

**VERBENA JESSICAE (VERBENACEAE),
A NEW SPECIES FROM NUEVO LEÓN, MEXICO**

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ABSTRACT

Verbena jessicae Nesom & Hinton, **sp. nov.**, is described from a gypseous llano in northeastern Nuevo Leon, Mexico. It grows closely intermixed with another local endemic, *Glandularia alejandrana*, and with the widespread *Verbena canescens*. The new species is characterized by its small, pinnately divided leaves, hirsute and stipitate-glandular vestiture, small, salverform flowers with apically notched petals, and especially by its procumbent to decumbent habit and short, few-flowered, solitary spikes.

Continued floristic exploration of gypseous areas in northeastern Mexico has brought to light a previously undescribed species of *Verbena*.

VERBENA JESSICAE Nesom & G.S. Hinton, **sp. nov.** **TYPE: MEXICO. Nuevo León.** Mpio. Galeana: Rancho Aguililla, gypseous llano in broad valley S of San Rafael, 2950 m, common over a few hectares, flowers purple, decumbent, 31 Mar 2010, *G.S. Hinton et al.* 29086 (holotype: TEX; isotypes: ANSM, GBH, MEXU). Figures 1–6.

Similar to *Verbena canescens* but distinct in its small, pinnately divided to deeply toothed leaves, hirsute and stipitate-glandular vestiture, salverform corollas, and particularly in its procumbent to decumbent habit and short, terminal, few-flowered spikes.

Annual to short-lived perennial herbs, taprooted. **Stems** 3–10 from the base, procumbent to decumbent, not rooting at nodes, 2–10 cm long, ascending at the spike apices, densely hirsutulous with hairs mostly 0.1–0.2 mm long, stipitate-glandular with sessile glands to 0.2 mm. **Leaves** mostly broadly ovate in outline, to oblong-ob lanceolate or oblong-lanceolate, pinnately divided to deeply toothed, (2–)3–5 lobes or teeth per side, the divisions oblong-linear to lanceolate-linear, antrorsely directed, lower and midstem 5–10(–15) mm x 2 x 5 mm, hirsute-strigose to strigose-hirsute on both surfaces and stipitate-glandular with sessile glands, veins impressed adaxially, margins narrowly revolute, blades basally attenuate but without a distinct petiolar region. **Fruiting spikes** terminal or axillary, 6–10 mm long, barely elongating, with 5–12 fruits; floral bracts linear-lanceolate to lanceolate, 2.5–3.5 mm, shorter than the calyces. **Calyces** (3–)3.5–4 mm, subcylindric, hirsute to hirsutulous, stipitate-glandular, lobes narrowly lanceolate, erect, connivent. **Corollas** violet to light purple or nearly white, salverform, tubes 3–3.5 mm, 1–1.5 mm longer than the calyces, limbs 2–3 mm in diam, petals notched at the apices. **Nutlets** 1.8–2.2 mm, easily separating; commissural faces not reaching nutlet apices, white-bullate.

Additional collections. **Nuevo León.** Mpio. Galeana: San José del Alamito to El Coyote, grassy gypseous llano, 1780 m, procumbent, flowers purple, very small, 15 Jul 1998, *G.S. Hinton et al.* 27202 (GBH, TEX); roadside Hwy 57, near Puerto México, grassy llano, 1900 m, flowers purple, 5 cm, Sep 21, 2006, *G.B. Hinton et al.* 28428 (GBH, TEX).

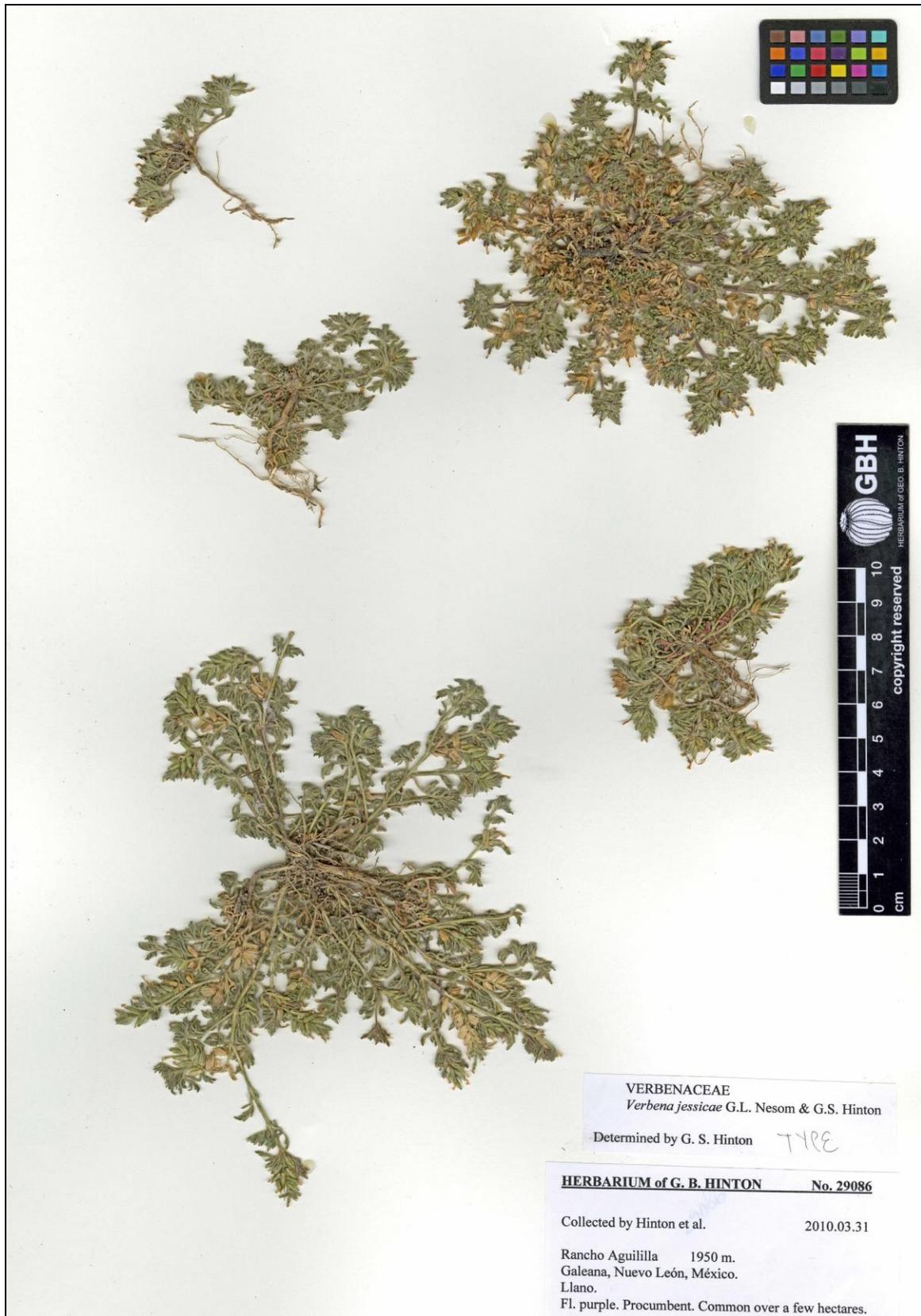


Figure 1. *Verbena jessicae*, isotype (GBH).



Figure 2. *Verbena jessicae*, dissected leaves and short, terminal and axillary inflorescences. From Hinton 28428 (GBH).



Figure 3. *Verbena jessicae* — vestiture and revolute leaf margins. From Hinton 29086.



Figure 4. *Verbena jessicae* — vestiture showing minute glandularity. From Hinton 29086.



Figure 5. *Verbena jessicae*, at the type locality.



Figure 6. *Verbena jessicae*, at the type locality.



Figure 7. *Verbena jessicae*, at the type locality.



Figure 8. *Verbena jessicae* (right) and *Glandularia alejandrana* (left), at the type locality of *V. jessicae*. Note the distinct corolla sizes.

Verbena jessicae is named for Jessica Hinton, daughter of the collector and frequent companion on his walks about their home in Rancho Aguillilla. It grows in the same habitat and closely intermixed with *Glandularia alejandrana* B.L. Turner (Turner 1999; see Fig. 6 below), named for the collector's wife. With the description of this new species of *Verbena*, wife and daughter are twice united.

The new species grows abundantly in a broad, flat, gypseous area without shrubs (a llano). Plants in the llano tend to cluster, leaving large portions of bare soil. The islands of plants primarily include *Stipa clandestina* with *Glandularia alejandrana*, *Glandularia pinnatifida*, *Verbena canescens*, *Nama hispidum*, *Townsendia mexicana*, *Solanum eleagnifolium*, *Sphaceralcea hastulata*, *Peganum mexicanum*, and *Cryptantha gypsophila*. *Glandularia alejandrana* is known from other populations in the same region of Nuevo León and slightly westward in Zacatecas (as cited and mapped by Turner 1999).

Verbena jessicae is a member of the *V. neomexicana* Small complex (Nesom 2010b), circumscribed as *Verbena* sect. *Verbena* series *Tricesimae* Nesom (Nesom 2010a). Plants of this group generally have slender, usually solitary or few-branched spikes with remote fruits, glandular rachises and calyces, distinctly exerted corolla tubes, nutlets with commissural faces not reaching the apex, and glossy-surfaced leaves that usually are elongate and pinnatifid to deeply toothed (but varying to subentire) and with impressed venation adaxially and revolute margins. Within ser. *Tricesimae*, *V. jessicae* is distinct in its small, mostly pinnately divided leaves with linear lobes, stipitate-glandular vestiture, salverform corollas, and especially in its procumbent to decumbent habit and few-flowered spikes. The short, nearly head-like spikes, of only 5–12 flowers at the slightly upturned ends of prostrate branches, are unique in their reduction among all species of the genus.

Verbena jessicae grows closely intermixed with *V. canescens* Kunth, also of ser. *Tricesimae*—the latter is distinct in its erect habit, more dissected leaves, funnellform corollas, and elongate floral bracts. Both species are abundantly present but intermediates between them are not encountered. The new species is similar in general aspect to *Glandularia alejandrana*, which has dissected leaves

with linear lobes and few-flowered, relatively compact inflorescences, but the latter has larger plants and flowers (Fig. 6) and the fruit morphology is characteristic of *Glandularia* rather than *Verbena*.

The only other species of ser. *Tricesimae* with prostrate stems is *Verbena gracilis* Desf., a species primarily of the central and western Mexico to the southwestern USA. The closest geographical approach of *V. gracilis* to *V. jessicae* is in San Luis Potosí, where the plants often are suberect. Despite similarities in habit and leaf morphology, the two are distinct in a number of easily discernible features, as in the contrasts below.

1. Stems 2–10 cm, densely hirsutulous with hairs mostly 0.1–0.2 mm long; fruiting spikes slightly upturned, 6–10 mm long, of 5–12 fruits; floral bracts 2.5–3.5 mm, shorter than the calyces; calyces (3–) 3.5–4 mm, lobes narrowly lanceolate; petal apices notched; nutlets 1.8–2.2 mm **Verbena jessicae**

1. Stems 10–25 cm, hirsute with bristly hairs mostly 0.3–0.8 mm long; fruiting spikes erect, 50–100 (–150) mm long, of 20–70 fruits; floral bracts 3–5 (–8 proximally) mm, distinctly longer than the calyces; calyces 2–2.5 mm, lobes deltate to deltate-apiculate; petal apices entire; nutlets 1.5–1.8 mm **Verbena gracilis**

LITERATURE CITED

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