

***PROBOSCIDEA FRAGRANS* (MARTYNIACEAE) IN EL PASO COUNTY, TEXAS**

RAUL GUTIERREZ, JR.

Botanical Research Institute of Texas
1700 University Drive
Fort Worth, Texas 76107

and

U.S. EPA Region VI
1445 Ross Ave, Suite 1200
Dallas, Texas 75202
gutierrez.raul@epa.gov

ABSTRACT

A recent collection extends the known range of *Proboscidea fragrans* westward in Texas to El Paso County, the northwesternmost station for the species. A distribution map for the species and a key to distinguish it from the other two species of El Paso County are provided.

Proboscidea fragrans is native to Mexico and the southwestern United States (New Mexico and Texas), and has naturalized in Australia, where it is considered a noxious weed (Hevly 1970; Gutierrez 2011). In New Mexico, it is known from one collection from Eddy County (*Pinkava 3146*, ASU). In Texas, it is known from Brewster, Culberson, Jeff Davis, Hudspeth, and Presidio counties. A collection documented here extends the range westward in Texas to El Paso County.

***Proboscidea fragrans* (Lindl.) Decne. (Martyniaceae), purple devil's claw, toritos, cuernitos.**

Voucher specimen. TEXAS. El Paso Co.: South corner of intersection between Interstate Highway 10 and Farm-to-Market Road 1110 (Clint exit 42), 31° 35' 57.31" N, 106° 11' 46.25" W, four individuals along FM 1110 at interface between right-of-way and Chihuahuan desert scrub in deep sand deposits (bluepoint association, rolling), growing with *Psoralea scoparius*, *Larrea tridentata*, *Boerhavia intermedia*, *Monroa squarrosa*, *Allionia incarnata*, *Portulaca pilosa*, *Pectis papposa* var. *grandis*, *Chamaesyce parryi*, and *Proboscidea althaeifolia*, 26 Sep 2013, R. Gutierrez, Jr. 3000 with R. Gutierrez, Sr. (BRIT, UTEP).

Turner et al. (2003) mapped this species as occurring in El Paso County, but the author has not seen any specimens to validate this. All specimens at TEX-LL and SRSC used in creating the maps for *Proboscidea formosa* (assumed to mean *P. fragrans*) have been identified by the author as *P. parviflora* (Woot.) Woot. & Standl. or *P. althaeifolia* (Benth.) Decne. Richard Worthington, curator of the UTEP herbarium, also has not seen any specimens of *P. fragrans* from the county (pers. comm.), nor does he include the species in his checklist of the flora of El Paso County (Worthington 1989, 1997). The specimens that are the basis of this paper represent the first vouchered collection of the species in El Paso County. Their presence in El Paso County most likely represent a dispersal event via vehicular transport, given that the plants were found growing immediately next to the right-of-way along FM 1110 and the presence of a series of restaurants, hotels, and gas stations at this exit off of Interstate Highway 10. The closest vouchered collection seen by the author was collected in 1938 from northern Hudspeth County, 15 miles east of the Hueco Mountains (*Hitchcock et al. 4337*, CAS). The next closest collection of *P. fragrans* comes from the far southeastern edge of Hudspeth County, near the Indio Mountains (*Lieb & Anderson 1015*, UTEP)

Proboscidea fragrans has been accepted as a species (Lawrence 1957; Hevly 1970) and as a subspecies of *P. louisianica* (Mill.) Thell. (Bretting 1983). Molecular work using phylogenetic analyses of nuclear and chloroplast sequences fails to place *P. fragrans* as sister to *P. louisianica* (Gutierrez 2002, 2011). Thus, they are recognized here as distinct species.

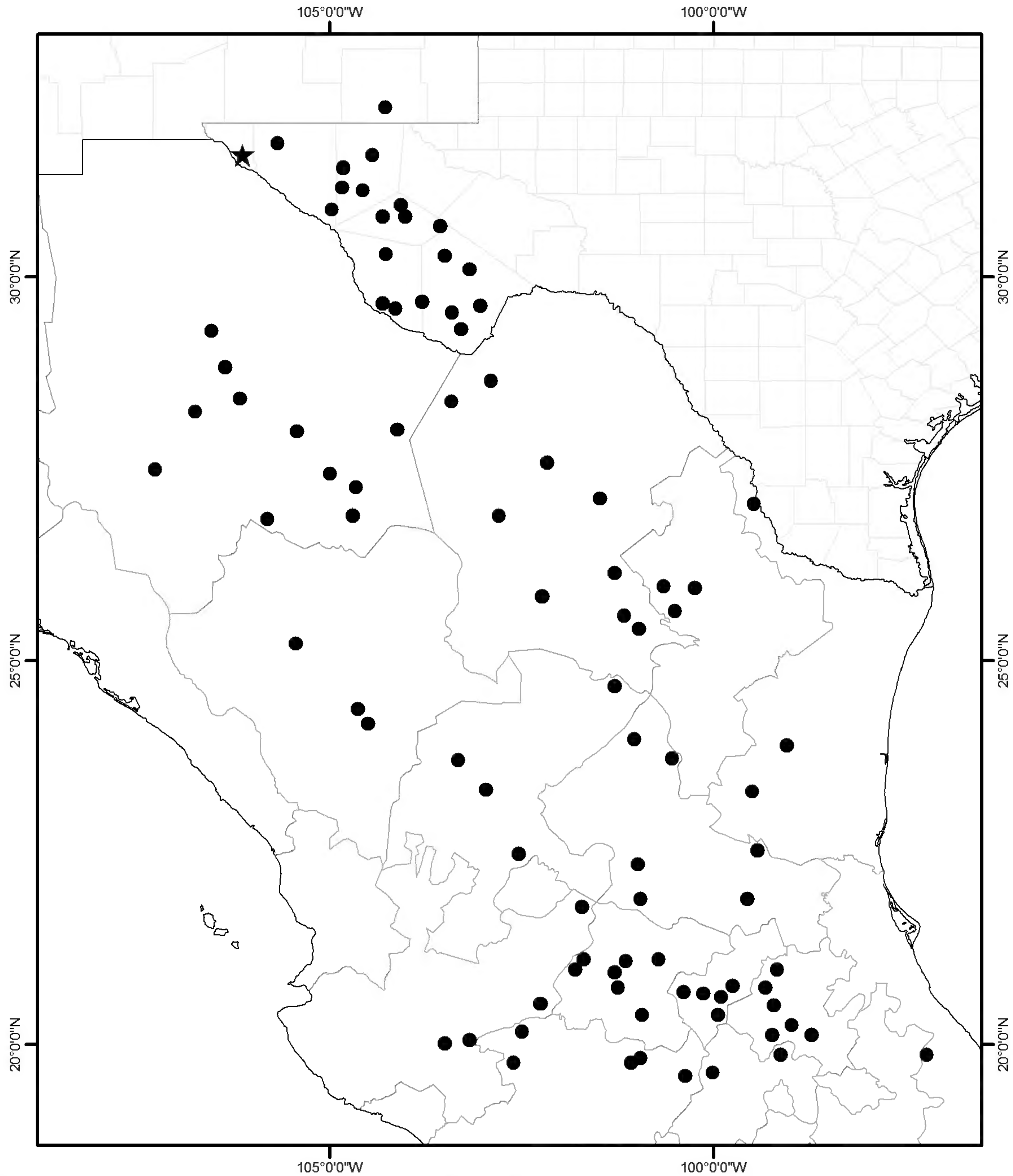


Figure 1. Distribution of *Proboscidea fragrans* (Lindl.) Decne. The star represent a new county record for El Paso County, Texas.

Two other species of *Proboscidea* have been documented in El Paso County (Worthington 1989, 1997; Gutierrez 2011). *Proboscidea parviflora* has shorter inflorescences and smaller flowers that are lighter in color. *Proboscidea althaeifolia* is a yellow-flowered perennial with tuberous roots. A key to the species of *Proboscidea* in El Paso County is provided here.

KEY TO THE SPECIES OF *PROBOSCIDEA* IN EL PASO COUNTY

1. Corollas yellow; plants perennial, arising from an underground tuber; stems trailing or prostrate **Proboscidea althaeifolia**
1. Corollas pink, lavender, purple, or magenta; plants annual, taprooted; stems ascending to erect.
 2. Inflorescences exceeded by or barely exceeding the foliage; flowers fewer than 10 per inflorescence, corollas to 2 cm long, petals pink or lavender **Proboscidea parviflora**
 2. Inflorescences exceeding the foliage; flowers more than 15 per inflorescence, corollas to 4 cm long, petals purple or magenta **Proboscidea fragrans**

LITERATURE CITED

- Bretting, P.K. 1983. The taxonomic relationship between *Proboscidea louisianica* and *Proboscidea fragrans* (Martyniaceae). *Southw. Naturalist* 28: 445–449.
- Gutierrez, Jr., R. 2002. A molecular phylogeny of the family Martyniaceae (order Lamiales) based on nrDNA Internal Transcribed Spacer sequences. Master's thesis, Univ. of Texas at El Paso, El Paso.
- Gutierrez, Jr., R. 2011. A phylogenetic study of the plant family Martyniaceae (order Lamiales). Ph.D. dissertation, Arizona State Univ., Tempe.
- Hevly, R.H. 1970. Martyniaceae. Pp. 1445–1449, in D.S. Correll and M.C. Johnston. *Manual of the Vascular Plants of Texas*. Texas Research Foundation, Renner, Texas.
- Lawrence, G.H.M. 1957. *Proboscidea* and other unicorn plants (Martyniaceae). *Baileya* 5: 127–132.
- Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. *Atlas of the Vascular Plants of Texas*. *Sida, Bot. Misc.* 24: 1–888.
- Worthington, R.D. 1989. An annotated checklist of the native and naturalized flora of El Paso County, Texas. *El Paso Southw. Bot. Misc.* 1: 1–56.
- Worthington, R.D. 1997. Nomenclatural changes, additions, and corrections to an annotated checklist of the native and naturalized flora of El Paso County, Texas. *El Paso Southw. Bot. Misc.* 2: 1–27.