

A NEW SPECIES AND NEW VARIETY OF *HYPOXIS* (HYPOXIDACEAE)
FROM NORTHEASTERN MEXICO

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ABSTRACT

Hypoxis pulchella, *sp. nov.*, is described from the sierra of central Nuevo León and west-central Tamaulipas; it apparently is most closely related to *H. hirsuta* of the southeastern United States. *Hypoxis decumbens* var. *dolichocarpa* (*var. nov.*) is described from northeastern México (Nuevo León, Tamaulipas, and San Luis Potosí); it differs from typical *H. decumbens* L. in its longer fruits. The distributions of the new taxa are mapped.

KEY WORDS: *Hypoxis*, Hypoxidaceae, México

Study of *Hypoxis* L. from northern México has indicated that two entities need to be formally described, each represented by a series of populations. The first is recognized as a species, the second as a variety.

Hypoxis pulchella Nesom, *sp. nov.* TYPE: MEXICO. Nuevo León: Mpio. Villa Santiago, area near Cola de Caballo, near running water, woods of *Pinus*, *Quercus*, *Platanus rzedowskii*, *Populus tremuloides*, *Colubrina greggii*, 800 m, 20 Jun 1984, J.A. Villarreal 2774 with M.A. Carranza and M. Vasquez R. (HOLOTYPE: TEX!; Isotype: ANSM).

Hypozi hirsutae (L.) Coville similis et ut videtur arcte affinis sed seminibus papillis distincte discretis conicisque apicibus rotundatis differt. Differt a *H. decumbenti* L. floribus majoribus (segmentis perianthii latoribus, antheris thecis longioribus), fructibus brevioribus, et morphologia seminum.

Perennial, stemless herbs with a rosette of leaves, the corm elongate, ca. 2 cm long, with membranaceous bases, these not disintegrating into stiff, fibrous bristles; leaves, scapes, pedicels, abaxial surface of perianth segments, and ovary and fruit sparsely to moderately pilose. Leaves lax, linear, 15-50 cm long, 1.5-4.0 mm wide, commonly with 3, raised nerves. Scapes filiform, erect, 15-20 cm long, 2(-4) flowered; pedicels mostly 1.5-4.0 cm long. Perianth segments yellow above, greenish beneath, narrowly elliptic to broadly lanceolate-elliptic, 8-13 mm long, (2.5-)3.2-4.0 mm wide; anther thecae versatile, 2.5-3.8 mm long. Capsule indehiscent, 4-5 mm long, crowned by the persistent, erect, perianth segments; seeds globose, ca. 1.5 mm in diameter, beak and rostrate hilum subterminal, surface black, muricate with elongate, conical but blunt-tipped, distinctly separated papillae.

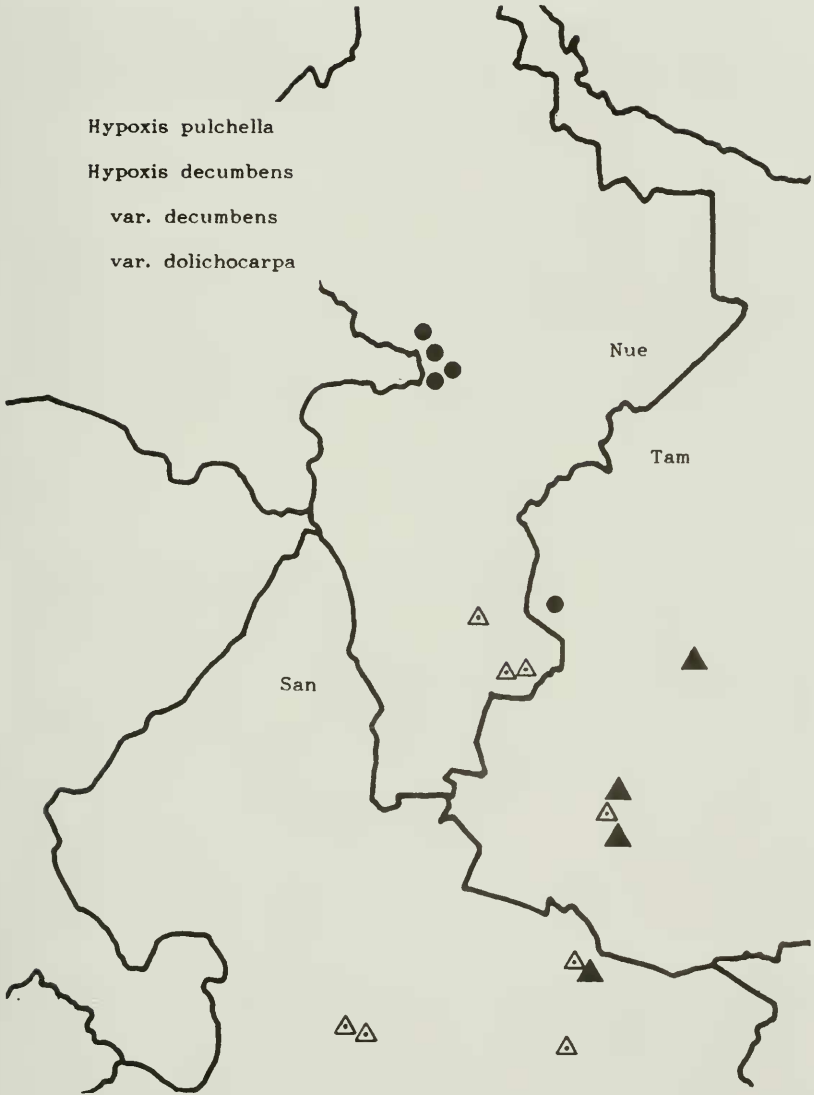
Nuevo León and Tamaulipas (Map 1); thorn forest, pine to pine-oak or oak woods, 550-1700 m; flowering April-September.

Additional collections examined: MEXICO. Nuevo León: Mpio. Villa Santiago: trail between Potrero Redondo and Laguna Sanchez, open pine forest, 16 Aug 1939, *Müller 2726* (LL); ca. 20 mi SE of Monterrey on Hwy 85, W to the end of road at the Río Ramos, thorn forest, 28 Jul 1971, *Parker 614* (LL); S of Villa Santiago, 800-900 m, 22 Jun 1934, moist gravelly soil, *Pennell 16928* (US); 5.2 road mi W of Cola de Caballo at developed picnic area near crest of steep limestone mountain, pine-oak woodland, 3 Jun 1982, *Worthington 8406* (TEX). Mpio. Montemorelos, trail up Sierra Cebolla from La Trinidad in pine-oak-hickory woodland, 1600-1700 m, 6 Sep 1992, *Patterson 7175* (TEX). Tamaulipas: Mpio. Hidalgo, into the sierra 14.9 mi W of Hotel Santa Engracia, 4.3 mi W of the Adelaida-Guayabas jct, side of steep canyon, NW-facing slope, area of primarily oaks (*Quercus rysophylla* dominant) with Lauraceae and *Ungnadia*, 560 m, 17 Apr 1988, *Nesom 6341* (TEX).

Hypoxis pulchella resembles and apparently is most closely related to *H. hirsuta* (L.) Coville of the eastern United States. Plants of both species produce non-fibrous leaf bases, similarly large flowers, short capsules, and black, densely elongate-muricate seeds. In *H. hirsuta*, however, the seed surfaces are densely covered with sharply conical, almost spine-like murications, while the murications of *H. pulchella* are much less dense, distinctly separated at their base, and broader with rounded apices. *Hypoxis hirsuta* occurs throughout the eastern United States and into east Texas, but there is no record of its occurrence in México.

Specimens of *Hypoxis pulchella* have been previously identified mostly as *H. decumbens* L. Plants of the latter species, however, produce smaller flowers (narrower perianth segments, shorter anther thecae), longer fruits, and seed surfaces with broad, rounded, confluent pebbling.

Hypoxis decumbens L. var. *dolichocarpa* Nesom, var. nov. TYPE: MEX-



Map 1. Geographic distribution of *Hypoxis pulchella*, typical *H. decumbens*, and *H. decumbens* var. *dolichocarpa* in northeastern México.

ICO. Tamaulipas: Mpio. Tula, 10.2 mi SE of Tula (centro) on road to Ocampo, plants common along roadside and edge of dense oak woods, 1440 m, 16 Jun 1987, *G. Nesom 6007* with M. Martínez, J. Norris, and L. Woodruff (HOLOTYPE: TEX; Isotype: MEXU).

Differt a *Hypoze decumbenti* L. typica fructibus longioribus ([14-]16-26 mm longis vs. [5-]7-14 mm).

Additional collections examined: MEXICO. Nuevo León: Mpio. Aramberri: Cerro El Viejo, oak and pine woods, 1725 m, 24 May 1993, *Hinton et al. 22813* (TEX,UAT); Cerro El Viejo, oak woods, 2130 m, 24 May 1993, *Hinton et al. 22828* (TEX,US); Cerro El Viejo, pine woods, 2085 m, 16 Jun 1993, *Hinton et al. 22916* (TEX,UAT); La Escondida to San Francisco, pine and oak woods, 1795 m, 23 Jul 1993, *Hinton et al. 29085* (TEX,UAT). San Luis Potosí: El Salto Falls, river bank, 9 Jan 1966, *Ernst 2194* (US); near waterfall at El Salto, 20 Feb 1961, *King 3883* (TEX,US); Alvarez, 13-23 Jul 1904, *Palmer 232* (US); Alvarez, 19-22 May 1905, *Palmer 581* (US); Espinazo del Diablo, Tamasopa Canyon, crevices of limestone cliffs, 800-1000 m, 7 Aug 1934, *Pennell 17978* (US).

This taxon is similar to typical *Hypoze decumbens* in seed and floral morphology; lack of fibrous leaf bases also place the two as closely similar. Typical *H. decumbens*, however, produces mature fruits (5-)7-14 mm long, while var. *dolichocarpa* produces mature fruits (14-)16-26 mm long. Such long-fruited plants apparently are restricted to southern Nuevo León, Tamaulipas, and San Luis Potosí (Map 1), where they occur in close proximity to plants with fruits typical of the species over the remainder of its considerable geographic range (southeastern México, Central America, West Indies, and South America south to Argentina). The contrast between the var. *decumbens* and var. *dolichocarpa* can be seen in the following collections: *Ernst 2194* and *King 3883* of var. *dolichocarpa* from El Salto in San Luis Potosí to apparently typical *H. decumbens* from the same locality (*Turner 80-24M* [TEX]); the type of var. *dolichocarpa* to apparently typical *H. decumbens* from near the same locality (1 km E of boundary between mpios. Tula and Ocampo, *Hernández 943* [TEX]).

Several other Mexican collections of *Hypoze decumbens* produce mature fruit 12-15 mm long and appear to be nearly intermediate between var. *decumbens* and var. *dolichocarpa*. These are well within the geographic range of typical *H. decumbens*: Hidalgo: between Tianguistengo and La Pagua, 24 Apr 1891, *Manry 5936* (US). Veracruz: near Jalapa, 17-22 May 1899, *Rose & Hough 4326* (US); RR banks near Jalapa, 10 Sep 1906, *Barnes et al. 31* (US). In further evaluation of the biological and taxonomic status of these two taxa, field observations will be critical.

Brackett (1923, p. 132) identified as *Hypoze decumbens* var. *major* Seubert a set of plants scattered over practically the entire range of *H. decumbens*, dis-

tinguished by her from the typical variety only by the phrase "plants coarser." One collection cited by Brackett as var. *major* (Palmer 581 from San Luis Potosí) is among those I have included with var. *dolichocarpa*. The type of var. *major*, however, was collected in South America, where only plants with typical-sized fruits occur.

Besides *Hypoxis decumbens* and *H. pulchella*, which are discussed in detail in the present paper, one other species of *Hypoxis* from Nuevo León and Tamaulipas is represented in LL,TEX, tentatively identified here as *H. mexicana* Schultes. These plants are sometimes slightly fibrous at the base, with short pedicels, very small flowers, and brownish seeds densely and minutely papillate with very short, sharply conical papillae. *Hypoxis mexicana* is wide spread in México, from southeastern Nuevo León and Tamaulipas south to Edo. México and Morelos and in western México northward to Durango and Chihuahua.

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LITERATURE CITED

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