

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDEUP0D110

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Euphorbia gracillima* S. Wats.

COMMON NAME: Mexican broomspurge, Mexican sandmat, Mexican keletonspurge,
Mexican erect

SYNONYMS: *Chamaesyce gracillima* (S. Wats.) Millsp., *Euphorbia revoluta*

FAMILY: Euphorbiaceae

AUTHOR, PLACE OF PUBLICATION: S. Watson, Proc. Amer. Acad. Arts and Sci. 21:
438. 1886.

TYPE LOCALITY: Mexico: Chihuahua: Hacienda San Miguel, near Batopilas.*

TYPE SPECIMEN: HT: GH-47778. E. Palmer 68, August 1885. IT: NY 263234 and 38722.

TAXONOMIC UNIQUENESS: The genus *Euphorbia* contains approximately 1,500 species worldwide (Hickman 1993). Forty-seven species are recognized by Lehr (1978), as occurring in Arizona.

DESCRIPTION: Mostly erect, delicate herbaceous summer annual, with slender erect to ascending dichotomously branching stems. Capillary ultimate branchlets are about 0.1 mm in diameter; appendages usually longer than the glands. Leaves linear, symmetric; herbage glabrous; almost all strictly opposite, usually strongly inequilateral at base; longest leaves usually shorter than 1 cm. Stipules mostly well developed, always evident. Ovary and capsule glabrous. Capsules sharply 3-angled, 1.3 to 1.4 mm long; staminate flowers 5 to 12 per cyathium. Seeds smooth. Involucres 0.5-0.7 mm in diameter (Kearney and Peebles 1960).

AIDS TO IDENTIFICATION: *Euphorbia gracillima* can be distinguished from *Euphorbia revoluta* by its seeds (smooth vs. transversely wrinkled or ridged), the involucre (0.5-0.7 mm in diameter vs. 0.9-1.0 mm), the appendages (longer vs. shorter than the glands), the ultimate branchlets (0.1 mm in diameter vs. 0.15-0.25 mm), and the longest leaves usually being shorter than 1 cm (vs. rarely as short as 1 cm) (Kearney and Peebles 1960). This species is more delicate, more branched, and possesses very slender upper stems and evidently divided styles when compared to *E. revoluta*. "Characteristics used by previous authors such as leaf and appendage length, involucre diameter, and seed texture generally do not distinguish these taxa" (Steinmann and Felger 1997).

ILLUSTRATIONS: Color photo of Isotype collection (E. Palmer in NYBG at http://scisun.nybg.org:8890/searchdb/owa/wwwcatalog.detail_list?this_id=4382539)

Color photo of Isotype collection (E. Palmer in NYBG at http://scisun.nybg.org:8890/searchdb/owa/wwwcatalog.detail_list?this_id=4385420)

TOTAL RANGE: In the deserts of western Mexico from Jalisco through Sonora, to south-central Arizona in Pima and Pinal counties.

RANGE WITHIN ARIZONA: In Pima County, they are found in the Quijotoa, Santa Rita, and Tucson mountains, and the Altar, Baboquivari and Santa Rosa valley's. In Pinal County, they can be found in the Galiuro and Tortilla mountains. Possibly from Guadalupe Canyon, Maricopa County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Annual herb.

PHENOLOGY: Flowers from July - November. Martin et al. (1998) reports flowering from August to October.

BIOLOGY: An inconspicuous summer ephemeral.

HABITAT: Occurs as a summer ephemeral on altered soils, streambanks, stony desert pavement, and gravelly or rocky slopes, in relatively bare areas with shallow soils. In Sonora, they are found in foothills thornscrub and open areas in tropical deciduous forest; relatively bare areas with shallow soils.

ELEVATION: In Arizona, it ranges from 2,200 - 2,910 feet (660-875 m); one specimen reported at 4,420 feet (1326 m). Steinmann and Felger (1997) report the elevation for their range as 390 - 3,610 feet (120-1100 m).

EXPOSURE:

SUBSTRATE: Gravelly, rocky, sandy soil; braide alluvium.

PLANT COMMUNITY: Sonoran desertscrub, thornscrub, and tropical deciduous forest; Desert pavement; Palo Verde association. In Arizona, associated species may include: *Allionia incarnata* (Training Allonia), *Ambrosia deltoidea* (Traingle bursage), *Boerhavia* (spiderling), *Carnegiea gigantea* (Saguaro cactus), *Cercidium* (*Parkinsonia microphylla*) *microphyllum* (Little-leaf paloverde), *Ericameria laricifolia* (Turpentine-bush), *Euphorbia* (*Chamaesyce*) *abramsiana* (Abram's broomspurge), *E. (C.) hyssopifolia* (Hyssop-leaf broomspurge), *E. (C.) micromera* (pit-seed broomspurge), *E. (C.) setiloba* (Yuma

broomspurge), *Janusia gracilis* (Slender Janusia), *Larrea tridentata* (Creosote bush), *Lycium berlandieri* (Berlandier wolf-berry), *Mammillaria*, *Menodora scabra* (Rough Menodora), *Opuntia acanthocarpa* (Stag-horn cholla), *Opuntia fulgida* (Sonoran jumping cholla), *Proboscidea* (unicorn-plant), *Simmondsia chinensis* (Jojoba), and *Trixis californica* (American trixis).

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA - Tohono O'odham Nation; NPS - Saguaro National Park; USFS - Coronado National Forest; State Land Department; Greasewood Park (County); Tucson Mountain County Park; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

- * Steinmann & Felger (*Aliso* 16: 41. 1997) discussed the type locality of this taxon.

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