

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

Plant Abstract

Element Code: PGEPH010E0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Ephedra funerea* Coville & Morton

COMMON NAME: Death Valley Mormon Tea, Death Valley Ephedra, Death Valley jointfir, funera Mormon tea

SYNONYMS: *Ephedra californica* var. *funera* (Coville & Morton) L. Benson

FAMILY: Ephedraceae

AUTHOR, PLACE OF PUBLICATION: Coville & C.V. Morton, Jour. Wash. Acad. Sci. 25(7): 307-308. 1935.

TYPE LOCALITY: Furnace Creek Canyon, Death Valley, California.

TYPE SPECIMEN: HT: US – 1565472. F.V. Coville with M.F. Gilman 447, 26 Apr 1932.

TAXONOMIC UNIQUENESS: A gymnosperm in the family Ephedraceae. The species *funerea* is 1 of 18 in the genus *Ephedra* in North America.

DESCRIPTION: An intricately branched, erect shrub, 0.25 – 1.5 m (0.82 – 4.92 ft) high, with pale green spinosely tipped branchlets. Bark gray, slightly cracked and irregularly fissured. Branches alternate or whorled, rigid, angle of divergence about 60°. Twigs gray-green, becoming gray with age, glaucous, slightly scabrous, with numerous very fine longitudinal grooves; internodes 2-6 cm (0.8–2.4 in). Terminal buds conic, 1-4 mm, apex acute. Leaves in whorls of 3, 2-6 mm, connate to 2/3-3/4 their length; bases splitting at margins, persistent, forming black, thickened collar, apex acute. Pollen cones 1-3 per node, narrowly ellipsoid, 5-8 mm long, on very short, scaly peduncles (rarely sessile). Bracts in 6-9 whorls of 3, light yellow, ovate, 3-4 x 2-3 mm, membranous, with short-clawed base; bracteoles equaling bracts. Sporangiphores 3-5 mm, exserted to 1/3 their length, with 3-7 sessile to short-stalked microsporangia. Seed cones 1-3 at node, lance-obovoid, 8-15 mm long, on short, scaly peduncles (rarely sessile); bracts in 6-9 whorls of 3, obovate, 4-8 x 3-5 mm, papery, yellow-translucent with green-yellow center and base, base broadly clawed, margins slightly dentate. Generally 1 seed (sometimes 2-3), 6-10 x 2-4 mm long, ovoid, 4-angled, pale green to light brown, smooth to scabrous. Fruits scarcely exserted beyond the bracts. (FNA 1993+).

AIDS TO IDENTIFICATION:

ILLUSTRATIONS: Line drawing (Benson and Darrow, 1981: fig. 3.373).

Color photos (Blakely, 1998 *in* CalPhotos)

Color photo of Holotype (Coville & Morton US-156472, in <http://ravenel.si.edu/botany/types/fullRecords.cfm?myFamily=>)

Color photos (Gary A. Monroe 2002, in USDA, NRCS 2004, http://plants.usda.gov/cgi_bin/plant_search.cgi)

Line drawing (*In* FNA 1993+, http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500606)

TOTAL RANGE: A native to the Mojave desert of California, extending slightly into Nevada and west-central Arizona.

RANGE WITHIN ARIZONA: La Paz and Mohave counties, Arizona.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial shrub.

PHENOLOGY: Coning from March - April.

BIOLOGY:

HABITAT: Washes and mountainsides in the Mojave Desert, in sandy dry soil and rocky scrub areas. Associated with limestone mountain ranges in Nevada.

ELEVATION: For their range, the elevation < 1700 m (5,577 ft), usually between 610 – 1524 m (2,000 – 5,000 ft); FNA (1993+) reports elevation between 500-1500 m (1,639-4,918 ft). Based on two records in the Heritage Data Management System (HDMS), elevation ranges from 323 – 372 m (1,060 – 1,220 ft) (AGFD, unpublished data accessed 2002).

EXPOSURE:

SUBSTRATE: Sandy, dry soil and rocky scrub areas; stabilized dunes.

PLANT COMMUNITY: Lower Sonoran; southwestern desertshrub. *Larrea tridentata*/Ambrosia dumosa scrub with *Acamptopappus s. var. sphaerocephalus* (rayless goldenhead). Associated species include: *Ambrosia dumosa* (white bursage), *Fouquieria splendens* (ocotillo), *Larrea tridentata* (creosotebush), *Opuntia ramosissima* (lead-pencil cholla), and *Parkinsonia floridum* (blue paloverde). Common where various combinations of *Atriplex* (saltbush), *Ambrosia*, *Coleogyne ramosissima* (blackbush), *Larrea*, or *Prosopis* (mesquite) are dominants (Beatley, 1976).

POPULATION HISTORY AND TRENDS: Unknown

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Bureau of Land Management Sensitive (USDI, BLM 2000).

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: Bureau of Land Management – Havasu Field Office.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Beatley, J.C. 1976. Vascular Plants of the Nevada Test Site and Central-Southern Nevada: ecologic and geographic distributions. Technical Information Center, Office of Technical Information, Energy Research and Development Administration. P. 114.
- Benson L., and R.A. Darrow. 1981. Trees and Shrubs of the Southwestern Deserts. The University of Arizona Press. Tucson, Arizona. P. 381.
- CalPhotos. 1998. Photos of *Ephedra funerea*; Death Valley Ephedra by Larry Blakely. Accessed 2002 from <http://elib.cs.berkeley.edu/cgi/>.
- Earle, C.J., ed. Gymnosperm Database, *Ephedra funerea* Coville & Morton 1935, description. <http://www.conifers.org/ep/ep/funerea.htm>, accessed 2002.
- Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 7+ vols. New York and Oxford.
- Hickman, J.C., ed. 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, California. P. 115.
- Integrated Taxonomic Information System (ITIS). Retrieved 3/23/2005 from ITIS, <http://www.itis.usda.gov>.
- McMinn, H.E. 1959. An illustrated manual of California shrubs. University of California Press. Berkeley, California. Pp. 45-46.
- Missouri Botanical Garden - TROPICOS, Nomenclatural Data Base. *Ephedra funerea* Coville & C.V. Morton. http://mobot.mobot.org/cgi-bin/search_vast. (Accessed: 3 Apr 2002).
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Ephedra funerea* Coville & C.V. Morton. <http://mobot.mobot.org/>. (Accessed: 23 Mar 2005).
- Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley, California. P. 44.

- NatureServe Explorer: An online encyclopedia of life [web application]. 2001. Version 1.6. Arlington, Virginia, USA: NatureServe. Available: <http://www.natureserve.org/explorer> (Accessed: April 3, 2002).
- NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.2. NatureServe, Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: March 23, 2005).
- SEINet. Collections Search Result. Accessed 3/23/2005 at <http://seinet.asu.edu/collections/list.jsp>.
- U.S. National Herbarium Type Specimen Register (US). <http://ravenel.si.edu/>. (Accessed: 3/23/2005).
- USDA, NRCS. 2004. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- USDI, Bureau of Land Management. 2000. BLM Sensitive Species List for Arizona. Information Memorandum No. AZ-2000-018.

MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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