

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

**Plant Abstract**

**Element Code:** PDASTD0010

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Adenophyllum wrightii*  
**COMMON NAME:** Wright's Dogweed  
**SYNONYMS:** *Dyssodia neomexicana*, *D. n. var. neomexicana*, *Hymenatherum neomexicana*, *Thymophylla neomexicana*  
**FAMILY:** Asteraceae

**AUTHOR, PLACE OF PUBLICATION:** Gray, Asa. Smithsonian Contributions to Knowledge 5(6): 92-93. 1853.

**TYPE LOCALITY:** New Mexico: [Hill-sides near the copper mines]

**TYPE SPECIMEN:** GH 618 (holotype). C. Wright, #1240. August 1851.

**TAXONOMIC UNIQUENESS:** NatureServe (2015) lists five species of *Adenophyllum* in the United States. These are all plants of the southwest, and four of the five species are found in Arizona. *A. wrightii* occurs in both Arizona and New Mexico; *A. porophyllum* occurs only in Arizona.

**DESCRIPTION:** Annuals, 1.5 - 7.0 dm high, branched from the base, stems striate, glabrescent; leaves at first opposite becoming alternate, 25 - 35 mm long, bearing a conspicuous gland at the base of each lobe; peduncles mostly 3 - 6 cm long, striate, bearing 4 - 5 linear-subulate bracts 4 - 6 mm long; calyculum of 3 - 5 slender, subulate bracts 3 - 5 mm long, glandless, involucre turbinate-campanulate, 7 - 8 mm high; phyllaries 9 - 13, in two subequal series, the outer bracts narrowly oblanceolate, usually bearing 3 - 5 conspicuous glands, the inner bracts broader, bearing 0 - 3 glands, bracts of both series markedly keeled, usually bearing a gland in the keel, scarious at the tip, the two series connate for about 1/2 - 3/4 their length, margins of the outer bracts free nearly to the base; receptacle convex, alveolate with shallow, scarious, lacinate sockets; ray florets ca 8, corollas yellow-orange, inconspicuous, tube ca 3 mm long, lamina elliptic, ca 2 mm long, cleft apically; disc florets 30 - 50, corollas dull, pale yellow, often tipped with crimson, 4 - 5 mm long, tube 1.0 - 1.5 mm long, throat slightly expanded, lobes lance linear, 1.5 - 2.0 mm long; style branches with short, conic appendages; pappus of two dissimilar series, the outer of 10 erose scales 0.7 - 1.0 mm long, the inner of 10 squamellae 5.0 - 6.5 mm long, each dissected into 3 hispidulous awns; achenes 3.5 - 4.5 mm long, obpyramidal, weakly 4 - 5 angled, black, striate, sparsely silky to sericeous (NatureServe 2015, from Strothers 1969).

**AIDS TO IDENTIFICATION:** An annual species with smooth, upright stems, up to 30 centimeters tall. The leaves are deeply lobed with 5-8 linear, spine-tipped segments. Flower heads occur on short stalks. The flower heads have very small and inconspicuous ray flowers that do not surpass the disk. The phyllaries each have large easily visible orange glands.

*Adenophyllum wrightii* var. *wrightii* is an annual with inconspicuous flowers. It can be separated from the more southerly-distributed *A. wrightii* var. *pulcherrima* by having shorter, more inconspicuous rays (lamina less than 3 mm long). Variety *pulcherrima* occurs farther south in Jalisco and Queretaro, Mexico on wet clay soils in roadsides and flats. It flowers earlier than variety *wrightii* starting in August.

The most similar species in this genus is *Adenophyllum anomalum*, which has a shorter involucre-to 4.5 mm. and phyllaries ca. 8. *A. wrightii* has an involucre 5 to 8 mm high, and 9 - 13 phyllaries. *A. anomalum* occurs in central-western Sonora, south on the Pacific slope to Durango and Western Sinoloa and is closely related to the element. It flowers August to February. It is not known to occur within the range of *A. wrightii* (NatureServe 2015, from Strothers 1969).

#### **ILLUSTRATIONS:**

Photos: <http://swbiodiversity.org/seinet/taxa/index.php?taxon=Adenophyllum%20wrightii>.

Photos and Herbarium Mounts: <http://eol.org/pages/596285/media>.

Photos: [http://wnmu.edu/academic/nspages/gilafiora/adenophyllum\\_wrightii.html](http://wnmu.edu/academic/nspages/gilafiora/adenophyllum_wrightii.html).

**TOTAL RANGE:** Historically known from the type locality in New Mexico and Chihuahua, Mexico, (but not since the 1800's) and eastern Arizona.

**RANGE WITHIN ARIZONA:** There are two collections: one near Springerville (1946) and the other on the South Fork Trail near Greer (2002). Both are in southern Apache County.

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Annual herb.

**PHENOLOGY:** Summer annual, blooming in September.

**BIOLOGY:** Reproduction is from seed as the species is an annual.

The dainty sulfur (*Nathalis iloe*) is known to feed on composites (Asteraceae), and *Dyssodia pentacheata* (closely related to the species) is recorded as a food plant for this species. Dainty sulfurs prefer fresh, not woody, herbaceous plants, especially seedlings. It is very likely the *A. wrightii* can serve as a food plant for the dainty sulfur, as it occurs within the geographic distribution and elevation of the element (NatureServe 2015, from Strothers 1969).

**HABITAT:** Low-lying areas that form ephemeral pools in late summer seem to be the best habitat for the species according to notes on herbarium specimens. Although it is not known for sure if these niches are preferred, if they are, the apparent rarity Wright's dogweed may be influenced by the habitat.

**ELEVATION:** There is some notable variation in the reported elevational ranges for this plant. The Flora of New Mexico (Martin and Hutchins 1981) report 4500 – 8000 feet (1372-2440m). Sivinski 2007 (in New Mexico Rare Plant Technical Council) reports 7000 – 7200 feet (2100-2200m) for the more northern variety, *A. w. var. wrightii*. One of the Arizona collections is from 8400 feet (2560m), although this location (and elevation) is only an approximation.

**EXPOSURE:** “Open slopes” is mentioned in the Flora of New Mexico, Martin and Hutchins 1981.

**SUBSTRATE:** Sandy or silty soils in swales and drainages in pinyon-juniper woodlands is cited for the variety *A. w. var. wrightii* in New Mexico (Sivinski 2007, in New Mexico Rare Plant Technical Council).

**PLANT COMMUNITY:** Forest/Woodland, Woodland – Conifer.

According to collector Pringle’s field notes from September 7, 1887, he “spent the fine day on the open plains beyond the pines and explored several shallow ponds there. Collected 1184 *Delphinium tenuisectum* Green 1294 *Hymenantherum neo-mexicanum* Gray (*Hymenantherum neomexicanum* is synonymous with *Adenophyllum wrightii*) and other such plants as *Pectis aquatica*, *Tagetes pringlei*, *Eriocaulon pringlei* etc. Many aquatic-moist ground things.”

**POPULATION HISTORY AND TRENDS:** Unknown. For a long time, the plant was known only from historical collections in New Mexico and Chihuahua, Mexico (both collected in the 1800s) and a single Arizona collection. NatureServe considers the species possibly extirpated in New Mexico and critically imperiled in Arizona and possibly the same for the global status. The plant was most recently collected in Arizona again in 2002.

However, given its possible association with ephemeral waters, some botanists believe this annual plant might make only periodic appearances when moisture conditions are ideal, and the species may therefore often evade our observation because it only occurs in the wettest of years.

According to Sivinski (2007, in New Mexico Rare Plant Technical Council), writing about the variety *A. w. var. wrightii*, this plant was formerly known from a few very old collections made near the Santa Rita copper mines and in the Black Range, New Mexico, near Springerville, Arizona, and in Chihuahua, Mexico. It was rediscovered in New Mexico in 1999 in the same general area as plants collected in 1880. The rediscovered populations are healthy and plants appear to be reproducing normally. During the abnormally wet summer of

2006, numerous populations of this plant were discovered in Grant and Sierra counties, New Mexico. It is now considered to be common within its range in New Mexico. In the fall of 2007, Richard Spellenberg reported finding *Adenophyllum wrightii* var. *wrightii* in western Chihuahua where it was "a weed" at one locality and present at another location further north. The presence of populations in Chihuahua, Mexico, make the total range of this plant well over 100 miles. Therefore, *Adenophyllum wrightii* var. *wrightii* can no longer be considered rare under NMRPTC criteria.

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None.  
**STATE STATUS:** None.  
**OTHER STATUS:** Forest Service Sensitive (USDA, FS Region 3 2013) Gila NF in New Mexico only.  
[Forest Service Sensitive (USDA, FS Region 3 2007) Gila NF in New Mexico only.]

**MANAGEMENT FACTORS:** Threats are unknown but may include livestock grazing in its habitat.

**PROTECTIVE MEASURES TAKEN:** Listed as a Forest Service Sensitive species in Gila National Forest in New Mexico.

**SUGGESTED PROJECTS:** There are no ecological data collected for this species. Even specimens do not mention the habitat type, nor associated species, and they are not specific enough to pinpoint the exact location of previously known populations. Plants should be located and plot studies done to determine exact locales and a more complete life history and status. In locations where Wright's dogweed was previously known, areas with ephemeral pools or low lying moist areas may be monitored. The plant's rarity is indisputable and protecting sites known to harbor it from human activity would be beneficial. Taking a census of a wide range of plots, particularly at areas of different elevation and average rainfall may suggest what amount of rainfall, if any, Wright's dogweed may depend on. It may also be important to study the effects livestock might have on ephemeral pools and browsing of this species (NatureServe 2016).

**LAND MANAGEMENT/OWNERSHIP:** USDA Forest Service (Apache-Sitgreaves National Forest) and private land holdings.

**SOURCES OF FURTHER INFORMATION****REFERENCES:**

- JStor| Global Plants, accessed 1/19/2016,  
<http://plants.jstor.org/stable/10.5555/al.ap.specimen.gh00000618>.
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- New Mexico Rare Plant Technical Council. 1999. New Mexico Rare Plants. Albuquerque, NM: New Mexico Rare Plants Home Page. <http://nmrareplants.unm.edu> (Latest update: 2007 by Robert Sivinski).
- Strother, John L. 1986. Renovation of *Dyssodia* (Compositae: Tageteae). SIDA 11(4): 371-378.
- Tropicos, accessed 1/19/2016, <http://www.tropicos.org/Name/2734513>.
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- USDA, Forest Service Region 3, Regional Forester's List of Sensitive Plants. 2013.

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**ADDITIONAL INFORMATION:**

**Revised:** 2016-01-20 (BDT)

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