

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

Plant Abstract

Element Code: PDMAL0Q0K0

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Malacothamnus orbiculatus* (Greene) Greene

COMMON NAME: Round-leaved Bush-Mallow

SYNONYMS: None, although sometimes included as part of *M. fremontii* (Torrey ex A. Gray) Greene

FAMILY: Malvaceae

AUTHOR, PLACE OF PUBLICATION: Greene. Leaflets of Botanical Observation and Criticism 1(15): 208. 1906.

TYPE LOCALITY: California.

TYPE SPECIMEN: Greene s.n. 1889

TAXONOMIC UNIQUENESS: The genus *Malacothamnus* contains approximately 12 species (Bates 2016, Morse and Chester 2019). *Malacothamnus orbiculatus* is the only species of *Malacothamnus* that is known to occur in Arizona. However, a historic collection from the Santa Cruz Valley, Mexico (which may now be a part of southern Arizona) is the type for *Malvastrum thurberi*, a synonym for *Malacothamnus fasciculatus*.

M. orbiculatus is not recognized in some treatments, where it is lumped with *M. fremontii* (NatureServe Explorer 2021).

DESCRIPTION: Erect subshrub, < 2 m, branched, hairs more or less stalked, yellowish, more or less shaggy-wooly to velvet; leaf petiole present, leaf < 7 cm, cordate, thick, unlobed to 3-lobed, pronounced veins on underside of leaf; inflorescence spike-like, 3-6 flowers per node, flowering stalks stout, calyx bracts 3-5, 1/3-3/4 length of calyx; calyx < 1.2 cm, triangular, 2-3 times taller than wide; petals < 2 cm, petals pale pink; fruits 5-14 chambered, dehiscent; seeds brown, 1 per segment (Slotta 2012, Bates 2016).

AIDS TO IDENTIFICATION: Any *Malacothamnus* plants encountered in Arizona would presumably belong to *M. orbiculatus*. *Malacothamnus* may be confused with *Sphaeralcea*; however, close examination of the flowers and fruits will aid in separating these two genera. *Malacothamnus*, for example, never have orange flowers.

ILLUSTRATIONS:

Color photographs, Calflora Taxon Report 10628

Photographs of plants seen in Tonto National Forest, keirmorse iNaturalist account:

https://www.inaturalist.org/observations/47149064#data_quality_assessment

TOTAL RANGE: California and Arizona.

RANGE WITHIN ARIZONA: Maricopa County: Tonto National Forest near Spur Cross Ranch Conservation Area and Sycamore Creek. Mohave County: Cerbat Mountains (known from a voucher specimen and photographs from Glenn Clifton--this locality was revisited by Keir Morse in 2020 and no plants were found).

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial.

PHENOLOGY: Late March – May in low elevations, May – July in higher elevations (Calflora 2020).

BIOLOGY: *Malacothamnus* species grow in post-fire succession communities and recently burned areas. Generally require fire to germinate, but seeds are capable of germination after laying dormant for 100 years or more. Populations die off as time since last burn increases, and appear to be locally extirpated by 10 years post-burn (Morse 2017).

HABITAT: Open areas in burned shrublands or woodlands.

ELEVATION: 488 m - 1,528 m

EXPOSURE: Variable.

SUBSTRATE: Variable.

PLANT COMMUNITY: Chaparral, Foothill woodland, Pinyon-Juniper Woodland (Calflora 2020).

POPULATION TRENDS: Unknown, difficult to study; plants persist for a few years after fire events, then disappear.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None

OTHER STATUS: None

MANAGEMENT FACTORS: *Malacothamnus* species occupy burned areas for a number of years and then tend to disappear. This makes tracking populations across time and space difficult. Post-fire vegetation treatments may disrupt seed production.

CONSERVATION MEASURES TAKEN: None. The discovery of *Malacothamnus* as part of the Arizona flora is relatively recent (1999) (SEINet 2020).

SUGGESTED PROJECTS: Conduct post-fire surveys for this species.

LAND MANAGEMENT/OWNERSHIP: USFS - Tonto National Forest, BLM - Kingman Field Office; State - Spur Cross Ranch Conservation Area

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Calflora. 2021. Taxon Report 10628 *Malacothamnus orbiculatus*. https://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Malacothamnus+orbiculatus
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- iNaturalist. 2020. Bush Mallows – The Genus *Malacothamnus*'s journal. Bush-mallow Challenge 3 – Arizona bush-mallows. <https://www.inaturalist.org/projects/bush-mallows-the-genus-malacothamnus/journal/11159-bush-mallow-challenge-3-arizona-bush-mallows>. Accessed 01/11/2021.
- Morse, K. and T. Chester. 2019. *Malacothamnus enigmaticus* (Malvaceae), a New Rare Species from the Desert Edge of the Peninsular Range of San Diego County, CA. *Madroño* 66(3): 103-119.
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- Slotta, T. 2012. *Malacothamnus orbiculatus*. In: Jepson Flora Project (eds.). Jepson eFlora. https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=32527. Accessed 12/28/2020.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Keir Morse, Rancho Santa Ana Botanic Garden

ADDITIONAL INFORMATION:

Revised: 2020-12-28 (TME)

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