

CRYPTANTHA GEOHINTONII (BORAGINACEAE), A NEWLY DESCRIBED GYPSOPHILE FROM NUEVO LEON, MEXICO**Billie L. Turner**Plant Resources Center
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Routine identification of Mexican plants has revealed the following novelty from gypsum outcrops in southern Nuevo Leon, Mexico:

CRYPTANTHA GEOHINTONII B.L. Turner, *sp. nov.* **Fig. 1**

Cryptantha gypsites I.M. Johnst. similes sed trichomatibus caulinis patentibus (vs patentibus et appressis), spicis floralibus longioribus (5-8 cm longis vs 1-4 cm). scapis styliaribus brevioribus (ca 0.5 mm longis vs 0.6-0.8 mm), et mericarpiis labra distincte evoluta carentibus.

Perennial herbs, much-branched from the base and forming low bushy, somewhat rounded herbs 8-12 cm high. **Stems** pubescent with stiff white spreading hairs ca 1 mm long, appressed hairs essentially absent. **Leaves** at mid-stem lanceolate, sessile, mostly 6-8 mm long, 1-2 mm wide, pubescent like the stems. **Flowering spikes** mostly 5-8 cm long; bracts lanceolate, 4-6 mm long; flowers sessile or nearly so. **Calyx** of 5 separate lanceolate sepals 2.2-2.4 mm long. **Corollas** white, ca 2 mm long (with lobes erect); lobes flared, ca 0.5 mm long. **Anthers** 5, ca 0.4 mm long, nestled at the throat of the tube. **Style** ca 0.5 mm long at anthesis; in fruit the style extending beyond the mericarps for ca 0.2 mm. **Mericarps** (or nutlets) trianguloid, ca 1.5 mm long, 1.0 mm wide, weakly flanged, if at all, the outer surface ornamented with numerous irregularly shaped white warts.

TYPE: **MEXICO. NUEVO LEON: Mpio. Mina**, NE of Carricitos ("26. 01386 N, 100. 47018 W"), 23 Jul 2007, *Hinton et al.* 28655 (Holotype: TEX).

ADDITIONAL SPECIMENS EXAMINED: **MEXICO. NUEVO LEON: Mpio. Mina**, Gypsum hillside, W of Los Molina, 943 m, 23 Jul 2007, *Hinton et al.* 28616 (Hinton herb.); Gypsum hillside, NE of Carricitos, 965 m, 23 Jul 2007, *Hinton et al.* 28635 (Hinton herb.); 10.5 km N of Rancho Las Estacas on road to Rancho Lechuguillal (26.26 N, 100.50 W), 685 m, 16 Mar 1973, *Johnston et al.* 10255e (LL); 1 km W of Rancho Potrillos in Canon de Potrillos (26.03 N, 100.45 W), 850 m, 17 Mar 1973, *Johnston et al.* 10246 (LL); 105 km NW of Monterrey on road to Monclova, 3 Sep 1971, *Turner* 6375 (TEX).

The new species occurs on gypsum outcrops about 55 airline km northwest of Monterrey. Near the type locality there are two large gypsum outcrops about 5.5 km apart and covering a total of 3.5 hectares, as noted by Nesom (2007) in his description of the gypsophile, *Erigeron heleniae*. He further notes (pers. comm.) that this area of outcrops probably is the total extent of the range of the two taxa concerned

When first examined I took material of this species to be aberrant forms of the oft collected *C. gypsites*, which it superficially resembles. George Hinton prevailed upon me to take a second look, especially at the fruit characters, calling to my attention the absence of well-defined flanges or lateral ridges on the mericarps of *C. geohintonii*, this character holding up well as a discriminatory feature, along with yet others mentioned in the above diagnosis.

Cryptantha geohintonii and *C. gypsites*, both relatively localized gypsophiles, are closely related to the widespread *C. mexicana*, the latter having smaller corollas, with much smaller lobes, shorter stylar shafts, somewhat smaller nutlets and stems with more appressed hairs, as indicated in the following key:

1. Corollas 1.0-1.2 mm long, the lobes not especially flaring; stylar shaft just barely extending beyond the mature nutlets; mostly spring-flowering.....**C. mexicana**

1. Corollas 2.0-2.5 mm long, the lobes markedly flaring; stylar shafts extending beyond the mature nutlets for 0.5-0.8 mm; nutlets w/o lateral ridges; mostly fall-flowering.....(2)
2. Nutlets with very distinct lateral ridges; pubescence of lower stems composed of both spreading and appressed hairs; gyp soils S of Monterrey.....**S. gypsites**
2. Nutlets w/o distinct lateral ridges; pubescence of lower stems mostly stiffly-spreading, appressed hairs few, if any; gyp soils NW of Monterrey (Mpio. Minas).....**S. geohintonii**

Distributions of the several taxa discussed in the above are shown in figures 2 and 3.

The species name refers to George S. Hinton, grandson of the legendary Mexican plant collector, George B. Hinton (cf. Hinton and Turner 2007). As noted in the above, *Cryptantha geohintonii* joins another newly described species from the same area of gypsum outcrops: *Erigeron heleniae* (Nesom 2007), named for George S. Hinton's mother.

ACKNOWLEDGEMENTS

I am grateful to George Hinton for forcing my attention upon the taxon concerned, and to my colleague Guy Nesom for the Latin diagnosis and for additional comments on the manuscript itself. Distribution maps are based upon collections on file at LL, TEX.

LITERATURE CITED

- Hinton, G.S. and B.L. Turner. 2007. James Hinton (1915-2006). *J. Bot. Res. Inst. Texas* 1: 1277-1280.
- Nesom, G.L. 2007. A new gypsophilous species of *Erigeron* (Asteraceae: Astereae) from northeastern Mexico. *J. Bot. Res. Inst. Texas* 1: 891-894.



Fig. 1. *Cryptantha geohintonii*, growing in the field.



Fig. 2. Distribution of *Cryptantha gypsites* and *C. geohintonii*.

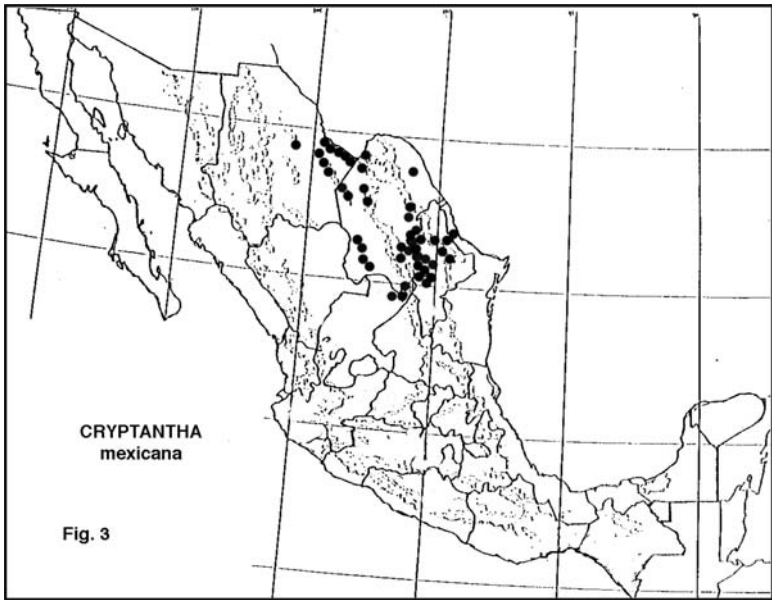


Fig. 3. Distribution of *Cryptantha mexicana*.