

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

Plant Abstract

Element Code: PDCRA06010

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Graptopetalum bartramii* Rose

COMMON NAME: Bartram Stonecrop

SYNONYMS: *Echeveria bartramii*

FAMILY: Crassulaceae

AUTHOR, PLACE OF PUBLICATION: Rose. 1926. Addisonia 11:1-2, pl. 253.

TYPE LOCALITY: Arizona: Santa Cruz County: Patagonia Mountains: Flux Canyon.

TYPE SPECIMEN: E. Bartram. 1920.

TAXONOMIC UNIQUENESS: One of nine species in the genus *Graptopetalum*, one of two in Arizona, which also includes *G. rusbyi*.

DESCRIPTION: Small succulent perennial with a **rosette of basal leaves**. These leaves, numbering 20 or more, are flat or somewhat concave, bluish-green with a reddish margin and tip, up to 6.5 cm (2.6 in.) long, and ovate to broadly spatulate with a pointed tip. Flower stalk up to 0.3 m (1.0 ft.) high with alternate bractlike leaves. Five-parted flowers arranged along multi-branched stalk are 19.0-32.0 mm (0.76-1.28 in) wide. Five petals joined at bottom are broadly campanulate when blooming. Colored pale- or greenish-yellow, 13.0 mm (0.52 in.) petals are transversely banded or blotched with red. Ten red stamens often recurve outside of petals. Valves of 5 carpels abruptly tipped with styles.

AIDS TO IDENTIFICATION: Grows as solitary rosettes or in clumps on ledges or slopes of steep walled canyons. Thick succulent leaves glaucous and gray-green in color. Old flowering stalks give population reddish-brown appearance from a distance. Flowers reported to have strong disagreeable odor resembling odor of stinkhorn fungus (Phillips 1982). Leaves of distinctive shape.

In its longer, apiculate leaves, acute sepals, paniculate inflorescence, and fall phenology *G. bartramii* differs from *G. rusbyi* (Anderson 1999).

ILLUSTRATIONS:

Line drawings of flowers (Moran 1949 Fig.1:4).

Line drawings of flowers (Moran 1949 Figs.2 and 3:55).

B&W photo of rosette (Moran 1974 Fig.1:94).

TOTAL RANGE: Southern Arizona and Chihuahua, Mexico (one record).

RANGE WITHIN ARIZONA: Santa Cruz County: Patagonia, Santa Rita and Tumacacori Mountains; Pima County: Baboquivari, Dragoon, Mule and Rincon Mountains; Cochise County: Chiricahua Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial succulent.

PHENOLOGY: Flowering and fruiting in October. Anderson (1999) reports a flowering/fruiting period from September to February.

BIOLOGY: Both sexual and vegetative reproduction.

HABITAT: Cracks in rocky outcrops in shrub live oak-grassland communities along meandering arroyos on sides of rugged canyons. Usually heavy litter cover and shade where moisture drips from rocks, often with Madrean evergreen woodland.

ELEVATION: 3,650 - 6,700 ft (1113-2044 m). Based on records in the Heritage Data Management System (HDMS), elevation ranges up to 6,300 ft (1922 m).

EXPOSURE: North.

SUBSTRATE:

PLANT COMMUNITY: Madrean evergreen woodland. Dominant associated species include: *Agave schottii*, *Bouteloua curtipendula*, *Cercocarpus montanus*, *Choisya mollis*, *Dasyllirion wheeleri*, *Fouquieria splendens*, *Juniperus deppeana*, *Muhlenbergia* spp., *Rhus trilobata*, and *Yucca baccata*. Also in rocky outcrops in shrub live oak-grassland communities.

POPULATION TRENDS: Unknown

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1983]
[C1 USDI, FWS 1980]

STATE STATUS: Salvage Restricted (ARS, ANPL accessed 2011)
[Salvage Restricted (ARS, ANPL 1993)]

OTHER STATUS:

Forest Service Sensitive (USDA, FS Region 3, 2007)
[Forest Service Sensitive (USDA, FS Region 3 1990, 1999)]
Bureau of Land Management Sensitive (USDI, BLM AZ 2000, 2005, 2008, 2010)

MANAGEMENT FACTORS: Small, isolated populations. Illegal collection main management issue. Mining and mineral exploration; habitat alteration due to livestock grazing; trampling by cattle and recreationists; road construction and maintenance. Protect population(s) from expansion of Ruby Road.

PROTECTIVE MEASURES:

SUGGESTED PROJECTS: Surveys needed to delimit range.

LAND MANAGEMENT/OWNERSHIP: BLM - Tucson Field Office; NPS - Saguaro National Park; USFS - Coronado National Forest; TNC - Thomas Canyon Preserve. Possibly on BIA - Tohono O'odham Nation.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Arizona Revised Statutes, Chapter 7. 1993. Arizona Native Plant Law. Appendix A:8.
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- Rutman, S. 1994. Bureau of Land Management, Safford District, Rare Plant Workshop. November 14-16. Tucson, Arizona.
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ADDITIONAL INFORMATION:

- Species name *Graptopetalum* from Greek "petals marked with writing."
- New treatment of *Graptopetalum*: Moran, Reed. 1993. Journal of Arizona-Nevada Academy of Science. Vol. 27:190-193. Newest and best key for Crassidaceae.
- Isotypes include: NY 387949, E.B. Bartram, 21 Nov 1924; NY 387950, E.B. Bartram 54708, Sep-Oct 1925.

Revised: 1990-12-20 (SR)
 1991-10-20 (BKP)
 1997-07-22 (SMS)
 2001-12-20 (SMS)

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