

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDCUS010H0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Cuscuta denticulata*
COMMON NAME: Desert Dodder
SYNONYMS: *Grammica denticulata*
FAMILY: Cuscutaceae

AUTHOR, PLACE OF PUBLICATION: Engelmann, George. American Naturalist
9(6): 348. 1875.

TYPE LOCALITY: Utah, St. George. On shrubs and herbs in arid soil.

TYPE SPECIMEN: Missouri Botanical Garden: MO-694314. C.C. Parry, #205, 1874
(Isotype).

TAXONOMIC UNIQUENESS: There are 17 species of *Cuscuta* found in Arizona. Four species, *C. mitriformis*, *C. odontolepis*, *C. erosa* and *C. dentatasquamata*, are only found in Arizona within the U.S., and two species, *C. mitriformis* and *C. dentatasquamata* are only known from single collection sites. *C. denticulata* has a wider distribution throughout the SW.

DESCRIPTION: Vine, annual (perennial if on perennial host), not in contact with ground, attached to, holoparasitic on host by many small, specialized roots (haustoria) along stem, generally glabrous. **Stem:** thread-like, ± green, yellow, orange, or ± red. **Leaf:** 0 or scale-like, alternate, ± 2 mm. **Inflorescence:** head-like, 2–7(12); pedicels (0)0.5–2.2 mm. **Flower:** 1.8–3.1 mm, membranous, not papillate, parts generally in 5s; calyx ± = corolla tube, bell- to urn-shaped, generally divided 2/3, veined, shiny, lobes obovate-round, bases overlapped, margins finely dentate, tip rounded; corolla tube 0.6–1.5 mm, bell-shaped, scales ± = corolla tube, oblong-ovate, rounded, uniformly finely dentate or fringed, lobes reflexed, ± = tube, ovate to widely elliptic, margins finely dentate, tip rounded, straight; filaments 0.2–0.4 mm, anthers included to ± exserted, 0.25–0.4 mm, ± round to elliptic; styles 0.3–0.5 mm, < ovary. **Fruit:** 1.3–2.1 mm, 1–2 mm wide, spheric-ovoid, not thickened or raised around opening between styles, translucent, capped by corolla. **Seed:** 1, 0.85–1.1 mm, 0.8–1.1 mm wide, spheric to spheric-ovoid, embryo enlarged on 1 end (Jepson eFlora 2013).

AIDS TO IDENTIFICATION: Capsules not circumscissile, i.e., not separating in a regular line of cleavage; flowers mostly 5-parted; infrastamineal scales present; perianth not fleshy-papillate; corolla lobes ovate or suborbicular, obtuse; flowers about 2 mm. long, subsessile, in

few-flowered glomerules, calyx lobes orbicular, broadly overlapping, capsules conic, mostly 1-seeded, margins of the perianth lobes denticulate (Kearney and Peebles 1960).

ILLUSTRATIONS:

Herbarium Mount: <http://www.tropicos.org/Image/34988>.

Herbarium Mount: <http://swbiodiversity.org/imglib/seinet/DES/DES00029/DES00029565.jpg>

Photo: © 2007 Michelle Cloud-Hughes.

http://calphotos.berkeley.edu/cgi/img_query?seq_num=222377&one=T

TOTAL RANGE: Throughout the SW including Colorado, Utah, Nevada, Arizona and California, and extends north into Idaho and Washington.

RANGE WITHIN ARIZONA: Predominantly desert valleys and foothills east of the Colorado River and west of Hwy 93, from north of I-10 to Hoover Dam, but also collections from the Buckeye Hills SW of Phoenix, North Rim of the Grand Canyon, and just south of I-40 near the New Mexico border. Apache, Coconino, Mohave, Yavapai, La Paz and Maricopa counties.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial, herbaceous vine, rootless.

PHENOLOGY: Flowers: May through October (California). In Arizona, has been collected in flower during April and May.

BIOLOGY: The plant is parasitic. Upon emergence from the seed, the slender, elongate seedling coils its yellowish, thread-like stems about an available host to which it becomes firmly attached by means of its sucker-like organs (haustoria) Kearney and Peebles, 1960.

HABITAT: Parasitic on a variety of plants including: *Larrea tridentata* (most commonly reported host), *Salvia columbariae*, *Ambrosia salsola*, *Acamptopappus sphaerocephalus*, *Chamaesyce polycarpa*, *Krameria grayi*, *Eriogonum fasciculatum*, and *Coleogyne*.

ELEVATION: In California, <4260 feet (1300 m). Based on collections in Arizona: 700 – 6680 feet (215 – 2035 m).

EXPOSURE: Not specified.

SUBSTRATE: Not applicable; no roots. Attaches to host plant.

PLANT COMMUNITY: Creosote bush scrub, Joshua tree woodland (Jepson eFlora 2013). Plants associated with Arizona collections include: *Acacia greggii*, *Acamptopappus sphaerocephalus*, *Ambrosia dumosa*, *Canotia holacantha*, *Cercidium microphyllum*, *Encelia frutescens*, *Eriogonum inflatum*, *E. thomasi*, *E. trichopes*, *Ferrocactus cylindraceus*, *Gutierrezia sarothrae*, *Larrea divaricata*, *Melampodium leucanthum*, *Prosopis glandulosa*, *Psilostrophe cooperi*, *Atriplex canescens*, *Bebbia juncea*, *Brassica tournefortii*, *Camissonia brevipes*, *Chamaesyce polycarpa*, *Chorizanthe brevicornu*, *C. rigida*, *Cryptantha angustifolia*, *Erioneuron pulchellum*, *Eschscholtzia glyptosperma*, *Geraea canescens*, *Gilia latifolia*, *Hymenoclea salsola*, *Krameria greyi*, *Lupinus arizonica*, *Oligomeris linifolia*, *Opuntia basilaris*, *O. echinocarpa*, *Palafoxia arida*, *Phacelia crenulata*, *Plantago insularis*, *Psathyrotes ramosissima*, *Schismus arabicus*, *Sphaeralcea ambigua*, *Tidestromia oblongifolia*, *Rhus simplicifolia*, *Juniperus osteosperma*, *Purshia stansburiana*, and *Chrysothamnus greenii*.

POPULATION HISTORY AND TRENDS: Unknown, but reported as common from a few Arizona collection sites. First collected in Arizona in 1917.

SPECIES PROTECTION AND CONSERVATION

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

MANAGEMENT FACTORS: Unknown.

PROTECTIVE MEASURES TAKEN: None.

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM, BIA (Navajo Nation), USNPS (Grand Canyon NP).

SOURCES OF FURTHER INFORMATION

REFERENCES:

Jepson eFlora, accessed 9/20/2013, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=21433.
JStor| Global Plants, accessed 9/20/2013, <http://plants.jstor.org/specimen/mo-694314?s=t>.
Kearney, Thomas H. and Robert H. Peebles. 1960. Arizona Flora. Univ. of Cal. Press, Berkeley. pp. 666-671.

NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia: <http://www.natureserve.org/explorer>. (Accessed: September 19, 2013).

Tropicos, accessed 9/20/2013, <http://www.tropicos.org/Name/8500673>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION: Considered to be a noxious weed in Arizona.

Revised: 2013-09-20 BDT

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