombia. Se incluye una discusión de su variabilidad morfológica y se aportan fotografías de plantas en su hábitat.

Palabras clave: Andes; Asteraceae; Colombia; Ecuador; páramo; Sudamérica.

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## INTRODUCTION

Within the Americas, the second most diverse family is Compositae with *ca.* 12,043 species. One of the largest genera is *Senecio* L., which appears to be the most diverse Compositae genus in Bolivia, Peru, and the Southern Cone (Ulloa Ulloa *et al.*, 2017).

In Colombia, *Senecio* is one of the most diverse plant genera at elevations above 3500 m (Bernal, 2016). Ávila *et al.* (2016) recorded 43 species in

this country. This number, however, increases when the species treated by these authors under *Culcitium* Bonpl. (2 spp.) and *Lasiocephalus* Willd. ex Schldl. (12 spp.) are included; both genera are currently widely accepted as being part of *Senecio* (Pelser *et al.*, 2007; Sklenář, 2012; Calvo & Freire, 2016; Salomón *et al.*, 2018). In addition, two new species (Calvo & Ávila, 2016; Aguilar-Cano & Hind, 2020) and a new record (Buirá *et al.*, 2018) were added after Ávila's account. On this basis, we estimate that Colombia harbors *ca.* 60 *Senecio* species.

Although the knowledge of the genus in Colombia has notably been improved during the last decades, especially thanks to the studies by Cuatrecasas (1950, 1951, 1953), a solid and comprehensive taxonomy of *Senecio* is far to be reached. Herein, we record a new species of *Senecio* for the Colombian flora.

## MATERIALS AND METHODS

This contribution is the result of bibliographic review, fieldwork in southern Colombia, and the revision of specimens kept at CAUP, COL, HT, JBB, and UDBC; herbarium acronyms follow Thiers (2021).

## RESULTS AND DISCUSSION

*Senecio alatopetiolatus* J. Calvo, E. Freire & Sklenář is recorded for the first time in Colombia (Figs. 1A, B). The species was described in 2016 from Cerro Hermoso in central Ecuador and it was hitherto known only from the type locality (Figs. 1C, D). It is an erect or scandent subshrub up to 2 m long characterized by having triangular to trullate middle cauline leaves with winged petioles broadened towards the base (Fig. 2A), and panduriform to lanceolate upper cauline leaves that become sessile upwards. The synflorescences are cymose-corymbiform composed of discoid, nodding capitula; these have (13–)15–22 involucre bracts, (7–)11–16 supplementary bracts, and 55–75 pale yellow florets (Figs. 2B–E). The immature achenes are glabrous. The stems, leaves, and synflorescences are densely covered by an indumentum composed of glandular-hirsute trichomes mixed with sericeous trichomes (description adjusted from Calvo *et al.*, 2016).

The Colombian population was found in a shrubby paramo between the San Rafael Lagoon and El Bedón Falls in the Cauca Department (southern Colombia). Plants from this population are slightly smaller (up to 1 m tall) and they have an erect or leaning habit rather than the typically scandent habit of the plants from the type locality. They also differ from those of Ecuador in having the style branch apices ornamented with a crown of trichomes of

different lengths instead of with a central tuft of longer trichomes (penicillate). We found no work revealing intraspecific variability of this character in *Senecio*, however, interspecific variability is well documented (Pelser *et al.*, 2007; Salomón *et al.*, 2016). Indeed, Salomón *et al.* (2016) concluded that this character provides scarce taxonomic information because some species display intermediate states that difficult the characterization of the style branch apices as penicillate or not. Since all other characters perfectly match each other, we resolve that the difference in this character by its own does not support the recognition of more than a single taxon. The aforementioned differences concerning the habit are also unworkable for discriminating purposes and they expand only the variability encompassed by *S. alatopetiolatus*.

*Senecio alatopetiolatus* J. Calvo, E. Freire & Sklenář in Phytotaxa 243 (2): 177. 2016.

*Ind. loc.*: “ECUADOR. Tungurahua: near laguna at the western side of Cerro Hermoso, 1° 13' 51" S, 78° 18' 04" W, 3870 m, 3 Dec 2010, P. Sklenář 13100”.

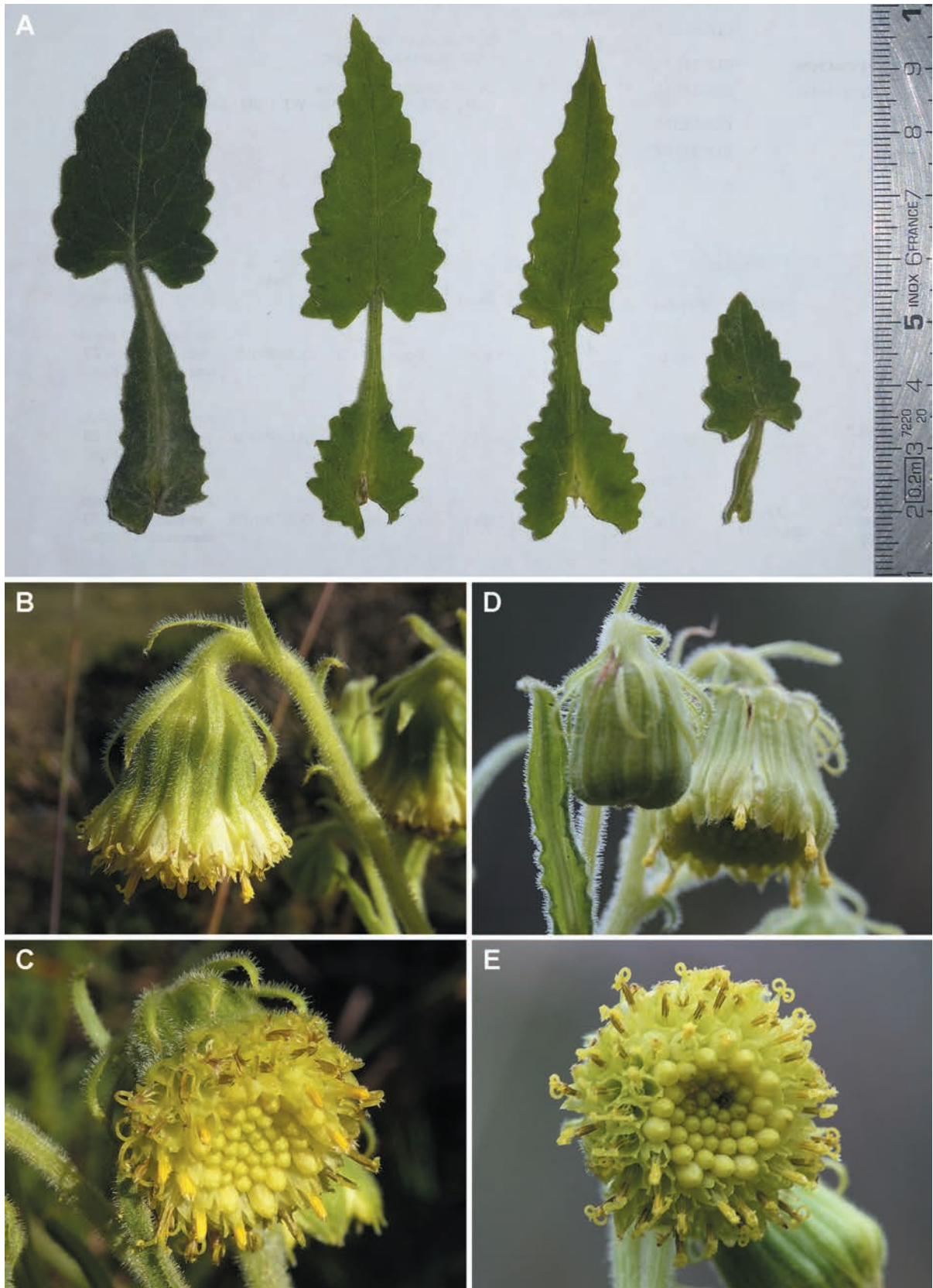
Holotype: Ecuador, Tungurahua, near laguna at the western side of Cerro Hermoso, 1° 13' 51" S, 78° 18' 04" W, 3870 m, 3-XII-2010, P. Sklenář 13100 (PRC 405860!; isotypes: MO s.n., QCA 215788!).

*Distribution and habitat*: Colombia (Cauca), Ecuador (Tungurahua). It grows in humid shrubby paramos at elevations of 3100–3870 m. Some species observed in the habitat of the Colombian population are *Azorella crenata* Pers. (Umbelliferae), *Baccharis* L. (Compositae), *Oreopanax* Decne. & Planch. (Araliaceae), *Rubus coriaceus* Poir. (Rosaceae), *Senecio involucreatus* (Kunth) DC. (Compositae), and *Vaccinium floribundum* Kunth (Ericaceae).

*Additional specimens examined*: Colombia, Cauca: Puracé, vía hacia el Parque Nacional Natural Puracé, 3100 m, VIII-2011, Ávila *et al.* 2005 (UDBC 028149); *ibid.*, 3-I-2017, Ávila 3400 (HT 06810, JBB s.n.); Puracé, alrededores de la cascada del Bedón, 2° 21' 18" N 76° 18' 49" W, 3300 m, páramo arbustivo, 9-XII-2017, Calvo 7678 (CAUP s.n.); Puracé, Parque Nacional Natural Puracé, laguna de San Rafael, 3370 m, 15-II-2000, Ramírez 12818 (CAUP 014678, COL 000101061).



**Figure 1.** *Senecio alatopetiolatus*: (A), stem upper part; (B), synflorescence; pr. Cascada del Bedón, Puracé, Cauca, Colombia (photographs: J. Calvo, 2017). (C), stem upper part; (D), synflorescence; Cerro Hermoso, Tungurahua, Ecuador (photographs: P. Sklenář, 2010).



**Figure 2.** *Senecio alatopetiolatus*: (A), cauline leaf shape variability; (B), capitulum; (C), florets; pr. Cascada del Bedón, Puracé, Cauca, Colombia (photographs: J. Calvo, 2017). (D), capitulum; (E), florets; Cerro Hermoso, Tungurahua, Ecuador (photographs: P. Sklenář, 2010).

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