



## Article

### New record of *Chaptalia ignota* Burkart (Asteraceae) for the Brazilian flora

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#### Abstract

The first record of *Chaptalia ignota* (Asteraceae, Mutisieae) for the Brazilian flora is reported here. The species was found during a taxonomic and floristic revision of *Chaptalia* in the state of Rio Grande do Sul, Brazil. We provide updated taxonomic notes, an illustration and photographs of the species, and a distribution map.

**Key words:** Compositae, floristics, Mutisieae, pampean biogeographical province, taxonomy

#### Introduction

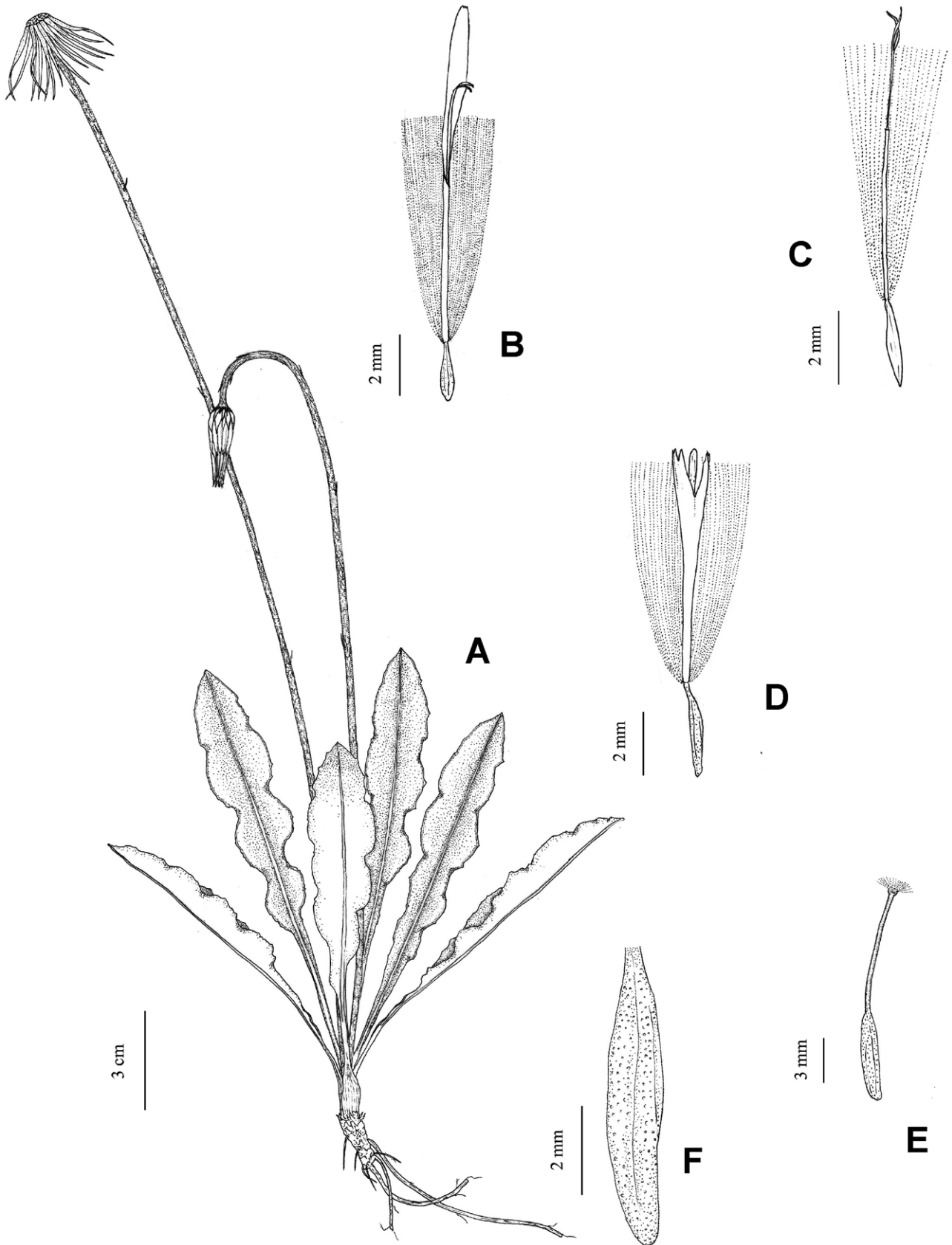
*Chaptalia* Ventenat (1802: 7) is the largest genus of the 'Gerbera-complex' with about 70 species (Katinas *et al.* 2008). The infrageneric relationships of the *Gerbera*-complex are still under discussion, and Katinas *et al.* (2008) indicated that the total number of *Chaptalia* species could be reduced to between 20 and 35 species. The genus is restricted to the Americas, distributed from the southern United States to central Argentina, except the Amazon region (Katinas *et al.* 2008). The most extensive revision of the genus was published by Burkart (1944), but was focused on the Argentinean species. Burkart discussed a total of 54 species and provided illustrations, genus and species descriptions, and geographical distributions. In Brazil, Monge & Roque (2012) reported the occurrence of 15 species distributed in the northern, northeastern, west-central, southern, and southeastern regions. In the state of Rio Grande do Sul, 10 species of *Chaptalia* have been reported (Malme 1931, Cabrera 1974, Mondin 1996, Zuloaga *et al.* 2008, Boldrini *et al.* 2009, Monge & Roque 2012), which inhabit a wide variety of floristic physiognomies, from forest understory to open grasslands. The morphological delimitation of the *Chaptalia* species is mainly based on leaf shape and the color and morphology of the corollas of the ray florets (Roque 2005). The presence of bracts on the scape is also a useful character for distinguishing some species.

Here we report an 11<sup>th</sup> species of *Chaptalia* for Rio Grande do Sul: *C. ignota* Burkart (1932: 11), which constitutes the first record of this species in Brazil.

#### Taxonomic treatment

*Chaptalia ignota* Burkart, Physis 11: 102 (1932). (Figs. 1 and 2)

*Herbs* perennial, 30–45 cm tall, roots dark brown. *Leaves* rosulate, sessile; blade membranaceous, discolorous, oblanceolate to lanceolate, 7–19 x 1–3 cm, base attenuate, margin crenate-dentate, sinuate-dentate, dentate, irregularly dentate, or smooth; apex subacute. *Inflorescences* monocephalous, scapigerous; scapes 12–43 cm long, tomentose, with leafy bracts; bracts 5–16, subulate, tomentose. *Capitula* radiate, heterogamous, nodding at anthesis; involucre conical to campanulate, 1–3 x 1.7–4 cm; involucral bracts 4–5-seriate, imbricate, subulate, green, abaxial surface tomentose, apex acute to acuminate, dark red.



**FIGURE 1.** *Chaptalia ignota*. **A.** Habit (*E. Pasini 469*, ICN). **B.** Outer pistillate floret. **C.** Middle pistillate floret. **D.** Inner bisexual floret. **E.** Cypsela. **F.** Detail of cypsela. **B-F:** (*Burkart et al. 23847*, SI). Illustration by Edson Luís de Carvalho Soares.

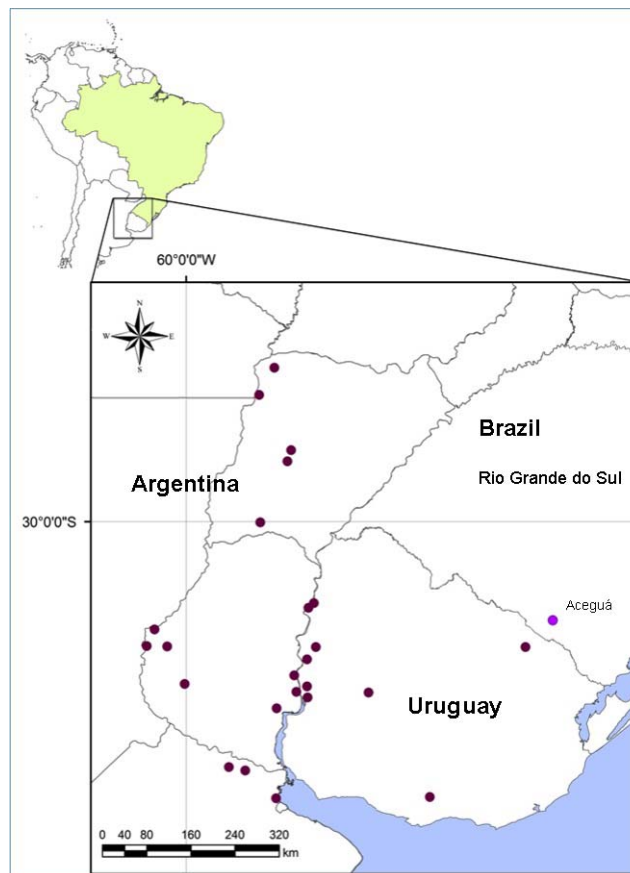


**FIGURE 2.** *Chaptalia ignota*. **A, B.** Habit. **C.** Detail of crenate-dentate leaf. **D, E.** Detail of scape and pappus. **F.** Grassland habitat at site, municipality of Aceguá, Rio Grande do Sul State, Brazil. Photo credits: A, B, C, D, F, G, H by E. Pasini and E by Gerard Ernst Overbeck.

*Florets* trimorphic; outer florets pistillate, uniseriate, ca. 18, corollas ligulate–bilabiate, abaxial lip liguliform, white to pink, 4–6.6 mm long, apex irregularly 3-lobed; adaxial lip irregularly bifid, occasionally absent, tube 4.5–8.3 mm long; style 8.4–10.3 mm long, style lobes 1–1.6 mm long; middle florets pistillate, ca. 40, corollas filiform, tube 4.5–5.7 mm long; style 7.5–8.3 mm long, exserted, style lobes 1.3–1.6 mm long; inner florets

bisexual, ca. 10, corolla tubulose-bilabiate, whitish, abaxial lip 1.5–2.5 mm long, apex 3-lobed, adaxial lip bifid, 1.5–2.3 mm long, tube 5.5–9.2 mm long; style 8.7–9.6 mm long, style lobes 0.7 mm long, papillose above bifurcation; anther thecae 3.6–4.8 mm long, apex obtuse, base of pollen sacs caudate, 1.3–2.2 mm long. *Cypsela* narrowly fusiform, 13.8–23.8 mm long, including slender beak 8.2–16.0 mm long, 5–8-ribbed, with trichomes densely distributed, pappus uniseriate, setose.

**Distribution and ecology:**—Native to South America, distributed in Argentina (provinces of Buenos Aires, Entre Rios, and Corrientes) and Uruguay. In Brazil, only known from Rio Grande do Sul (Fig. 2), from the pampean biogeographical province of Cabrera & Willink (1973), municipality of Aceguá. Information about the ecology of this species is sparse; Burkart (1944) noted the distribution area but did not provide details regarding habitat and phenology. We therefore emphasize the importance of field expeditions to better understand the distribution, demography and ecology of *C. ignota*. However, our field observations and label information of herbarium specimens suggests that the species inhabits wet or dry, flat or gently rolling grasslands. It also can be found in disturbed areas such as roadsides with exposed soil.



**FIGURE 3.** Distribution map of *Chaptalia ignota*. The purple solid circle indicates the location of *C. ignota* in Brazil. Other circles represent the location of other specimens that were studied.

**Phenology:**—Flowering and fruiting from October to November (pers. obs. and label information of herbarium specimens).

**Conservation status:**—Although the species is widely distributed in Argentina and Uruguay, we emphasize its restricted occurrence in Rio Grande do Sul. In this state, according to the IUCN (2010), the species is considered to be critically endangered (CR B2b(ii)—the estimated area of occupancy is less than 10 km<sup>2</sup>, and the field observations indicate a continuing decline of habitat quality; D—the size of the observed population was less than 50 mature individuals). Therefore, *C. ignota* should be included in the Official List of Threatened Species of Rio Grande do Sul's Flora.

**Specimen examined:**—BRAZIL. Rio Grande do Sul: **Aceguá**, 31°34'97.2''S, 54°08'39.0''W, em beira de estrada, campo limpo, úmido, de plano à suave ondulado, 7 November 2010, fl., fr., *E. Pasini* 469 (ICN).

**Additional specimens examined:**—ARGENTINA. Buenos Aires: **Buenos Aires**, San Isidro, 2 April 1933, fl., fr., A. Burkart 5597 (SI); Corrientes: **Sauce**, Chacra El Timbó, 3 km N de Sauce, 22 October 1977, fl., O. Ahumada et al. 1335 (CTES); **San Liso Palmar**, Estación Herlitzka, 26 September 1945, fl., Z. Ibarrola 3324 (CTES); Entre Rios: **Colón**, Calera Barquín, s.d., fr., A. Pozzi s.n. (SI 115700); **Concepción del Uruguay**, 17 October 1949, fl., fr., A. Burkart 17966 (SI); **Concordia**, ruta 14 a Concordia, Arroyo Isletas, 21 September 1961, fl., A. Burkart 22793 (SI); **Crespo**, 2 November 1970, fl., A. Burkart & N. Troncoso 28085 (SI); **Diamante**, 15 May 1964, fl., fr., A. Burkart et al. 25518 (SI); **Gualeguaychú**, ruta 12, 14 km al S de Gualeguaychú, 30 September 1970, fl., fr., A. Burkart & N. Troncoso 28115 (SI); **Paraná**, camino al Paracao, 31 October 1962, fl., A. Burkart et al. 23847 (LP, SI); **Puerto Cupalén**, 22 December 1941, fl., E. G. Nicora 3371 (SI).

URUGUAI. Cerro Largo: **Rio Negro**, Estancia Palleros, January 1941, fl., fr., G. Aragone & B. Rosengurt 4598 (LP).

According to Burkart (1944), *Chaptalia ignota* belongs to the section *Leria* Burkart (1944: 6). The species in this section are robust herbs, with long inflorescence scapes and foliaceous involucre bracts. Although the species is easy to recognize, it is morphologically close to *C. arechavaletae* Hieronymus (1904: 14), *C. integerrima* (Vellozo 1831: 8) Burkart (1944: 6) and *C. sinuata* Baker (1884: 6), from which it can be distinguished by the oblanceolate to lanceolate leaves with crenate-dentate margins vs. ovate-lanceolate leaves (*C. sinuata*) or leaves with denticulate or smooth margins (*C. integerrima*) or more strongly crenate-dentate margins (*C. arechavaletae*).

### Key to distinguish *Chaptalia ignota* from morphologically similar species

1. Leaf blade lyrate ..... *C. nutans*
1. Leaf blade never lyrate ..... 2
2. Scape ebracteate, roots reddish orange or yellowish gray ..... 3
3. Leaf margin dentate or crenate-dentate, disc florets lilac, roots orangish red ..... *C. sinuata*
3. Leaf margin denticulate or smooth, disc florets light beige, roots yellowish gray ..... *C. integerrima*
2. Scape with subulate bracts, roots dark brown or brown ..... 4
4. Leaf ovate to ovate-lanceolate, margin strongly crenate-dentate, scape with 20–35 subulate bracts ..... *C. arechavaletae*
4. Leaf oblanceolate to lanceolate, margin crenate-dentate, sinuate-dentate, dentate, irregularly dentate or smooth, scape with up to 5–16 subulate bracts ..... *C. ignota*

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