U.S. Fish & Wildlife Service

Ash Meadows

National Wildlife Refuge

Plants


I perhaps owe having become a painter to flowers.
-Claude Monet

Introduction

Welcome

Ash Meadows National Wildlife Refuge, established in 1984, is the largest oasis in the Mojave Desert, supporting an incredible diversity of plants and wildlife year-round. Over 24,000 acres of alkali seeps, springs and other unique habitats make Ash Meadows a biological wonder for everyone to enjoy and protect.

Enjoying the Refuge's Plants

With such rare habitats, Ash Meadows has some of the most unique plant communities in the world. Unlike some desert areas where flowers bloom simultaneously in spectacular spring-time displays, the blooms at Ash Meadows are much more subtle and span the entire year. Natural fluctuations in weather can affect bloom times as well. In any season, something is blooming for insects and birds to eat, and people to admire. Look carefully and tread lightly—you will be amazed by what you discover!

Using this Plant Guide

This list includes over 40 of the approximately 340 plant species at Ash Meadows. Each of the plants listed are used by culturally affiliated American Indians for both food and medicines. These tribes have revealed select information and caution visitors not to collect, eat or prepare plants, possibly harming an individual or the land. While collecting plants is strictly prohibited, observation and photography are encouraged. For more information, contact the refuge office at 775/372 5435.

Plant Guide Key

Refuge Symbols

Refuge location where plant can be most commonly seen:

- Crystal Spring boardwalk
- Point of Rocks boardwalk
- Longstreet boardwalk
- Peterson Reservoir
- Devils Hole

Conservation Status Symbols

- * an Ash Meadows endemic plant (only grows in the Ash Meadows area)
- † an endangered species
- ‡ a threatened species
- ▲ a non-native or invasive species

Alkali mariposa lily.
Cyndi Souza/USFWS

Credits

Many dedicated individuals made this project possible. Deserving of special recognition are the Nuwuvi/ Newe Working Group, Cyndi Souza, Cristi Baldino, Christina Nalen, Sharon McKelvey, Wendy Smith and Alyson Mack.

Trees & Shrubs

Alkali Rabbitbrush
Chrysothamnus albidus

This perennial shrub is commonly seen growing in alkaline flats throughout the refuge. Its small, highly resinous leaves help reduce water loss in an intensely hot and dry environment. A member of the aster family, it is covered by bright white or yellow flowerheads in late summer and fall. Native peoples use it as building material and a chewing gum.

Size: 1-4' tall
Blooms: Aug.-Nov.

Arrow Weed
Pluchea sericea

This tall, willow-like shrub grows in thickets around springs, streams and other wetlands on the refuge. Its pink flowers provide a welcome burst of color in spring and summer. For Native peoples, arrow weed uses include making arrow shafts, shelters, shades, granaries and roasting pit liners from the straight shoots and branches.

Size: 3-16' tall
Blooms: Mar.-July

Creosote Bush
Larrea tridentata

A characteristic shrub of the Mojave Desert, creosote is well-adapted to its harsh environment. Resins on its small leaflets slow water loss—it also drops some leaves during periods of drought. It can continue to photosynthesize despite very dry soil conditions. Through self-cloning, a single plant can survive for hundreds, or even thousands, of years. This important plant is used by American Indians for firewood, arrows, shades, tool handles and other useful items.

Size: 2-10' tall
Blooms: Apr-May

Desert Holly
Atriplex hymenelytra

The jagged leaves of this evergreen shrub resemble Christmas holly, though they are not related. Dormant in the summer, the leaves lose moisture, making it appear shriveled and dead. The leaves turn on edge to reduce sun exposure and their silver scales reflect light. This plant grows and flowers in the winter, pollinated not by insects but by wind. All these adaptations allow the desert holly to survive the hottest season.

Size: 1-3' tall
Blooms: Jan.-April

Desert Mistletoe
Phoradendron californicum

This reddish, parasitic plant is commonly found growing on mesquite trees. Technically, it is a *hemi*parasite—it relies on its host for water and nutrients, but produces some sugars through photosynthesis. Its leaves and flowers are tiny and scale-like which, like the spines on a cactus, help it to conserve water. Inedible to humans, the white-pink berries are eaten by Phainopepla birds, which help spread the mistletoe seeds from tree to tree.

Size: 1-3' tall
Blooms: Jan-March

Dodder
Cuscuta sp.

This yellow-orange twining plant has thread-like stems resembling spaghetti. Lacking chlorophyll, leaves, and roots, the mature dodder plant survives through parasitism—obtaining all its sugars and water from a host plant. Its small flowers produce seeds in the spring that need a suitable host plant. The young plant twines in a counter-clockwise direction, then eventually uproots and lives entirely off its host.

Size: vinelike
Blooms: Mar-May

Honey Mesquite

Prosopis glandulosa var. *torreyana*

Size: 5-30' tall
Blooms: May-June

In spring, this thorny tree produces spikes of yellow flowers that attract bees, wasps and other insect pollinators. The seed pods (shown) are long, straight and sweet to the taste—true to its name. Native people managed honey mesquite for its edible pods, which are also enjoyed by cottontails, ground squirrels and coyotes. Found in dense stands wherever ground water is available, a long taproot can reach water at depths of up to 190 feet.

Velvet ash trees in the fall.

Leather-leaf or Velvet Ash

Fraxinus velutina

Size: up to 40' tall
Blooms: April-May

The leather-leaf ash is the tree for which "Ash Meadows" is named. Historic references to "gallery stands of ash" suggest that it may have been more prominent in years past. The leaves of this smooth-barked tree turn a golden yellow in the fall and completely drop off in the winter. Native people used this plant to make tools, utensils and cradleboard frames. Short sticks of ash were used to hunt chuckwalla.

Quailbush

Atriplex lentiformis breweri

Size: 3-10' tall
Blooms: July-Oct.

Like many desert shrubs, quailbush sometimes drops its leaves during the summer and remains dormant until spring. Its edible seeds and blue-gray leaves provide food and shade for Gambel's quail and other wildlife in the alkaline flats where it grows. Amazingly, quailbush and shadscale are the only known host plants for saltbush sootywing caterpillars (adult butterfly shown here).

Screwbean Mesquite

Prosopis pubescens

Size: up to 25' tall
Blooms: May-June

This thorny tree is named for its 1-2" long, tightly coiled seed pods that resemble screws (shown). The pods are eaten in large quantities by coyotes and small mammals, which assist in dispersing the seeds to new areas. Native people collect and cure the pods then ground them into flour for consumption. At one time, the pods were also used as a trade item.

Seep Willow

Baccharis emoryi

Size: up to 12' tall
Blooms: Aug-Dec

This tall, leafy shrub forms graceful thickets along springs and streams. Despite its name, seep willow is not a true willow but a member of the sunflower family. It is also called "coyote bush", possibly due to its bushy clusters of flowers resembling a coyote's tail. The long, slender, evergreen leaves are coated with a resin that deters herbivory and aids water retention. Native people use this plant as fuel for starting fires.

Shadscale
Atriplex confertifolia

Size: 1-2' tall
Blooms: April-July

Found in alkaline flats, this densely branched shrub, sometimes called "spiny saltbush" has woody stem tips that become rigid and sharply pointed. Its fruits consist of a single seed clustered between two papery bracts that turn red or pink when mature (shown). Unlike many desert shrubs, shadscale is "semi-evergreen", retaining some leaves year round. This gives it a head start at photosynthesizing—producing food—in the spring while its new leaves are still developing.

Wild Grape
Vitis arizonica

Size: vinelike
Blooms: May-June

Commonly seen growing around springs and streams at Ash Meadows, this large woody vine has maple-like leaves, shreddy bark and coiling tendrils. Tiny, inconspicuous white flowers bloom in spring and turn into dark blue, juicy fruits in late summer and fall. The grapes are edible and provide a tasty treat for birds and other animals. It has been managed by Native people as a food and beverage.

Wire-lettuce
Stephanomeria pauciflora

Size: 1-2' tall
Blooms: May-Aug.

The flower stalks of this small shrub are leafless and therefore wire-like, giving wire-lettuce its name. Though not edible, it is related to garden lettuce—characterized by milky sap and heads composed entirely of ray flowers. The seeds bear tufts of fine, light brown bristles that act like parachutes, catching in the wind and spreading the seeds.

Alkali Sacaton
Sporobolus airoides

Size: 1-7' tall
Blooms: Apr-Oct

This perennial bunchgrass forms dense clumps in alkaline flats. Like all grasses, its roots form a dense mat underground that helps hold soil in place. This prevents erosion, retains soil moisture, and keeps down dust. For this reason, managers often use sacaton in habitat restoration on the refuge.

Common Reed
Phragmites australis

Size: 6-12' tall
Blooms: July-Nov

This bamboo-like grass with purplish-white plumes is widely distributed around the world, and has become a noxious weed in several states. Dense colonies can be found on the refuge. The long plant stems under or along the ground send out roots and shoots known as "*rhizomes*". American Indians use a local variety to make arrows, fire drills, pipes, game tokens and house walls.

Saltgrass
Distichlis spicata

Size: up to 1' tall
Blooms: Apr-July

This low grass forms dense, carpet-like stands in seasonally wet alkaline soils. Its leaves secrete excess salt, allowing it to survive in highly saline soils. The salt crystals may also serve to reflect sunlight off the leaves, thereby reducing water loss. This plant aids habitat restoration by helping to prevent erosion, retain soil moisture and reduce dust. American Indians use this plant to enhance the flavor of their food.

Southern Cattail
Typha domingensis

Size: 10-12' tall

This tall, perennial aquatic plant grows in dense colonies in springs and streams throughout the refuge. Historically, cattails were less common on the refuge, but developments and agricultural activity have caused them to become overgrown in many wetlands. The brown spikes ripen in summer and break open in fall, releasing millions of fluffy seeds to the wind.

Mojave thistle seeds are an important food for lesser goldfinches in their spring and fall migration.
Wendy Smith/USFWS

Alkali Heliotrope
Heliotropium curassavicum

Size: 0.3-2' tall
Blooms: May-June

Alkali heliotrope, true to its name, is found in moist to dry alkaline (salty) soils, usually near water. Its flowers are borne in a scorpion-tail-like spike that uncoils as the flower opens in May or June. The name comes from the Greek word *heli* meaning "sun" and *tropos* meaning "to turn", referring to the plant's ability to turn toward the sun. This plant likes disturbed areas (bare soil) and spreads rapidly from a rhizome-like root.

Beavertail Cactus
Opuntia basilaris var. *basilaris*

Size: 3-16" tall
Blooms: Mar-June

Beavertail, like all cacti, is well adapted to extremely hot, arid environments. While most plants make their food during the day, opening up their leaves' pores to absorb carbon dioxide, cacti run the risk of losing too much water to the dry desert air. Instead, cacti photosynthesize at night when temperatures are cooler. Beavertail take it one step further by not photosynthesizing at all during the hot summer.

Blue-eyed Grass
Sisyrinchium spp.

Size: up to 1.5 ' tall
Blooms: Mar-May

Despite its name and grass-like appearance, blue-eyed grass belongs in the iris family. Its delicate blue-violet blossoms embellish spring pool banks, streams, meadows and alkaline flats throughout the refuge in spring. Botanists have identified two species of blue-eyed grass on the refuge, as well as a possible hybrid with characteristics of both species.

Desert Globemallow
Sphaeralcea ambigua

Found growing on rocky slopes and roadsides, desert globemallow is the most drought-resistant member of the mallow family. Bighorn sheep often graze on this plant. Another name, "sore-eye poppy", refers to the stiff hairs on its leaves and stems that hurt when accidentally rubbed in the eye. It has been used to make a thick syrup for potter's clay and to coat the surface of drying pottery.

Size: 1-3' tall
Blooms: Feb-April

Desert Paintbrush
Castilleja angustifolia

This perennial desert flower is a hemiparasite - it lacks a well-developed root system, and instead, attaches to the roots of a host plant to obtain water and nutrients. Surprisingly, it is not the flower that attracts people's attention, but the bright red bracts (modified leaves) beneath each flower. The flowers are the greenish tubes located directly above each bract. The similar Wyoming paintbrush grows up to 4' tall and blooms later, in fall.

Size: up to 1.5' tall
Blooms: Mar-Apr

Desert Trumpet
Eriogonum inflatum

Native people use this plant, also called *Indian Pipeweed*, to make pipes, whistles, and children's toys. It also serves as a food source. It can be seen on rocky slopes, along roads, and on sandy flats. The desert trumpet's most distinctive feature is its swollen stem. A particular species of wasp deposits her eggs inside the young, green stems of desert trumpet. The eggs hatch inside and the wasp larvae grow, eventually chewing their way out.

Size: up to 1' tall
Blooms: Mar-April

Preuss' Milkvetch
Astragalus preussii

The long, branched stems of this plant will often creep, forming a low-crouching ground cover. Its leaves look like those of the common pea, its close relative. During spring, it blooms in colorful displays of dark purple flowers. Its seed pods are small, pointed and inflated. This is not to be confused with the very rare, federally threatened, Ash Meadows milkvetch.

Size: up to 1' tall
Blooms: Mar-April

Mojave Aster
Xylorhiza tortifolia var. tortifolia

This member of the sunflower family usually blooms in spring but sometimes waits until fall. The brilliant lavender flower head can grow up to 2" in diameter. After wet winters, its petals may be covered with black/gray/orange striped caterpillars—the larvae of the desert checkerspot butterfly. Look for it around the Point of Rocks boardwalk.

Size: 0.5-2' tall
Blooms: Mar-May

Mojave Thistle
Cirsium mohavense

This spiny native thistle grows in a variety of habitats, including alkaline flats, meadows and wetlands. Its pink to white flower blooms in summer. The seeds are a preferred food for migratory lesser goldfinches in fall and winter. Native people eat parts of this thistle after careful processing and preparation.

Size: 2-8' tall
Blooms: July-Oct

Prince's Plume

Stanleya pinnata

Size: 1-5' tall
Blooms: Apr-Sept

This mustard is often seen along washes, slopes, and roadsides. It produces 4–12" spikes of yellow flowers. Prince's plume prefers selenium-rich soils and accumulates the mineral at levels toxic to humans and livestock. Native people have traditionally managed this plant as a food source, collecting it during particular times of year and preparing it according to exact and proper methods.

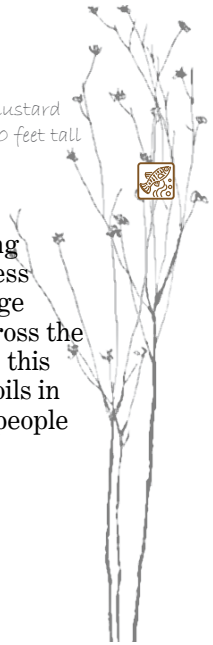
Sacred Datura

Datura wrightii

Size: 1.5-5' tall
Blooms: Mar-Nov

The showy white flowers of datura close during the day, opening at night to attract its primary pollinator—the hawkmoth. Hawkmoths are specially equipped with long tongues to access nectar from these trumpet-like blossoms. Though the moths suffer no permanent damage from their meal, datura is known for its hallucinogenic, and potentially lethal, effect on humans.

telescoping mustard grows up to 10 feet tall



Telescoping Mustard

Thelypodium integrifolium

Size: 1-10' tall
Blooms: Aug-Sept

This mustard is striking because of its tall leafless stalks arising from large basal leaves. Found across the western United States, this species likes alkaline soils in Ash Meadows. Native people use this plant for food.

Yerba Mansa

Anemopsis californica

Size: 6-20" tall
Blooms: May-June

This low-growing perennial is identified by its large, round leathery leaves and large white blossoms. In winter, the reddish stolons (above-ground shoots) are very conspicuous along the ground. New flowers sprout from these creeping stolons, allowing the plant to form beautiful, dense stands when in springtime bloom. It prefers springs and wet meadow habitats.

Yerba mansa turns a deep reddish hue in the winter.
Alyson Mack/USFWS

Rare & Endemic Plants

Alkali Mariposa Lily
Calochortus striatus

These beautiful and delicate flowers are critically endangered in the State of Nevada. Small populations grow in only ten spots within the refuge. The greatest potential threat to their habitat at Ash Meadows is the lowering of the water table caused by groundwater pumping in surrounding areas. Look for them in alkali meadows and washes.

Size: up to 8" tall
Blooms: April-June

Amargosa Niterwort*†
Nitrophila mohavensis

The Amargosa niterwort is endemic to the Ash Meadows area. It is also our only endemic plant designated as an endangered species. While this plant is now federally protected, some Native people feel that the Amargosa niterwort is endangered because it was disrespected and chose not to reproduce.

Size: up to 4" tall
Blooms: April-June

Ash Meadows Blazingstar*‡
Mentzelia leucophylla

The Ash Meadows blazingstar is a biennial or short-lived perennial plant—during its first year of growth it forms a whorl of leaves at its base, but doesn't produce any flowers. It grows in small outcroppings, hills or slopes with loose, uncompacted soil. In 1985, this refuge-endemic plant was listed as a federally threatened species and is the rarest endemic plant on the refuge.

Size: up to 20" tall
Blooms: May-Sept

Ash Meadows Gumplant*‡
Grindelia fraxino-pratensis

Ash Meadows gumplant derives its name from a gum-like substance found on its flower buds. It grows in moist clay and alkaline soils, producing multiple lemon-yellow flowers. In 1985, Ash Meadows gumplant was listed as a threatened species. It is considered an *endemic species*—it only grows on the refuge and a small area in neighboring Inyo County, California.

Size: up to 1' tall
Blooms: June-Oct

Ash Meadows Ivesia*‡
Ivesia kingii var. *eremica*

Ivesia is a genus of the rose family known as "mousetails". These perennial herbs are native to western North America. The incredibly hardy, salt-tolerant Ash Meadows ivesia, also known as Ash Meadows mousetails, grows in alkali washes throughout the refuge. It prefers moist, clay soils with a prominent salt crust.

Size: up to 5" tall
Blooms: Aug-Oct

Ash Meadows Lady's Tresses*
Spiranthes infernalis

This endemic plant is one of only two orchid species on the refuge. Like many orchids, it stores its pollen in a package, or *pollinia*. Visiting bees collect this pollinia on their long tongues and transfer it to other flowers for pollination. Lady's tresses are found along springs and in wet meadows within only 34.7 acres on the refuge. Since its habitat is so limited, it is a U.S. Fish and Wildlife species of concern.

Size: up to 16" tall
Blooms: June-Aug

Ash Meadows Milkvetch*‡

Astragalus phoenix

Size: 20" wide
Blooms: Mar-May

Not to be confused with the more common freckled milkvetch, the Ash Meadows milkvetch has hairy, grayish-green leaves that form low mounds up to 20 inches wide. The plants grow in hard alkaline upland soils. The pinkish-purple, pea-shaped flowers extend up from the foliage, with 1–2 flowers per stem. The fruit is a small legume that can hold 30 seeds. An early bloomer, it is a favorite food of black-tailed jackrabbits on the refuge.

Ash Meadows Sunray*‡

Enceliopsis nudicaulis var. *corrugata*

Size: up to 2' tall
Blooms: April-May

This perennial grows from a clumped base with twisted, fuzzy leaves. Its bright yellow flowers grow on leafless stalks. The sunray prefers hard, whitish alkaline soils, particularly in upland areas and limestone washes. It produces copious amounts of nectar and pollen, and attracts a broad array of insects. One study found over 55 species of bees, wasps, flies, ants, beetles, spiders and butterflies on its blossoms—more than any other plant on the refuge after mesquite trees!

Spring-loving Centaury*‡

Zeltnera namophila

Size: up to 2' tall
Blooms: July-Sept

This species has rebounded since the refuge was created and is now abundant around wet meadows, seeps and springs in summer. It is capable of self-fertilization, but benefits greatly from the services of insect pollinators like bees and wasps. Its numerous branched stems emerge from a single base, giving a bush-like appearance. These stems bear multiple small, pink flowers about the size of a dime.

Tecopa Birds Beak*

Cordylanthus tecopensis

Size: 6" tall
Blooms: July-Oct

Tecopa birds beak occurs in Nevada within an extremely limited range that includes the refuge. It is also a known associate of spring-loving centaury and often occurs within the same habitat types, including wet meadows, seeps, and the banks of spring channels. Its small, inconspicuous flowers vaguely resemble a bird's beak, thus its name. Look for it in clay, alkaline soils along the Crystal Spring boardwalk.

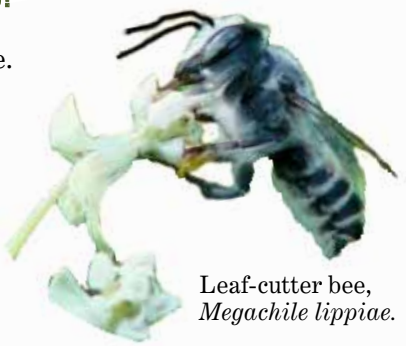
White Bearpoppy

Arctomecon merriamii

Size: up to 6" tall
Blooms: April-June

American Indians were the first to identify and gather traditional knowledge on white bearpoppy, also known as white bearpaw poppy. The first scientifically described specimen was collected by Merriam and Bailey during the 1891 Death Valley expedition, hence its scientific name. Look for these delicate flowers with fuzzy leaves in gravel substrates of alluvial fans.

Pollinator Superhero!



Leaf-cutter bee, *Megachile lippiae.*

Megachile lippiae is not your average bee. While most bees store pollen on their legs, *Megachile* carries it under its abdomen for easy access to a flower's pistil, where new seeds develop. Many plants on the refuge depend on *Megachile*'s super-pollinator skills for their survival, including three threatened plants: the spring-loving centaury, Ash Meadows sunray and Ash Meadows lady's tresses.

Refuge Plant Checklist

Aizoaceae (Fig-Marigold)
- *Sesuvium verrucosum*

Amaranthaceae (Amaranth)
- *Amaranthus albus*▲
- *Amaranthus blitoides*
- *Amaranthus retroflexus*▲
- *Nitrophila mohavensis**†
- *Nitrophila occidentalis*
- *Tidestromia oblongifolia*

Anacardiaceae (Sumac)
- *Rhus trilobata*

Apiaceae (Carrot)
- *Hydrocotyle verticillata*

Apocynaceae (Dogbane)
- *Amsonia tomentosa*
- *Apocynum cannabinum*

Arecaceae (Palm)
- *Phoenix dactylifera*▲
- *Washingtonia filifera*▲

Asclepidaceae (Milkweed)
- *Asclepias erosa*
- *Asclepias fascicularis*
- *Asclepias speciosa*

Asteraceae (Sunflower)
- *Acamptopappus shockleyi*
- *Acroptilon repens*▲
- *Ambrosia dumosa*
- *Ambrosia psilostachya*
- *Amphipappus fremontii*
- *Aster pauciflorus*
- *Aster subulatus var. ligulatus*
- *Atrichoseris platyphylla*
- *Baccharis emoryi*
- *Baileya pleniradiata*
- *Bebbia juncea var. asper*
- *Brickellia desertorum*
- *Calycoseris parryi*
- *Calycoseris wrightii*
- *Centaurea melitensis*▲
- *Chaenactis stevioides*
- *Chaetadelpha wheeleri*
- *Chrysothamnus albidus*
- *Chrysothamnus nauseosus*
- *Chrysothamnus paniculatus*
- *Cirsium mohavense*
- *Cirsium vulgare*▲
- *Conyza canadensis*▲
- *Conyza coulteri*
- *Crepis runcinata ssp. hallii*
- *Dicoria canecens*
- *Encelia farinosa*
- *Encelia frutescens*
- *Encelia viginensis*
- *Enceliopsis nudicaulis var. corrugata**‡
- *Eriophyllum lanosum*
- *Geraea canescens*
- *Gnaphilum luteo-album*▲
- *Grindelia fraxino-pratensis**‡
- *Gutierrezia microcephala*
- *Hazardia brickelloides*
- *Helianthus annuus*▲
- *Helianthus nuttalii*
- *Hymenoclea salsola*
- *Isocoma acradenia*
- *Iva acerosa*
- *Iva axillaris ssp. robustior*
- *Lactuca serriola*▲
- *Machaeranthera arida*
- *Machaeranthera carnosa*
- *Malacothrix glabrata*
- *Monoptilon belloides*
- *Palafoxia arida var. arida?*
- *Pectis papposa var. papposa*
- *Pleurocoronis pluriseta*
- *Pluchea odorata*
- *Pluchea sericea*
- *Porophyllum gracile*
- *Prenanthella exigua*
- *Psathyrotes annua*
- *Psathyrotes ramosissima*
- *Pyrrocoma racemosa var. ?*
- *Rafinesquia neomexicana*
- *Solidago spectabilis*
- *Sonchus asper ssp. asper*▲
- *Stephanomeria pauciflora var. ?*
- *Xanthium strumarium*
- *Xylorhiza tortifolia var. tortifolia*

Boraginaceae (Borage)

Amsinkia tesselata var. ?
Cryptantha angustifolia
Cryptantha circumscissa
Cryptantha confertiflora
Cryptantha pterocarya
Cryptantha virginensis
Heliotropium curassavicum
Lappula redowski var. capulata
Pectocarya platycarpa
Pectocarya recurvata
Plagiobothrys stipitatus var. micranthus
Tiquilia canescens var. canescens
Tiquilia plicata

Brassicaceae (Mustard)

Arabis holboelli var. ?
Cardaria draba ▲
Descurania pinnata
Descurania sophia ▲
Dithyrea californica
Hutchinsia procumbens
Lepidium flavum var. flavum
Lepidium fremontii var. fremontii
Lepidium lasiocarpum var. lasiocarpum
Lepidium montanum var. cinereum
Lepidium perfoliatum ▲
Malcolmia africana ▲
Physaria chambersii
Rorippa nasturtium-aquaticum ▲
Sisymbrium irio ▲
Stanleya pinnata var. ?
Streptanthella longirostris
Thelypodium integrifolim ssp. affine

Cactaceae (Cactus)

Echinocactus polycephalus
Echinocereus engelmannii
Ferocactus cylindraceus var. lecontei
Mammillaria tetrancistra
Opuntia basilaris var. basilaris
Opuntia echinocarpa
Opuntia ramosissima
Sclerocactus johnsoni

Campanulaceae (Bellflower)

Nemacladus gladuliferus var. ?

Capparaceae (Caper)

Cleome sparsifolia
Cleomella brevipes
Cleomella obtusifolia
Oxystylis lutea

Caryophyllaceae (Pink)

Scopulophila rixfordii

Chenopodiaceae (Goosefoot)

Allenrolfea occidentalis
Atriplex canescens ssp. canescens
Atriplex confertifolia
Atriplex hymenelytra
Atriplex lentiformis ssp. torreyi
Atriplex parryi
Atriplex phyllostegia
Atriplex polycarpa
Bassia hyssopifolia ▲
Chenopodium album ▲
Grayia spinosa
Halogeton glomeratus ▲
Kochia californica
Kraschninnikovia lanata
Monolepis nuttalliana
Salsola paulsenii ▲
Sarcobatus vermiculatus
Suaeda moquinii

Convolvulaceae (Morning Glory)

Convolvulus arvensis ▲
Cressa truxillensis

Cucurbitaceae (Gourd)

Cucurbita palmata

Cuscutaceae (Dodder)

Cuscuta pentagona ?

Cyperaceae (Sedge)

Bolboschoenus maritimus
Bolboschoenus robustus
Carex praegracilis
Cladium californicum
Eleocharis parishii
Eleocharis rostellata
Fimbristylis thermalis
Schoenoplectus americanus
Schoenus nigricans

Eleagnaceae (Oleaster)

Eleagnus angustifolius▲

Ephedraceae

Ephedra funerea
Ephedra nevadensis
Ephedra torreyana

Euphorbiaceae (Spurge)

Chamaesyce albomarginata
Chamaesyce micromeria
Chamaesyce parishii
Chamaesyce polycarpa
Chamaesyce serpyllifolia ssp. serpyllifolia
Croton californicus
Ditiaxis californica
Euphorbia incisa

Fabaceae (Legume or Pea)

Acacia greggii
Astragalus laynae
Astragalus lentiginosus
Astragalus nuttallianus var. imperfectus
*Astragalus phoenix**‡
Astragalus preussii
Dalea mollis
Dalea mollissima
Glycyrrhiza lepidota
Lotus corniculatus▲
Lupinus arizonicus
Lupinus sparsiflorus
Medicago sativa▲
Melilotus alba▲
Melilotus indica▲
Melilotus officinalis▲
Prosopis glandulosa var. torreyana
Prosopis pubescens
Psorothamnus fremontii var. fremontii
Trifolium ssp.▲

Gentianaceae (Gentian)

*Zeltnera namophilum**‡

Geraniaceae (Geranium)

Erodium cicutarium▲

Hydrocharitaceae (Waterweed)

Najas marina

Hydrophyllaceae (Waterleaf)

Eucrypta micrantha
Nama demissum var. demissum
Nama pusillum
Phacelia calthifolia
Phacelia crenulata var. multiflora
Phacelia fremontii
Phacelia pachyphylla
Phacelia vallis-mortae

Iridaceae (Iris)

Sisyrinshium funereum
Sisyrinchium radicatum

Juncaceae (Rush)

Juncus balticus
Juncus cooperi
Juncus nodosus

Juncaginaceae (Arrow-grass)

Triglochin concinna var. debilis

Krameriaceae (Rhatany)

Krameria erecta
Krameria grayi

Lamiaceae (Mint)

Marrubium vulgare▲
Salazaria mexicana
Salvia columbiariae
Salvia dorrii var. ?

Liliacae (Lily)

Asparagus officinalis▲
Calochortus flexuosus
Calochortus striatus

Dichlostemma capitatum ssp. ?
Yucca schidigera

Loasaceae (Loasa)
Eucnide urens
*Mentzelia leucophylla**‡
Mentzelia obscura
Mentzelia oreophila
Mentzelia tricuspis
Petalonyx thurberi ssp. ?

Lythraceae (Loosestrife)
Lythrum californicum

Malvaceae (Mallow)
Eremalche rotundifolia
Malvella leprosa
Sphaeralcea ambigua var. ?

Nyctaginaceae (Four o'clock)
Allionia incarnata
Mirabilis bigelovii var. ?
Selinocarpus nevadensis

Nymphaceae (Water Lily)
Nuphar odorata▲

Oleaceae (Olive)
Fraxinus velutina
Menodora spinescens

Onagraceae (Evening Primrose)
Camissonia boothii ssp. ?
Camissonia brevipes ssp. brevipes
Camissonia claviformis ssp. integrior
Camissonia heterochroma
Gaura mollis?
Oenothera deltoides ssp. ?
Oenothera elata ssp. hirsutissima

Orchidaceae (Orchid)
Epipactis gigantea
*Spiranthes infernalis**

Papaveraceae (Poppy)
Arctomecon merriamii
Argemone corymbosa
Eschscholzia minutiflora

Plantaginaceae (Plantain)
Plantago inuslaris
Plantago major▲
Plantago ovata

Poaceae
Achnatherum hymenoides
Agrostis semivericillata ▲
Andropogon glomeratus var. scabriglumis
Aristida purpurea var. ?
Arundo donax ▲
Avena sativa ▲
Bromus madritensis var. rubens ▲
Cenchrus echinatus ▲
Cynodon dactylon ▲
Distichlis spicata
Echniochloa crusgalli ▲
Elytrigia pontica ssp. pontica ▲
Erioneuron pulchellum
Festuca arundinacea ▲
Festuca pratensis ▲
Hordeum jubatum
Hordeum murinum ssp. glaucum ▲
Hordeum vulgare ▲
Leptochloa uninervia
Leymus cinereus
Lolium perenne ▲
Muhlenbergia asperifolia
Muhlenbergia utilis
Panicum virgatum
Phragmites australis
Poa secunda ssp. secunda
Polypogon monspeliensis ▲
Schismus arabicus ▲
Sorghum bicolor▲
Sorghum halepense ▲
Spartina gracilis
Sporobolus airoides
Vulpia octoflora var. ? ▲

Polemoniaceae (Phlox)
Eriastrum eremicum ssp. eremicum
Gilia hutchinsifolia
Gilia latifolia
Gilia ripleyi
Ipomopsis polycladon
Langlosia setosissima ssp. setosissima

Polygalaceae (Milkwort)
Polygala acanthoclada

Polygonaceae (Buckwheat)
Chorizanthe brevicornu var. ?
Chorizanthe rigida
Eriogonum brachypodum
Eriogonum contiguum
Eriogonum deflexum var. ?
Erigonum heermannii var. ?
Erigonum inflatum var. deflatum
Erigonum inflaum var. inflatum
Eriogonum reniforme
Eriogonum thomasii
Eriogonum trichopes
Polygonum argyrocoleon▲
Rumex crispus▲
Rumex hymenosepalus

Potamogetonaceae (Pondweed)
Potamageton pectinatus
Ruppia cirrhosa

Primulaceae (Primrose)
Dodecatheon pulchellum
Samolus parviflorus

Pteridaceae (Brake)
Cheilanthes feei
Pellaea sp.

Ranunculaceae (Buttercup)
Delphinium parishii ssp. parishii

Resedaceae (Mignonette)
Oligomeris linifolia

Rosaceae (Rose)
Ivesia kingii var. *eremica***‡

Rubiaceae (Madder)
Galium stellatum var. eremicum

Rutaceae (Rue)
Thamnosma montana

Salicaceae (Willow)
Populus fremontii ssp. fremontii
Salix exigua
Salix googgingii

Sauraceae (Lizard's Tail)
Anemopsis californica

Scrophulariacae (Snapdragon)
Castilleja angustifolia
Castilleja linariifolia
*Cordylanthus tecopensis***
Mimulus guttatus
Mohavea breviflora
Veronica americana
Veronica anagallis-aquatica▲

Solanaceae (Nightshade)
Datura wrightii
Lycium andersonii
Lycium pallidum var. oligospermum
Lycium shockleyi
Nicotiana obtusifolia
Physalis crassifolia
Solanum eleagnifolium▲

Tamariacaceae (Tamarisk)
Tamarix aphylla▲
Tamarix parviflora▲
Tamarix ramosissima▲

Typhaceae (Cattail)
Typha domingensis

Viscaceae (Mistletoe)
Phoradendron californicum

Vitaceae (Grape)
Vitus arizonica

Zygophyllaceae (Caltrop)
Larrea tridentata
Tribulus terrestris▲

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Alyson Mack/USFWS

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