

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDLAM030D0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Agastache rupestris* (Greene) Standl.

COMMON NAME: Baboquivari Giant Hyssop, Thread-leaf Giant-hyssop, Threadleaf giant hyssop, Licorice Mint, Sunset hyssop

SYNONYMS: *Cedronella rupestris* Greene, *Agastache lanceolata*, *Brittonastrum rupestre*, *Cedronella cana* var. *lanceolata*

FAMILY: Lamiaceae

AUTHOR, PLACE OF PUBLICATION: (Greene) Standley. 1910. Contr. U.S. Nat. Herb. 13: 212, 227.

TYPE LOCALITY: New Mexico: Grant County: Mangas Springs, 30 km NW of Silver City. 1880.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: Species *rupestris* is 1 of 16 in the genus *Agastache*, and genus *Agastache* is 1 of 76 genera in the family Lamiaceae.

DESCRIPTION: Herbaceous rock dwelling perennial, up to 1.0 m (3.3 ft) tall with a woody caudex (rootstock). Stems are erect to prostrate, 3-4 mm in diameter at the midpoint, with divergent ramification. The leaves are linear or linear-lanceolate, 2-5 cm (0.8-2.0 in) long and 1.4 mm wide; the blades are (6-)8-15 times longer than wide. The leaves are densely glandular, bright green and sparsely tomentose above, gray and densely tomentose below; the base of the blade is cuneate; margin entire; apex acute to truncate. The inflorescence of racemes is 13-15 cm long (5-6 in), and consists of 3-20 flowers. **Flowers:** Consist tomentose, united sepals (calyx) with abundant glands, 6-8 mm long; the tube is 4.5-7 mm long. The color of the corolla (united petals) is dark pink with a purple tinge in the lower half, although other color variants include orange-pink to rose. Corolla tube is 25-33 mm long and several toothed or laciniate; stamens exserted; the filaments are purple; anthers dark purple, 1-1.5 mm long, with dorsal insertion and longitudinal dehiscence; pistil to 30 mm long. Nutlets (fruits) are 1.5-2 mm long and 1 mm wide, oblong, light brown, punctuate, with hairs on the upper third. (Damrel and Puente-Martinez, *in* Christy et al. 2003).

AIDS TO IDENTIFICATION: *Agastache rupestris* has been reported to form hybrids with *A. wrightii* (Sonoran giant hyssop) where their habitat may overlap. *A. rupestris* grows up to 1.0 m tall, with stems erect to prostrate, and leaves linear or linear-lanceolate, 2-5 cm long

and densely glandular; the inflorescence are racemes, and the flowers (which are slightly larger in *A. rupestris* than *A. wrightii*) are dark pink with purple tinge in lower half; range is open mountain forests and canyons from 1500-7600 ft. *A. wrightii* grows between 75-100(-150) cm tall, with stems erect to sprawling, and leaves deltoid to lanceolate, 1.5-4.5 cm long, 1-3 cm wide; the inflorescence usually interrupted spikes with distinct verticals, 12-30 cm long; the flowers have light green to tan calyx, and a pale violet to pale blue corolla; range is canyon slopes and bottoms from 3600-6600ft. (Damrel and Puente-Martinez, *in* Christy et al. 2003). ****See Additional Comments** for a continued discussion on the hybridization between these two forms.

ILLUSTRATIONS:

Colored photo of specimen (J. Jeremy Buegge #1051, ASU 231628,
<http://seinet.asu.edu/seinet/collections>)

Colored photo (by pnwjoy, *in* <http://hortiplex.gardenweb.com/plants/p1/gw1000823.html>
accessed: 9 July 2008).

Colored photo (by Beth Kingsley Hawkins, *in* High Country Gardens at
<http://www.highcountrygardens.com/catalog/product/11825/> Accessed 7/9/2008)

TOTAL RANGE: Native populations found in southwest New Mexico in Catron and Grant counties, and central and southern Arizona. It may also occur in Sonora, Mexico.

In cultivation, *A. rupestris* can be found throughout most of the United States and much of Canada.

RANGE WITHIN ARIZONA: Cochise (Huachuca Mountains), Gila (Mazatzal Mts.), Graham (Cottonwood Mountain), Pima (Baboquivari Mts.), Pinal (Galiuro Mts.), Santa Cruz (Atascosa and Santa Rita mountains), and Yavapai counties (Mingus Mountain).

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial subshrub or forb.

PHENOLOGY: August to October.

BIOLOGY: A plant with fragrant foliage, and flowers that attract hummingbirds and bees. In cultivation, it is often used in water-thrifty gardens where it loves a hot, sunny position in well-drained soils in USDS growth zones 4-9.

HABITAT: Open mountain forests and canyons with ponderosa pine, oaks, and granitic substrates (Damrel and Puente-Martinez, *in* Christy et al. 2003). The New Mexico Rare Plant Technical Council (2005) reports them from vegetation-covered igneous boulders and sandy soil at base of protected north slopes with *Populus*, *Juglans*, *Prunus*, etc. Collected from drainages, rocky slopes, and atop of cliff-face of n-facing slopes, and at base of w-facing cliff (SEINet, accessed 2008).

ELEVATION: Across its range in Arizona, collected between 1066-2195 m (3,495-7,200 ft). Damrel and Puente-Martinez (*in* Christy et al. 2003) reports elevation range from 450-2300 m (1500-7600 ft).

EXPOSURE: Generally found on north-facing exposures, but also collected from west-facing cliff base.

SUBSTRATE: Primarily inhabits granitic substrate, and pale-pink & gray igneous rock boulders. Also collected from sandy soils.

PLANT COMMUNITY: Upper oak-savannah, Ponderosa pine forest, pinyon-juniper and juniper-oak woodlands. Associated species include: *Agave toumeyana* (Toumey's century plant), *Bouvardia glaberrima* (= *B. ternifolia*, firecrackerbush), *Fraxinus* (ash), *Fraxinus velutina* (velvet ash), *Juniperus deppeana* (alligator juniper), *Pinus discolor* (border pine), *P. ponderosa* (ponderosa pine), *Platanus* (sycamore), *Quercus* (oak), *Quercus chrysolepis* (canyon oak), *Q. gambelii* (Gambel oak), *Q. oblongifolia* (Mexican blue oak), *Salix* (willow), *Salvia lemmonii* (Lemmon's sage), *Solidago* (goldenrod), *Sphaeralcea* (globemallow), *Tagetes lemmonii* (Lemmon's marigold), and *Vauquelinia californica* (Arizona rosewood). (SEINet, 2008). New Mexico Rare Plants Technical Council (2005) reports some common associated species include *Populus* (cottonwood), *Juglans* (walnut), *Prunus* (plum), etc.

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND PRESERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None

MANAGEMENT FACTORS: *Agastache rupestris* is commonly found in cultivation because of their attractive flowers, and as an attractant for hummingbirds. Caution should be taken when searching for this plant, to determine which are natural populations and which may be escaped cultivars.

PROTECTIVE MEASURES:

SUGGESTED PROJECTS: Life history studies need to be conducted, along with genetic studies to determine if they do or do not hybridize with *A. wrightii*, or if there is an unnamed form which has been suggested (NMRPTC, 2005). In addition, the effects of fire and livestock grazing are poorly known.

LAND MANAGEMENT/OWNERSHIP: Four of the eight Arizona collections are on the Tonto, Prescott, and Coronado National Forests.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

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ADDITIONAL INFORMATION:

The population in Sycamore Canyon, Pajarito Mts., Santa Cruz Co., Arizona, is apparently a hybrid between *A. rupestris* but the leaves are somewhat toothed instead of linear-entire. A collection from Rio Bavispe, Sonora also appears to be *A. rupestris* X *wrightii*.

According to the New Mexico Rare Plants Technical Council (2005), "Sanders (1987, fig.93) notes intergrades of this species and *A. wrightii* (Greenm.) Woot. & Standl. in south-central Arizona near the border and in northeastern Sonora. He suspects that *A. rupestris* occurs in NE Sonora, but cites no specimens. A specimen at UTEP from southern Arizona is also a suspected hybrid between the two taxa. Wootton and Standley (1915) record the range as from mountains of southwestern New Mexico. Martin and Hutchins (1981) indicate the species also to be southwestern New Mexico; they also include Arizona. Kearney and Peebles (1969) cite a similar range and provide a discussion of putative hybrids in southern Arizona between *A. rupestris* and *A. wrightii*, but note that typical *A. rupestris* is not at that locality and suggest the possibility of the presence of an undescribed species. Sanders (1987) amplifies the discussion of these Arizona hybrids, but does not suggest the presence of a new taxon. This is a regional endemic that occurs in the mountains. No authors note rarity, and nothing is indicated on collection labels regarding frequency at collection sites."

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