



INVASIVE PLANT GUIDE

for National Parks in the
Mojave Desert Network



plant pictured: *Acroptilon repens*



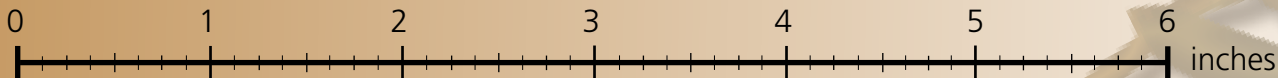
What is an invasive plant and why should we care?

Invasive plants are non-native plants that grow quickly and aggressively, spreading and displacing other plants. They are usually introduced by people, either by accident or on purpose, into a region far from their native habitat. Invasive plants pose one of the greatest threats to park resources. They establish themselves in locations where native plants would normally grow, creating dire conditions for many native species. Invasive plants can steal water and other resources from the native plants and may increase the likelihood of wildfires, often making it more difficult for native plants to survive.

This guide is intended to assist in the identification of invasive plants within the national park units of the Mojave Desert Network.

How to use this guide:

Each species, color-coded by life-form (**grass**, **shrub**, **tree**, or **forb**), is presented on the front and back of a single card, with the scientific and common names located on the top panel. The front side of each card lists distinguishing characteristics with bolded words highlighting traits that are most visible. Corresponding photos are included to aid in identification. The front page also contains a quick reference section listing parks that the species is either known to be found ('Known Parks') or has the potential to be found ('Watch For In'), a figure showing the average height of the plant, and the best time of year to see the plant growing/flowering. The back side of each card has additional photos for further identification, and habitat information indicating where the plant is likely to be found. The 'Don't Confuse' section contains a description and photos of look-alike native species that may be present within the park to help distinguish them from the targeted invasive plants. *For a full list of photo credits used in this guide, please visit: <http://go.nps.gov/mojn-ipp>*



Cape ricegrass (*Achnatherum capense*)

Plant: Also called Mediterranean steppegrass; **erect growth** (not usually clumped)

Stems/Branches: 10-30 cm (4-12 in) long

Leaves: Can be densely hairy, 5-15 cm (2-6 in) long, <1.5 mm (<1/4 in) wide

Flowers: Dense flower clusters with **long bristles**; 3-15 cm (1-6 in) long; bristles bend when mature

Fruit/Seeds: Not used for the identification of grasses within this guide



Watch For In:
JOTR

Growing Season:
Winter - Spring

Flowering Times:
February - April

Plant Height
~ 1 1/2 ft
(0.5 m)



Cape ricegrass (*Achnatherum capense*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields

mature, bent bristles of *A. capense*



flower of *A. capense* with long bristles

Don't Confuse With Natives:

Foxtail barley
(*Hordeum jubatum*)

Loosely clumped growth

loosely clumped growth of *H. jubatum*



Squirreltail
(*Elymus elymoides*)

Densely clumped growth

densely clumped growth of *E. elymoides*



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Giant Reed (*Arundo donax*)

Plant: Forms dense stands; turns from green to tan as it dries in fall/winter

Stems/Branches: Erect, smooth stems, 1-4 cm ($\frac{1}{3}$ -1½ in) thick

Leaves: Up to 0.5 m (1½ ft) long & 2.5-5 cm (1-2 in) wide; distinct pale green area where leaves attach to stem

Flowers: Brown to tan; erect, feathery clusters 0.3-1 m (1-3¼ ft) long of many small flowers

Fruit/Seeds: Not used for the identification of grasses within this guide

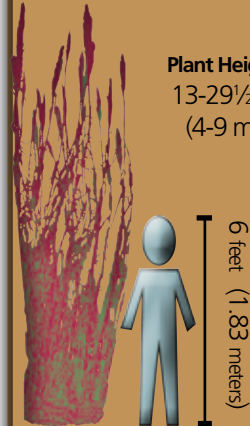


Known Parks:
DEVA, JOTR,
LAKE, MOJA

Growing Season:
Spring - Summer

Flowering Times:
April - July

Plant Height
13-29½ ft
(4-9 m)



Giant Reed (*Arundo donax*)

Habitat: Disturbed areas, springs, river banks



Grass Family - Poaceae

Don't Confuse With Native:

Common reed

(*Phragmites australis*)



All parts ~3 times smaller than giant reed; flowers red to tan & **drooping (not erect)**



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Wild oat (*Avena fatua*)

Plant: Erect growth

Stems/Branches: Up to 1.5 m (~5 ft) long; may have sparse hairs

Leaves: 10-45 cm (4-17¾ in) long & 1.2 cm (½ in) wide

Flowers: 18-32 mm (¾-1¾ in) long, **drooping**; **2-3 slender bristles**, each 25-40 mm (1-1.5 in) long

Fruit/Seeds: Not used for the identification of grasses within this guide



Known Parks:
JOTR, LAKE, MOJA

Growing Season:
Winter - Summer

Flowering Times:
March - June

Plant Height
1-4 ft
(0.3-1.9 m)



Wild oat (*Avena fatua*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields, grassland



twisting leaves



flowers
with slender
bristles



drooping
flowers

Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Ripgut brome (*Bromus diandrus*)

Plant: Can form dense stands

Stems/Branches: <80 cm (2½ ft)
long, hairs on lower stems

Leaves: 3.5-27 cm (1⅜-10⅝ in) long
& 1-9 mm (⅛-⅜ in) wide

Flowers: 13-25 cm (5-10 in) long,
drooping; slender **bristles extending**
30-55 mm (1⅛-2⅛ in) past flower

Fruit/Seeds: Not used for the
identification of grasses within this guide



Ripgut brome field on hillside

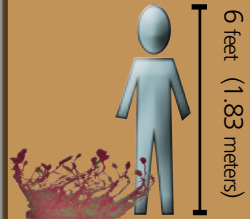
Known Parks:
DEVA, JOTR,

LAKE, MOJA, PARA

Growing Season:
Winter - Spring

Flowering Times:

Plant Height
6 in- ~3 ft
(0.2-1 m)



Ripgut brome (*Bromus diandrus*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields, grassland



Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Red brome (*Bromus rubens*)

Plant: Usually grows in clumps

Stems/Branches: <50 cm (19½ in) long, fuzzy hairs on lower stems

Leaves: 4-10 cm (2-4 in) long & 1-4 mm (<1⁄8 in) wide

Flowers: 20-50 mm (¾-2 in) long, arranged in dense clusters; slender bristles extending 10-25 mm (1⁄3-1 in) past flower; **mature flowers turn red**

Fruit/Seeds: Not used for the identification of grasses within this guide

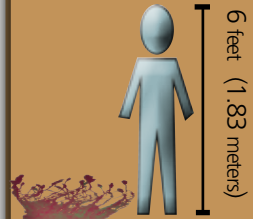


Known Parks:
DEVA, JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Winter - Spring

Flowering Times:
February - April

Plant Height
4 in - 1⅔ ft
(0.1-0.5 m)



Red brome (*Bromus rubens*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields



flower cluster



mature flower cluster



Red brome in bloom

Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Cheat grass (*Bromus tectorum*)

Plant: Can form dense stands

Stems/Branches: Have short, soft hairs

Leaves: 4-16 cm (2-6 in) long & 2-4 mm (<1/8 in) wide

Flowers: 5-10 cm (2-8 in) long, **drooping**; **slender bristles extending 8-18 mm (<1/2 in) past flower**

Fruit/Seeds: Not used for the identification of grasses within this guide

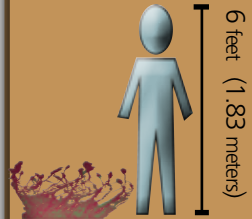


Known Parks:
DEVA, GRBA,
JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
April - June

Plant Height
2 in - 1 1/3 ft
(0.05 - 0.4 m)



Cheat grass (*Bromus tectorum*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Pampas grass (*Cortaderia selloana*)

Plant: Densely clumped growth

Stems/Branches: 20-40 cm
(7-15 in) long

Leaves: <1.8 m (6 ft) long &
3-13 mm (1/8-1/2 in) wide, **drooping**,
have sharp edges

Flowers: dense, feathery
flower clusters 0.3-1.3 m (1-4 ft)
long, white to tan

Fruit/Seeds: Not used for the
identification of grasses within this



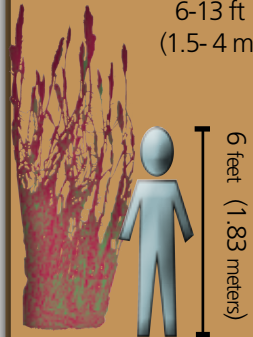
Known Parks:
DEVA

Watch For In:
LAKE

Growing Season:
Fall - Spring

Flowering Times:
September - March

Plant Height
6-13 ft
(1.5- 4 m)



Pampas grass (*Cortaderia selloana*)

Grass Family - Poaceae

Habitat: Sandy areas, landscaped areas (commonly planted as an ornamental)



Pampas grass dense, feathery flower clusters



drooping leaves

Don't Confuse With Native:

Common reed
(*Phragmites australis*)

Plant **not clumped**; all parts 5-10 times smaller than Pampas grass; **flowers loosely clustered**



Common reed loose flower clusters

Common reed lacks clumped growth



Bermudagrass (*Cynodon dactylon*)

Plant: Forms mats

Stems/Branches: Can grow erect or creep along ground

Leaves: <6 cm (2 $\frac{1}{3}$ in) long & <6 mm ($\frac{1}{3}$ in) wide; **pointed tips**

Flowers: 2.5-7.5 cm (1-3 in) long; **4-7 thin flowering stems radiating out from a single point**

Fruit/Seeds: Not used for the identification of grasses within this guide

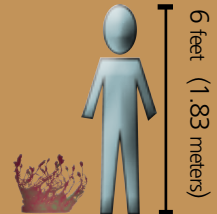


Known Parks:
DEVA, JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
June - September

Plant Height
~1 $\frac{1}{3}$ ft
(~0.4 m)



Bermudagrass (*Cynodon dactylon*)

Grass Family - Poaceae

Habitat: Disturbed areas, landscaped areas (commonly planted as an ornamental)



Don't Confuse With Native:

Salt grass
(*Distichlis spicata*)

Dense flower clusters;
flowering stems do not radiate from a single point



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Barley (*Hordeum spp.*)

Plant: Loosely clumped

Stems/Branches: Smooth, erect

Leaves: Sometimes covered with short hairs

Flowers: Dense flower clusters closely attached to stem; **have stiff bristles.** *H. marimum* and *H. murinum* flowers erect; *H. vulgare* flowers nodding.

Fruit/Seeds: Not used for the identification of grasses within this guide



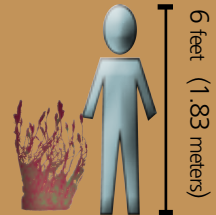
Known Parks:
DEVA, JOTR, LAKE,
MANZ, MOJA, PARA

Watch For In:
GRBA

Growing Season:
Fall - Winter

Flowering Times:
January - November

Plant Height
6 in-4½ ft
(0.15-1.4 m)



Barley (*Hordeum spp.*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Natives:

Foxtail barley (*Hordeum jubatum*)

Bristles longer and less stiff than *H. marinum* & *H. murinum*



Squirreltail (*Elymus elymoides*)



Slightly nodding flowers with longer bristles; dried bristles turn outward from flower cluster



Buffelgrass (*Pennisetum ciliare*)

Plant: Densely clumped growth

Stems/Branches:

Multi-branched

Leaves: 30–50 cm (11-20 in) long & 2-13 mm ($\frac{1}{8}$ - $\frac{1}{2}$ in) wide

Flowers: 2-13 cm ($\frac{3}{4}$ -5 in) long, **purple**, arranged in dense clusters

Fruit/Seeds: Not used for the identification of grasses within this guide



Buffelgrass plant with densely clumped growth

Known Parks:
LAKE

Watch For In:
DEVA, JOTR

Growing Season:
Year Round

Flowering Times:
July - November

Plant Height
~5 ft
(<1.5 m)



Buffelgrass (*Pennisetum ciliare*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, landscaped areas (commonly planted as an ornamental)



Don't Confuse With Native:

Alkali sacaton
(*Sporobolus airoides*)

Flowers arranged in loose clusters



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Fountain grass (*Pennisetum setaceum*)

Plant: Densely clumped growth

Stems/Branches:

Have fine hairs where leaves attach to stems

Leaves: slender, 20-65 cm (8-26 in) long & 2-3.5 mm (<1/8 in) wide; **have sharp edges**

Flowers: Arranged in dense clusters 8-30 cm (3-12 in) long, **white to purple**; each flower has **many stiff bristles**

Fruit/Seeds: Not used for the identification of grasses within this guide



P. setaceum densely clumped growth



stiff bristles on flowers

Known Parks:
JOTR, LAKE, MANZ

Watch For In:
DEVA, MOJA

Growing Season:
Year Round

Flowering Times:
January - November

Plant Height
~5 ft
(<1.5 m)



Fountain grass (*Pennisetum setaceum*)

Grass Family - Poaceae

Habitat: Disturbed areas, springs, river banks, landscaped areas (commonly planted as an ornamental)

long, dense
flower clusters



P. setaceum slender leaves



Don't Confuse With Natives:

Alkali sacaton
(*Sporobolus airoides*)



close-up
flower
clusters

Flowers
arranged
in loose
clusters



loose flower clusters

California satintail
(*Imperata brevifolia*)

Flowers lack stiff
bristles; spreading
(not densely clumped)
growth

spreading growth of *I. brevifolia*



flowers lack
stiff bristles



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Rabbitsfoot grass (*Polypogon monspeliensis*)

Plant: Typically found in small bunches

Stems/Branches: Generally round, hollow

Leaves: 1-20.5 cm ($\frac{1}{3}$ -8 in) long & 4-6 mm ($\sim\frac{1}{4}$ in) wide, often rough & prickly

Flowers: Densely packed cluster <18 cm (7 in) long, **soft & downy looking, green to tan**; many small flowers, each <4 mm ($\frac{1}{8}$ in) long, 2 slender bristles extending from the tip <1 cm ($\frac{1}{3}$ in) long

Fruit/Seeds: Not used for the identification of grasses within this guide



Known Parks:
DEVA, GRBA, JOTR,
LAKE, MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
April - October

Plant Height
2 in-2 $\frac{1}{3}$ ft
(0.05- 0.7 m)



Rabbitsfoot grass (*Polypogon monspeliensis*)

Grass Family - Poaceae

Habitat: Developed areas, springs

bunched growth & bristles on flower clusters



bunched growth

soft, downy looking flower cluster



Don't Confuse
With Native:

California satintail
(*Imperata brevifolia*)

Spreading (not bunched) growth; flowers lack bristles; Perennial

flowers lack bristles



spreading growth of *I. brevifolia*



Ravenna grass (*Saccharum ravennae*)

Plant: Robust; forms dense clumps

Stems/Branches: 2-4 m (6-13 ft) long

Leaves: <0.8 m (30 in) long & 2.5 cm (1 in) wide; **soft hairs where leaves attach to stem**, sometimes has **white stripe down middle of leaf**

Flowers: white to tan, erect, feathery clusters 0.6 m (24 in) long of many small flowers

Fruit/Seeds: Not used for the identification of grasses within this guide



Ravenna grass plant

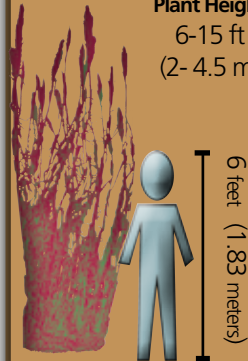
Known Parks:
DEVA

Watch For In:
LAKE, MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
September - October

Plant Height
6-15 ft
(2- 4.5 m)



Ravenna grass (*Saccharum ravennae*)

Grass Family - Poaceae

Habitat: Springs, washes, river banks



Don't Confuse With Native:

Common reed
(*Phragmites australis*)

All parts ~3 times smaller
than Ravenna grass;
flowers red-tan & nodding;
lacks clumped growth



Common reed lacks clumped growth



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Mediterranean grass (*Schismus spp.*)

Plant: Low growing

Stems/Branches: Round & slender,
<1 mm (<1/8 in) wide

Leaves: <6 cm (2 1/3 in) long & 2 mm
(1/8 in) wide; sparse, fine hairs where leaves
attach to stem

Flowers: Dense clusters <5 cm (1/4 in)
long

Fruit/Seeds: Not used for the
identification of grasses within this guide



Known Parks:
DEVA, JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Winter - Summer

Flowering Times:
March - May

Plant Height
~8 in
(<0.20 m)



Mediterranean grass (*Schismus spp.*)

Grass Family - Poaceae

Habitat:

Disturbed areas,
sandy areas, washes



Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Johnson grass (*Sorghum halepense*)

Plant: Forms dense patches

Stems/Branches: 0.4-2 cm ($\frac{1}{4}$ - $\frac{3}{4}$ in) wide

Leaves: 10-50 cm (4-20 in) long & 0.5-3 cm ($\frac{1}{4}$ - $1\frac{1}{4}$ in) wide, white stripe down middle of leaf, **edges feel sharp**

Flowers: Loose flower cluster 10-50 cm (4-20 in) long, tan to purple; **often has single, bent bristle extending from tip of each flower**

Fruit/Seeds: Not used for the identification of grasses within this guide

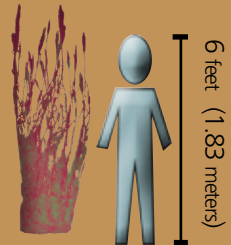


Known Parks:
LAKE

Growing Season:
Spring - Fall

Flowering Times:
May - August

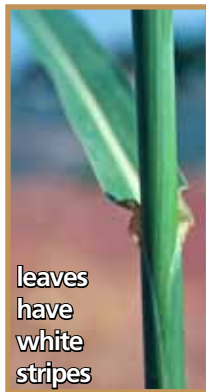
Plant Height
6½ ft
(<2 m)



Johnson grass (*Sorghum halepense*)

Grass Family - Poaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:

Native and non-native grasses are difficult to distinguish if flowers are not present.



Grass

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Common lantana (*Lantana camara*)

Plant: Sprawls along ground, can climb other plants

Stems/Branches: Stems have thorns

Leaves: ~15 cm (~6 in) long, dark green, **toothed edges, rough leaf surface**; leaves directly across from one another on stem

Flowers: Multicolored flower clusters, white to pink or lavender, or yellow to orange; 2.5-5 cm (1-2 in) wide

Fruit/Seeds: ~6 mm (~¼ in) wide, round, dark blue



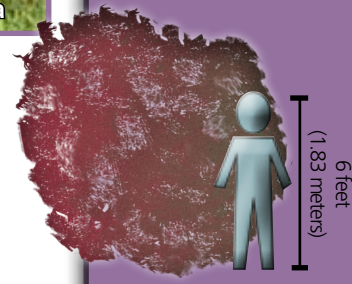
Known Parks:
DEVA

Watch For In:
LAKE

Growing Season:
Spring - Summer

Flowering Times:
March - September

Plant Height
6-15 ft
(~2-4½ m)



Common lantana (*Lantana camara*)

Verbena Family - Verbenaceae

Habitat: Disturbed areas, roadsides, developed/landscaped areas
(commonly planted as an ornamental)



Don't Confuse With Native:

There are no similar looking *native* species for Common lantana



Shrub

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Oleander (*Nerium oleander*)

Plant: Erect; leaves present all year, toxic to humans

Stems/Branches: Grayish bark

Leaves: 5-21 cm (~2-8¼ in) long, dark green; narrow, **thick, and leathery**

Flowers: White, pink, or red; 2.5-5 cm (~1-2 in) wide

Fruit/Seeds: Linear fruits 5-23 cm (~2-9 in) long; seeds light and fluffy



Oleander in bloom



fluffy seeds



linear fruit

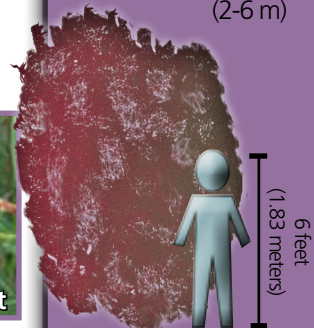
Known Parks:
DEVA, LAKE, MOJA

Watch For In:
JOTR

Growing Season:
Year Round

Flowering Times:
June - October

Plant Height
~6½-20 ft
(2-6 m)



Oleander (*Nerium oleander*)

Dogbane Family - Apocynaceae

Habitat: Disturbed areas, landscaped areas (commonly planted as an ornamental)

Don't Confuse With Native:

There are no similar looking *native* species for Oleander



Shrub

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Spanish broom (*Spartium junceum*)

Plant: Toxic to humans

Stems/Branches: **Smooth**, finely ridged, often leafless

Leaves: 1-3 cm (<1⅛ in) long, linear to oblong

Flowers: Yellow, 2-2.5 cm (~¾-1 in) long, **fragrant**

Fruit/Seeds: Fruits 4-11 cm (1½-4½ in) long and ~0.5 cm (<¼ in) wide; **pea pod shaped**, densely covered with **silvery hairs**



Spanish broom in bloom



flowers & stem

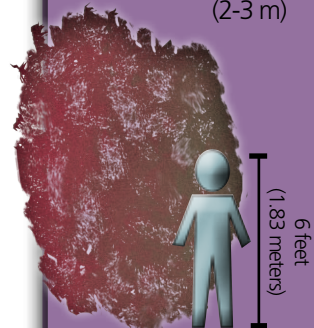
Known Parks:
PARA

Watch For In:
DEVA

Growing Season:
Spring - Summer

Flowering Times:
April - June

Plant Height
6-10 ft
(2-3 m)



Spanish broom (*Spartium junceum*)

Pea Family - Fabaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:
There are no similar looking
native species for Spanish broom



Shrub

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Lilac chastetree (*Vitex agnus-castus*)

Plant: Densely branched, shrub or small tree, fragrant

Stems/Branches: Smooth, woody stems

Leaves: Gray-green to dark green on top and lighter green underneath, 5-15 cm (2-6 in) long; 5-7 leaves extending from a central point (arranged in hand-like shape)

Flowers: Blue to purple; arranged in clusters ~18 cm (7 in) long

Fruit/Seeds: Off-white to brownish black



Lilac chastetree in bloom



hand shaped leaves



smooth woody stems

Known Parks:
LAKE

Watch For In:
DEVA

Growing Season:
Spring - Summer

Flowering Times:
July - August

Plant
Height
25 ft
(<7.5 m)



6 feet
(1.83 meters)

Lilac chastetree (*Vitex agnus-castus*)

Vervain Family - Verbenaceae

Habitat: Developed areas, roadsides, washes, landscaped areas (commonly planted as an ornamental)



Don't Confuse With Native:

Bigleaf lupine

(*Lupinus polyphyllus*)



Flower clusters less dense, individual flowers larger than Lilac chastetree



Shrub

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Tree-of-heaven (*Ailanthus altissima*)

Plant: Erect; emits strong odor when bark scraped or leaves crushed

Stems/Branches: Grayish brown with light spots that become cracked with age

Leaves: Leaves directly across from one another on stem; 5-17 cm (~2-6¾ in) long, **angle downward**; dark shiny green on top & lighter green underneath; smaller leaves often reddish

Flowers: Greenish yellow to white; **loose flower clusters** up to 50 cm (~19½ in) long of many small 2-3 mm (< ¼ in) individual flowers

Fruit/Seeds: **Wing-shaped fruits** 2.5 cm (1 in) long, twisted into a loose spiral; green to straw-colored to reddish brown



Known Parks:
DEVA, MANZ, MOJA

Watch For In:
JOTR, LAKE

Growing Season:
Spring - Fall

Flowering Times:
May - July

Plant Height
10-82 ft
(3-25 m)

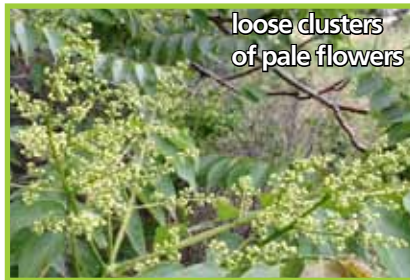


6 feet
(1.83 meters)

Tree-of-heaven (*Ailanthus altissima*)

Quassia Family - Simaroubaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:

Smooth sumac
(*Rhus glabra*)

Dense clusters of yellow flowers;
red berries

Smooth sumac berries



Smooth sumac flowers



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Russian olive (*Elaeagnus angustifolia*)

Plant: Silvery color

Stems/Branches: Smooth, reddish brown, have **long thorns**

Leaves: 4-8 cm (~1½-3 in) long, not directly across from one another on stem; **green to silver**, narrow and linear

Flowers: **Yellow**, 5-10 mm (~¼-⅜ in) long, arranged in clusters

Fruit/Seeds: Fruits **round**, light green to yellow



Russian olive tree



thorns on stems/branches



narrow linear leaves

Known Parks:
GRBA, JOTR

Watch For In:
PARA

Growing Season:
Spring - Summer

Flowering Times:
May - June

Plant Height
~ <23 ft
(<7 m)



6 feet
(1.83 meters)

Russian olive (*Elaeagnus angustifolia*)

Oleaster Family - *Elaeagnaceae*

Habitat: Disturbed areas, roadsides, fields, wetlands



round
fruits



yellow flower of Russian olive

Don't Confuse With Native:

Desert willow
(*Salix exigua*)

**No thorns; flowers white
to pink; fruits are linear**



S. exigua linear fruits



S. exigua
flowers



S. exigua plant



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Tree tobacco (*Nicotiana glauca*)

Plant: Erect, toxic to humans

Stems/Branches: Smooth gray-green bark

Leaves: 5-21 cm (~2-8¼ in) long, not directly across from one another on stem; **oblong to egg shaped**, grayish-green

Flowers: Tubular, yellow, 3-3.5 cm (~1⅛ in) long

Fruit/Seeds: Fruits 7-15 mm (~2¾-6 in) long, **capsule shaped**



Known Parks:
LAKE, PARA

Watch For In:
DEVA, JOTR, MOJA

Growing Season:
Spring - Summer

Flowering Times:
March - November

Plant Height
~ <23 ft
(<7 m)



Tree tobacco (*Nicotiana glauca*)

Tobacco Family - Solanaceae

Habitat: Disturbed areas, roadsides, wetlands, washes



Don't Confuse With Native:

There are no similar looking *native* species for Tree tobacco



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Date palm (*Phoenix dactylifera*)

Plant: Erect

Stems/Branches: Single trunk, no branches; stems 4-6 m (~13-20 ft) long

Leaves: Palm frond 30 cm (~12 in) long, **sharp, pointed, waxy**, narrow

Flowers: Off white color, arranged in **feathery clusters**

Fruit/Seeds: Fruits green to yellow, 3-7 cm (~1-2¾ in) long, **shaped like grapes**, arranged in clusters



Date palm tree

Known Parks:
DEVA, JOTR
LAKE, PARA

Growing Season:
Spring - Summer

Flowering Times:
March - November

Plant Height
~ < 100 ft
(< 30 m)



Date palm (*Phoenix dactylifera*)

Palm Family - *Areaceae*

Habitat: Landscaped areas (commonly planted as an ornamental), springs



Don't Confuse With Native:

There are no similar looking
native species for Date palm



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Tamarisk/Saltcedar (*Tamarix ramosissima*)

Plant: Many branched shrub or small tree, leaves not present all year

Stems/Branches: Reddish brown bark; **branches often purplish**

Leaves: 1.5-3.5 mm (<1/8 in) long, blue-green, **branching, overlapping, scale-like**

Flowers: White to pink, **arranged in tightly packed clusters** 1.7-7 cm (1/2-2 3/4 in) long

Fruit/Seeds: Fruits <5 mm (<1/4 in) long



Known Parks:
DEVA, JOTR, LAKE
MANZ, MOJA, PARA

Watch For In:
GRBA

Growing Season:
Spring - Summer

Flowering Times:
March - August

Plant Height
<27 ft
(<8 m)



Tamarisk/Saltcedar (*Tamarix ramosissima*)

Tamarisk Family - *Tamaricaceae*

Habitat:

Disturbed areas,
roadsides,
washes, springs



Don't Confuse With Native:

There are no similar looking
native species for Tamarisk/
Saltcedar



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Athel (*Tamarix aphylla*)

Plant: Gray-green,
leaves present all year

Stems/Branches:

Reddish brown to gray

Leaves: ~2 mm (<1/8
in) long, grayish, **tightly
wrapped around stem,
scale-like**

Flowers: White to pink,
flowers clustered along
stem tip

Fruit/Seeds: Fruits <5
mm (<1/4 in) long



Known Parks:
DEVA, JOTR, LAKE
MOJA, PARA

Growing Season:
Spring - Summer

Flowering Times:
May - July

Plant Height
<40 ft
(<12 m)



6 feet
(1.83 meters)

Athel (*Tamarix aphylla*)

Tamarisk Family - *Tamaricaceae*

Habitat: Roadsides, washes, springs



Don't Confuse With Native:

There are no similar looking *native* species for Athel



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

California fan palm (*Washingtonia filifera*)

Plant: Erect; considered native in DEVA (when belonging to a cultural landscape); native in MOJA & JOTR

Stems/Branches: No branches, **single trunk**

Leaves: Waxy fronds, 0.9-1.5 m (3-5 ft) long; bunched at top of trunk



Flowers: 10 mm (~3/8 in) long, white or yellow clusters, drooping funnel shape

Fruit/Seeds: Black to beige-white, oval shaped, arranged in clusters, 1.2 cm (~1/2 in) long

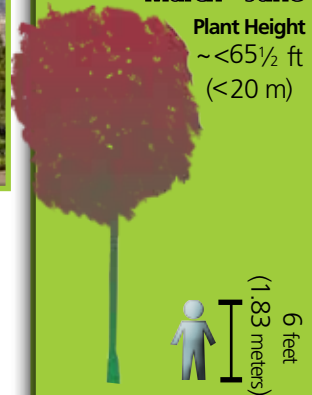


Known Parks:
DEVA, JOTR,
LAKE, MOJA
Watch For In:
PARA

Growing Season:
Year Round

Flowering Times:
March - June

Plant Height
~<65½ ft
(<20 m)



California fan palm (*Washingtonia filifera*)

Palm Family - *Areaceae*

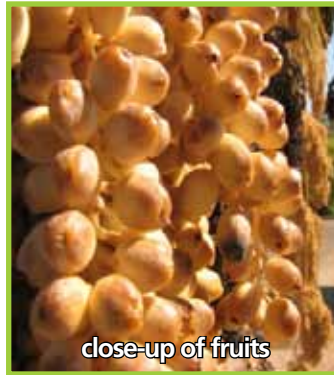
Habitat: Landscaped areas (commonly planted as an ornamental), springs

Don't Confuse With Native:

There are no similar looking *native* species for California fan palm



fruits hanging from tree



close-up of fruits



close-up of dried fruits



Tree

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Russian knapweed (*Acroptilon repens*)

Plant: Erect; densely branched

Stems/Branches: Cobwebby hairs

Leaves: Not directly across from one another on stem; **lobed lower leaves** 4-10 cm (1½-4 in) long, **linear upper leaves** 1-3 cm (~⅓-1 in) long

Flowers: Pink, lavender-blue, or white; ~15mm (½ in) wide; **green scales** located below colored part of flower

Fruit/Seeds: Seeds soft, white, have fine bristles



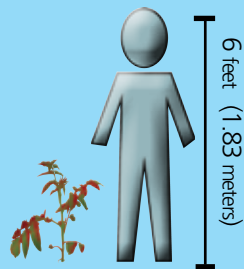
Known Parks:
DEVA, LAKE, MOJA

Watch For In:
GRBA, PARA

Growing Season:
Spring - Fall

Flowering Times:
May - September

Plant Height
<3 ft
(<1 m)



Russian knapweed (*Acroptilon repens*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, fields



flowers & upper leaves



close-up of flowers



seeds of *A. repens*



lower leaves lobed

Don't Confuse With Native:

Hoary tansyaster

(*Machaeranthera canescens*)

All leaves are same shape and size
3-10 cm (1½-4 in) long; **flower is purple with yellow center**

M. canescens flower with yellow center



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Fivehook bassia (*Bassia hyssopifolia*)

Plant: Erect, densely branched, gray-green

Stems/Branches: Reddish to brown stems

Leaves: Not directly across from one another on stem; **flat and coming to a point on the end**, 5-60 mm (~ $\frac{1}{3}$ -2 $\frac{1}{3}$ in) long

Flowers: Flowers 1-2 mm ($<\frac{1}{8}$ in) long, **fuzzy**; arranged in clusters up to 5 cm (~2 in) long

Fruit/Seeds: Star shaped fruit with <2 mm ($<\frac{1}{8}$ in) long **hook-shaped spines**



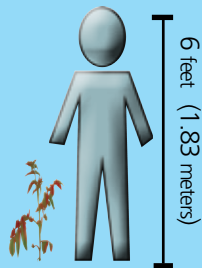
Known Parks:
DEVA, GRBA, LAKE

Watch For In:
JOTR, MOJA, PARA

Growing Season:
Summer - Fall

Flowering Times:
July - October

Plant Height
<5 ft
(<1.5 m)



Fivehook bassia (*Bassia hyssopifolia*)

Goosefoot Family - *Chenopodiaceae*

Habitat: Disturbed areas, roadsides, fields, wetlands



Don't Confuse With Native:

Seepweed

(*Suaeda moquinii*)

Leaves plump & rounded
(not flat & pointy)



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

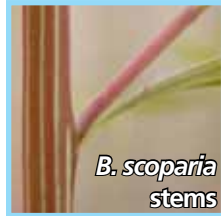
Annual

Burningbush (*Bassia scoparia*)

Plant: Erect, gray-green

Stems/Branches:

Green to red, sometimes with white stripes



Leaves: 8-50 mm ($\frac{1}{3}$ -2 in) long, **flat, linear**; not directly across from one another on stem

Flowers: Each flower <2 mm (< $\frac{1}{8}$ in) long; flowers located between leaves on stem, forming small clusters of yellow flowers

Fruit/Seeds: Fruits <2 mm (< $\frac{1}{8}$ in), knoblike or paper thin



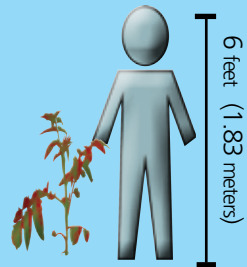
Known Parks:
DEVA, JOTR, LAKE

Watch For In:
GRBA, MANZ, PARA

Growing Season:
Summer - Fall

Flowering Times:
July - October

Plant Height
<6 ft
(<2 m)



Burningbush (*Bassia scoparia*)

Goosefoot Family - *Chenopodiaceae*

Habitat: Disturbed areas,
roadsides, wetlands

knoblike &
paper-thin fruits



yellow flowers located
between leaves



flat, linear leaves



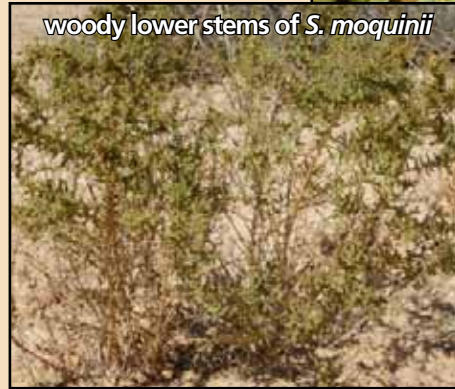
**Don't Confuse
With Native:**

Seepweed
(*Suaeda moquinii*)

plump
leaves



woody lower stems of *S. moquinii*



Lower
stems
woody;
leaves
plump
(not
flat)



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Sahara mustard (*Brassica tournefortii*)

Plant: Erect

Stems/Branches: Stiff white hairs on stems



Leaves: Deeply lobed, 7-30 cm (2¾-11½ in) long, **with bumps & short prickly hairs**

Flowers: 8-14 mm (⅓-½ in) wide, **dull yellow**, 4 petals

Fruit/Seeds: Linear and cylindrical fruit, 3-7 cm (1¼-2¾ in) long, **fruits point up & away from stem**

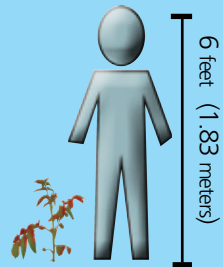


Known Parks:
DEVA, JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Winter - Spring

Flowering Times:
January - April

Plant Height
<~2 ft
(<0.7 m)



Sahara mustard (*Brassica tournefortii*)

Mustard Family - Brassicaceae

Habitat: Disturbed areas, roadsides, fields, sandy areas



dull yellow flowers

leaves have bumps & hairs



fruit point up & away from stem

Don't Confuse With Native:

California mustard

(*Guillenia lasiophylla*)

White flowers; fruit point downward; leaves arrow-shaped with no bumps or hairs

downward pointing fruit



leaves lack bumps & hairs



white flowers



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Hoary cress (*Cardaria draba*)

Plant: Erect

Stems/Branches: <0.5 m (<2 ft) tall,
covered with short hairs

Leaves: Not directly across from one another
on stem; 8 cm (~3 in) long, **toothed edges**, base
of **leaves wrap around stem**

Flowers: 4 white petals, ~4 mm (~ $\frac{1}{8}$ in) long;
flowers arranged in clusters

Fruit/Seeds: Deflated balloon-shaped fruits,
~3 mm (~ $\frac{1}{8}$ in) long



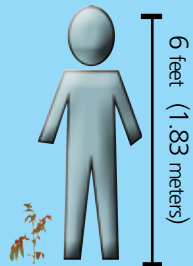
Known Parks:
GRBA, PARA

Watch For In:
DEVA

Growing Season:
Fall - Spring

Flowering Times:
March - July

Plant Height
<~1½ ft
(<0.5 m)



Hoary cress (*Cardaria draba*)

Mustard Family - Brassicaceae



Hoary cress flower clusters with single flowers having four petals

Habitat:

Disturbed areas, roadsides, fields

Don't Confuse With Native:

There are no similar looking *native* species for Hoary cress

leaves have toothed edges & wrap around stem at base



dried, deflated balloon-shaped fruits



Musk thistle (*Carduus nutans*)

Plant: Erect

Stems/Branches: Stems have spines

Leaves: 10-40 cm (~4-15¾ in) long; not directly across from one another on stem; **deeply lobed, spined**

Flowers: 3-7 cm (1⅛-2¾ in) wide, pink-purple nodding flower

Fruit/Seeds: Seeds soft, white, have fine bristles

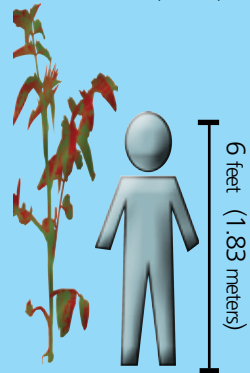


Known Parks:
GRBA

Growing Season:
Fall - Summer

Flowering Times:
June - September

Plant Height
<~9½ ft
(<3 m)



Musk thistle (*Carduus nutans*)

Sunflower Family - Asteraceae

Habitat:

Disturbed areas,
roadsides, fields

spined stem
& leaves



pink-purple
nodding
flower



Don't Confuse With Native:

New Mexico thistle
(*Cirsium neomexicanum*)

Flowers **white or
pink-purple**, erect
(not nodding)



erect flowers



New Mexico thistle plants
in bloom



single New
Mexico thistle
plant in bloom



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Biennial

Malta star-thistle (*Centaurea melitensis*)

Plant: Grayish-green; evenly covered with white, cottony hairs

Stems/Branches: Edges may be winged

Leaves: 2-15 cm (~¾-6 in) long, lobed

Flowers: Yellow, 10-15 mm (~½-⅝ in) long; have **thick spines 19 mm (~¾ in) long**, reddish purple in color

Fruit/Seeds: Seeds soft, white, have fine bristles

Malta star-thistle with white, cottony hairs covering plant



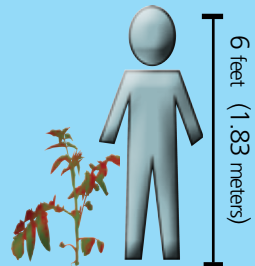
Known Parks:
DEVA, LAKE,
MOJA, PARA

Watch For In:
JOTR

Growing Season:
Winter - Summer

Flowering Times:
April - September

Plant Height
<~3 ft
(<1 m)



Malta star-thistle (*Centaurea melitensis*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, fields

Don't Confuse With Native:

There are no similar looking *native* species for Malta star-thistle



close-up of stems
with winged edges



flowers have sharp
spines at base



seedling, lobed leaves



plant has grayish-green color



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Yellow star-thistle (*Centaurea solstitialis*)

Plant: Grayish-green; evenly covered with **white, cottony hairs**

Stems/Branches: Edges may be winged

Leaves: 2-15 cm (~¾-6 in) long, deeply lobed

Flowers: **Yellow**, 13-20 mm (~½-¾ in) long; have **thick spines 26 mm (~1 in) long**, yellowish to straw-colored

Fruit/Seeds: Seeds soft, white, have fine bristles

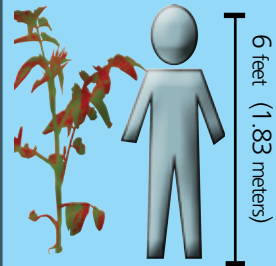


Known Parks:
DEVA, PARA

Growing Season:
Summer - Winter

Flowering Times:
June - December

Plant Height
<~6 ft
(<2 m)



Yellow star-thistle (*Centaurea solstitialis*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, fields

flower,
spines,
& white
cottony
hairs



winged
edges of
stems

Don't Confuse With Native:

There are no similar looking *native* species for Yellow star-thistle

seedling, deeply lobed leaves



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Spotted knapweed (*Centaurea stoebe ssp. micranthos*)

Plant: Erect

Stems/Branches: Densely branched

Leaves: Not directly across from one another on stem; **deeply lobed lower leaves** 4-10 cm (1½ -4 in) long, **linear upper leaves** 1-3 cm (~⅓-1 in) long; **cobwebby hairs on young leaves**; grayish-green in color

Flowers: Pink, lavender-blue, or white; ~15mm (½ in) wide; **green scales** located below colored part of flower **have dark tips**

Fruit/Seeds: Seeds soft, white, have fine bristles



single
densely
branched
plant

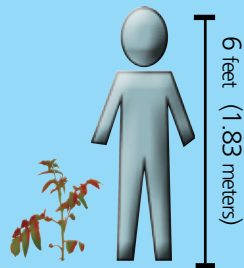
Known Parks:
GRBA

Watch For In:
PARA

Growing Season:
Spring - Fall

Flowering Times:
June - October

Plant Height
<3 ft
(<1 m)



Spotted knapweed (*Centaurea stoebe ssp. micranthos*) Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, fields

unopened flowers with single open flower



lower leaves lobed



lavender to white flower



Don't Confuse With Native:

Hoary tansyaster

(*Machaeranthera canescens*)

All leaves are same shape and size
3-10 cm (1 1/8-4 in) long; **flower is purple with yellow center**

M. canescens flower with yellow center



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Canada thistle (*Cirsium arvense*)

Plant: Erect; densely branched

Stems/Branches: Smooth

Leaves: 5-20 cm (~2-8 in) long; irregular, wavy, and toothed with prickly edges

Flowers: Purple-pink; 1.5-2.5 cm (~½-1 in) wide; green scales below colored part of flower

Fruit/Seeds: Seeds soft, white, have fine bristles



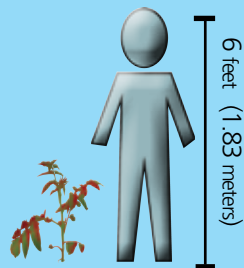
Known Parks:
GRBA

Watch For In:
PARA

Growing Season:
Spring - Fall

Flowering Times:
April - October

Plant Height
<3 ft
(<1 m)



Canada thistle (*Cirsium arvense*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, river banks

close-up of smooth stems & toothed leaves with prickly edges



purple-pink flower



seedling with irregular/wavy leaves

Don't Confuse With Native:

There are no similar looking *native* species for Canada thistle

toothed leaves with prickly edges



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Perennial

Bull thistle (*Cirsium vulgare*)

Plant: Erect; densely branched

Stems/Branches: Cobwebby hairs and spines

Leaves: Spined, lobed lower leaves 15-25 cm (~½-1 in) long; upper leaves more spiny & deeply lobed

Flowers: Pink-purple; 2.5-5 cm (1-2 in) wide; have dense, short spines 1-5 mm (<¼ in) long

Fruit/Seeds: Seeds soft, white, have fine bristles

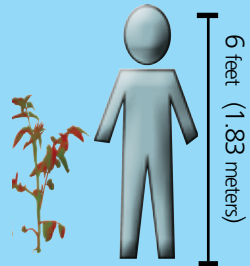


Known Parks:
GRBA, JOTR, PARA

Growing Season:
Spring - Fall

Flowering Times:
June - October

Plant Height
~3-5 ft
(1-1.5 m)



Bull thistle (*Cirsium vulgare*)

Habitat: Disturbed areas, fields



Sunflower Family - Asteraceae

Don't Confuse With Native:

New Mexico thistle (*Cirsium neomexicanum*)

Plant height 1½-10 ft (0.5-3 m); **spines 4-15 mm (¼-5/8 in); flowers white or pink-purple**



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Biennial

Field bindweed (*Convolvulus arvensis*)

Plant: Vine; mat-forming, can climb other plants

Stems/Branches: Stems twist and climb

Leaves: Not directly across from one another on stem, **2-3 cm** (~ $\frac{3}{4}$ - $1\frac{1}{8}$ in) long, arrowhead shaped, dull green

Flowers: White to pink, funnel shaped when open, **1.5-3 cm** (~ $\frac{1}{2}$ -1 in) diameter

Fruit/Seeds: Tiny, tan fruit ~8mm (< $\frac{1}{3}$ in) diameter

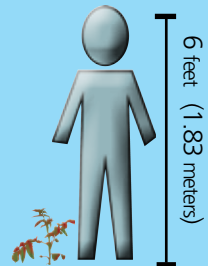


Known Parks:
GRBA, LAKE, MANZ,
MOJA, PARA

Growing Season:
Year Around

Flowering Times:
April - October

Stem Height
~1-2½ ft
(0.3-0.8 m)



Field bindweed (*Convolvulus arvensis*)

Morningglory Family - *Convolvulaceae*

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:

Hedge bindweed
(*Calystegia sepium*)

Extremely similar;
flowers larger:
3-7 cm (~1-2¾ in)
diameter;
leaves longer:
5-10 cm (~2-4 in)
long



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Biennial

Redstem filaree (*Erodium cicutarium*)

Plant: Low growing

Stems/Branches: Green-reddish

Leaves: 3-10 cm (~1½-4 in) long, deeply lobed, **feathery**

Flowers: Pink to lavender, 3-5 mm (~⅛ in) long; 2-10 flowers per flowering stem

Fruit/Seeds: Long, pointy fruits; long part of fruit curls into a spiral when dried out

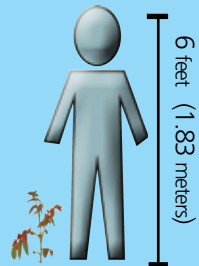


Known Parks:
DEVA, GRBA, JOTR,
LAKE, MANZ,
MOJA, PARA

Growing Season:
Year Round

Flowering Times:
February - June

Plant Height
~2 ft
(<0.6 m)



Redstem filaree (*Erodium cicutarium*)

Geranium Family - Geraniaceae

Habitat: Disturbed areas, roadsides, fields, developed areas (picnic areas, viewpoints, campgrounds)



lavender flowers,
reddish stems, &
feathery leaves



dried fruit



long, pointy fruits

Don't Confuse With Native:

Texas filaree
(*Erodium texanum*)

Round-shaped leaves, not deeply lobed or feathery; larger flower
14-30 mm (~½-1⅛ in) wide



rounded leaves and larger
flower of Texas filaree



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Arugula (*Eruca vesicaria ssp. sativa*)

Plant: Erect

Stems/Branches: Have fine, white hairs

Leaves: Deeply lobed

Flowers: 2-4 cm (~¾-1½ in) wide, white with purple veins

Fruit/Seeds: Fruits 12-25 mm (~½-1 in) long, **linear & cylindrical with pointed tip**



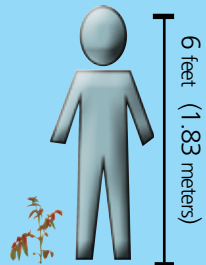
Known Parks:
MOJA

Watch For In:
JOTR

Growing Season:
Spring - Summer

Flowering Times:
May - September

Plant Height
0.5-3¼ ft
(0.2-1 m)



Arugula (*Eruca vesicaria* ssp. *sativa*)

Mustard Family - Brassicaceae

Habitat: Disturbed areas,
roadsides, fields

Don't Confuse With Native:

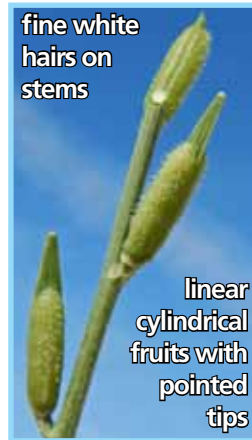
There are no similar looking
native species for Arugula

white flower with purple veins



deeply
lobed
leaves

fine white
hairs on
stems



linear
cylindrical
fruits with
pointed
tips



Forb

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Annual

Leafy spurge (*Euphorbia esula*)

Plant: All parts have a sticky **milky sap** when cut, sap toxic to humans



Stems/Branches: Yellow-green, smooth

Leaves: 2-6 cm (~¾-2⅜ in) long, not directly across from one another on stem, linear shaped, sometimes hairy

Flowers: Pale yellow to green, 1.5-2.5 mm (<⅛ in) long, arranged in clusters

Fruit/Seeds: Fruits 3-5 mm (<⅛ in) long, smooth, **pumpkin shaped with 3 lobes**

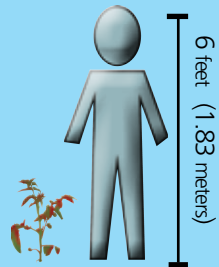


Watch For In:
GRBA

Growing Season:
Summer

Flowering Times:
June - September

Plant Height
~2½ ft
(<0.8 m)



Leafy spurge (*Euphorbia esula*)

Spurge Family - Euphorbiaceae

Habitat: Disturbed areas, roadsides, wetlands

Don't Confuse With Native:

There are no similar looking *native* species for Leafy spurge



Saltlover (*Halogeton glomeratus*)

Plant: Erect, densely branched, green to bluish green

Stems/Branches: Red stems 6-25 cm (~2-10 in) long, curved at base of plant

Leaves: Not directly across from one another on stem, 4-17 mm ($\frac{1}{8}$ - $\frac{2}{3}$ in) long, plump cylindrical shape; **bristle at tip of leaf**

Flowers: Greenish yellow to pink, 2-3.5 mm ($<\frac{1}{8}$ in) long, form dense clusters on stem; petals papery thin

Fruit/Seeds: Tan-brown paper thin fruit, 1-2 mm ($<\frac{1}{8}$ in) long



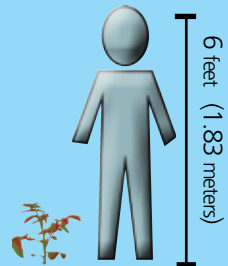
Known Parks:
DEVA, GRBA, MOJA

Watch For In:
LAKE, PARA

Growing Season:
Summer - Fall

Flowering Times:
July - September

Plant Height
<1 $\frac{1}{3}$ ft
(<0.4 m)



Saltlover (*Halogeton glomeratus*)

Goosefoot Family - *Chenopodiaceae*

Habitat: Disturbed areas, roadsides



papery thin flower petals

dense cluster of flowers

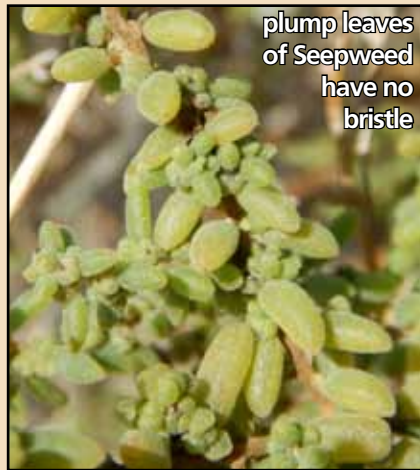


plump, bristle-tipped leaves & red stems

Don't Confuse With Native:

Seepweed
(*Suaeda moquinii*)

Leaves lack a bristle at the tip



plump leaves of Seepweed have no bristle



Prickly lettuce (*Lactuca serriola*)

Plant: Short, prickly hairs on stems

Stems/Branches:

Exude milky sap

Leaves: 7-20 cm (3-8 in) long, deeply lobed; **leaves clasp around stem; short, prickly hairs on underside of leaf**

Flowers: Yellow, 4-6 cm ($\frac{3}{4}$ -1½ in) wide

Fruit/Seeds: Brown seeds with white bristles

clasp
leaves &
sap



brown seeds with white bristles



deeply lobed leaves
of *L. serriola* plant

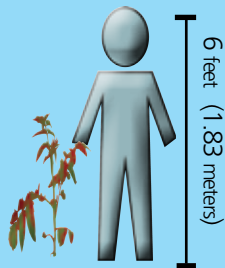


Known Parks:
DEVA, GRBA, JOTR,
LAKE, MOJA, PARA

Growing Season:
Year Round

Flowering Times:
May - September

Plant Height
1-10 ft
(0.5-3 m)



Prickly lettuce (*Lactuca serriola*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas,
roadsides



Don't Confuse With Native:

California chicory
(*Rafinesquia californica*)

Lacks prickly hairs;
flowers white



California chicory stems
lack prickly hairs



Perennial pepperweed (*Lepidium latifolium*)

Plant: Erect, green to gray-green

Stems/Branches: 35-120 cm (~13¾-47 in) long;
newly **emerging plants have purple stems**

Leaves: not directly across from one another on stem;
oblong, 3.5-15 cm (1⅜-6 in) long

Flowers: 4 white petals, 1.5 mm (<⅛ in) long;
flowers arranged in small clusters

Fruit/Seeds:
Round, flattened
seed pod,
~2.5 mm (<⅛ in)
diameter



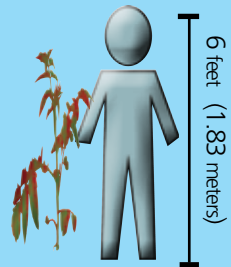
Known Parks:
LAKE, MOJA

Watch For In:
GRBA, JOTR, PARA

Growing Season:
Spring - Summer

Flowering Times:
May - September

Plant Height
<6½ ft
(<2 m)



Perennial pepperweed (*Lepidium latifolium*)

Mustard Family - Brassicaceae

Habitat:

Disturbed areas, roadsides, meadows, wetlands

invasive growth of perennial pepperweed



oblong leaves of *L. latifolium*



close-up of white flowers

Don't Confuse With Natives:

Desert pepperweed
(*Lepidium fremontii*)

Deeply lobed lower leaves, flower petals 2-4 mm (<1/8 in) long

deeply lobed leaves of *L. fremontii*



Mountain pepperweed
(*Lepidium montanum*)

Deeply lobed lower leaves, flower petals 2-4 mm (<1/8 in) long

deeply lobed leaves of *L. montanum*



Forb

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Perennial

Purple loosestrife (*Lythrum salicaria*)

Plant: Erect

Stems/Branches: Square, fuzzy stems

Leaves: 5-14 cm (~2-5½ in) long, narrow leaves with slightly wider base; leaves directly across from one another on stem

Flowers: 8-14 mm (⅓-½ in) long, pink to purple, 4-6 petals, flowers arranged in long dense clusters at tips of stems

Fruit/Seeds: 3-4 mm (~⅛ in) long

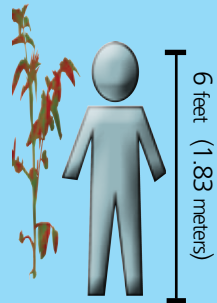


Watch For In:
GRBA

Growing Season:
Summer

Flowering Times:
June - September

Plant Height
6½ - <10 ft
(2-3 m)



Purple loosestrife (*Lythrum salicaria*)

Loosestrife Family - Lythraceae

Habitat: Disturbed areas, wetlands



Don't Confuse With Native:

California loosestrife

(*Lythrum californicum*)

Flowers 4-8 mm ($\frac{1}{2}$ - $\frac{1}{3}$) long, spread out along the stem in loose clusters



Forb

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Annual

African mustard (*Malcolmia africana*)

Plant: Covered in short, white hairs

Stems/Branches: Multi-branched stems

Leaves: Not directly across from one another on stem, <6 cm (~2³/₈ in) long; **toothed leaf edges, leaves have bumps**

Flowers: 6-9 mm (~1/4-3/8 in) wide, **pink-purple**, 4 petals

Fruit/Seeds: Straight fruits 4-6 cm long (1 1/2-2 3/8 in); point up and away from stem



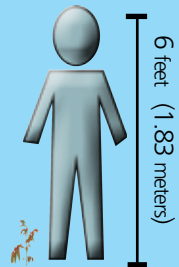
African mustard plants in bloom

Known Parks:
DEVA, GRBA, LAKE
MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
May - August

Plant Height
1/3 - 1 2/3 ft
(0.1-0.5 m)



African mustard (*Malcolmia africana*)

Mustard Family - Brassicaceae

Habitat: Disturbed areas, roadsides



Don't Confuse With Native:

There are no similar looking *native* species for African mustard



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Scotch thistle (*Onopordum acanthium*)

Plant: Erect; densely branched, spiny

Stems/Branches:
Winged stems with spines

Leaves: 10-50 cm (4-19½ in) long; cobwebby gray hairs; spined

Flowers: White or pink-purple; <5 cm (<2 in) wide

Fruit/Seeds: Soft, white, have fine bristles

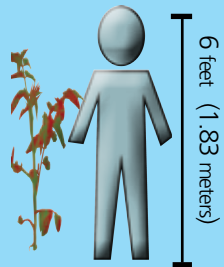


Known Parks:
GRBA, PARA

Growing Season:
Year Round

Flowering Times:
July - September

Plant Height
~5-10 ft
(1.5-3 m)



Scotch thistle (*Onopordum acanthium*)

Sunflower Family - Asteraceae

Habitat: Disturbed areas, roadsides, fields, grassland



Don't Confuse With Native:

New Mexico thistle
(*Cirsium neomexicanum*)

Not densely branched;
stems lack wings & spines



Forb

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Biennial

Russian thistle (*Salsola tragus*)

Plant: Bluish-green, prickly, erect

Stems/Branches: Rigid branches, densely intertwined, purple or green striped stem

Leaves: Not directly across from one another on stem; linear to needlelike, 8-52 mm (~¼-2 in) long with sharp-pointed tips

Flowers: White-pink, paper thin, 2.5-3.5 mm (<⅜ in) long

Fruit/Seeds: Fruits 7-9 mm (~¼-⅜ in) long

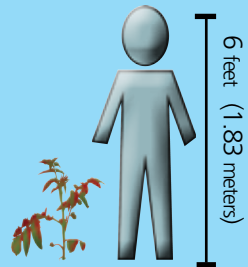


Known Parks:
DEVA, GRBA,
JOTR, LAKE,
MANZ, MOJA, PARA

Growing Season:
Spring - Summer

Flowering Times:
July - October

Plant Height
< 3¼ ft
(< 1 m)



Russian thistle (*Salsola tragus*)

Goosefoot Family - *Chenopodiaceae*

Habitat: Disturbed areas, roadsides, fields

Don't Confuse With Native:

There are no similar looking *native* species for Russian thistle



Tall tumbled mustard (*Sisymbrium altissimum*)

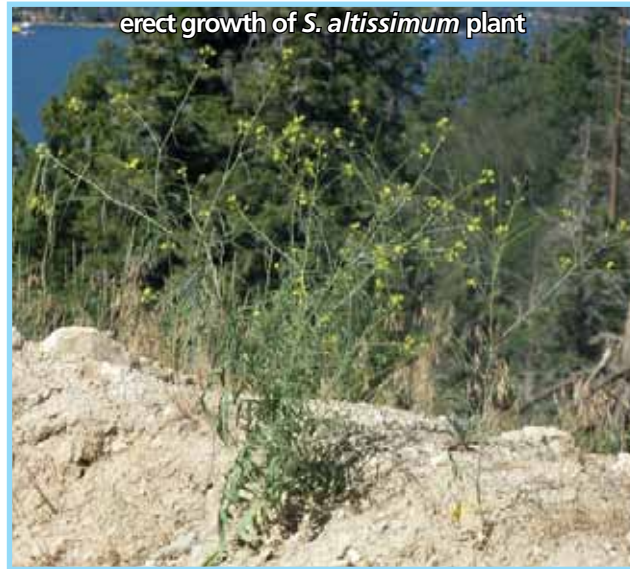
Plant: Erect growth

Stems/Branches: White hairs on stems

Leaves: 5-20 cm (~2-8 in) long, deeply lobed with stiff hairs

Flowers: 6-8 mm (~¼-⅓ in) wide, white-pale yellow, 4 petals

Fruit/Seeds: Straight fruits 5-10 cm (~2-4 in) long; point up and away from stem

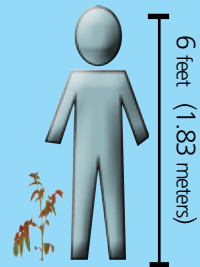


Known Parks:
DEVA, GRBA, JOTR,
LAKE, MOJA, PARA

Growing Season:
Spring - Fall

Flowering Times:
April - September

Plant Height
~1½-5 ft
(0.5-1.5 m)



Tall tumblemustard (*Sisymbrium altissimum*)

Mustard Family - Brassicaceae

Habitat: Disturbed areas, roadsides, fields



leaves deeply lobed with stiff hairs



white flowers & long linear fruits



pale yellow flowers with 4 petals

Don't Confuse With Native:

Tansy mustard
(*Descurainia pinnata*)

Fruits shorter:
1-2 cm ($\frac{3}{8}$ - $\frac{3}{4}$ in) long



fruits shorter than those of *S. altissimum*



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

London rocket (*Sisymbrium irio*)

Plant: Erect growth

Stems/Branches: Stems mostly branched near base

Leaves: Deeply lobed, 15 cm (~6 in) long

Flowers: Yellow, 2.5-4 mm (1-1½ in) long, 4 petals

Fruit/Seeds: Linear **fruits 3–4 cm** (~1-1½ in) long, curve upward



Known Parks:
DEVA, JOTR, LAKE,
MOJA, PARA

Growing Season:
Winter - Spring

Flowering Times:
January - May

Plant Height
1.5 ft
(0.5 m)



London rocket (*Sisymbrium irio*)

Habitat: Disturbed areas, roadsides, fields



yellow flowers & linear fruits of *S. irio*



field of *S. irio*

Mustard Family - Brassicaceae

Don't Confuse With Native:

Tansy
mustard
(*Descurainia
pinnata*)

Fruits shorter:
1-2 cm ($\frac{3}{8}$ - $\frac{3}{4}$ in)
long



fruits
shorter than
those of *S. irio*



Indian hedgemustard (*Sisymbrium orientale*)

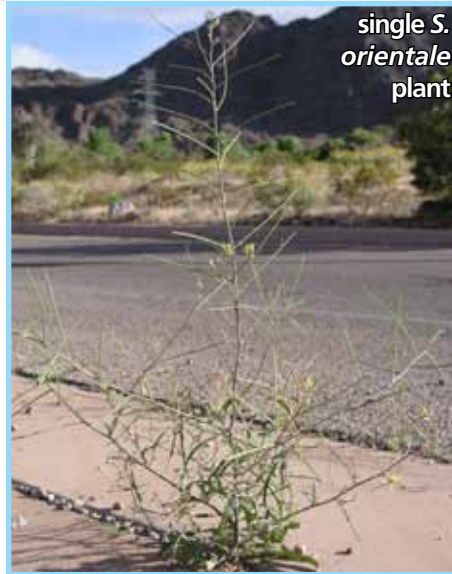
Plant: Erect growth

Stems/Branches: Stems mostly branched near base, **have sparse hairs**

Leaves: 3-12 cm (~1-4¾ in) long, very deeply lobed, **lobes often extending to center of stem**

Flowers: 7-9 mm (~¼-⅜ in) long, 4 yellow petals

Fruit/Seeds: Linear fruits 6-10 cm (~2½-4 in) long, pointing away from stem



single *S. orientale* plant

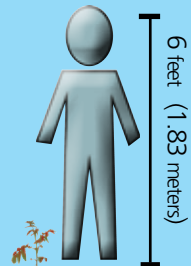
Known Parks:
DEVA, JOTR,
LAKE, MOJA

Watch For In:
PARA

Growing Season:
Spring - Summer

Flowering Times:
May - June

Plant Height
⅔ - 1⅓ ft
(0.2-0.7 m)



Indian hedgemustard (*Sisymbrium orientale*)

Mustard Family - Brassicaceae

Habitat: Disturbed areas, roadsides, fields



Don't Confuse With Native:

Tansy mustard
(*Descurainia pinnata*)

Fruits shorter:
1-2 cm ($\frac{3}{8}$ - $\frac{3}{4}$ in) long



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual

Common sowthistle (*Sonchus oleraceus*)

Plant: Erect; leaves and stems exude milky sap when cut

Stems/Branches: May be green or red

Leaves: 10-20 cm (~4-8 in) long, not directly across from one another on stem, deeply lobed, **toothed edges**; leaves clasp around stem

Flowers: Yellow; 1.5-2.5 cm (~½-1 in) wide

Fruit/Seeds: Seeds soft, white, have fine bristles



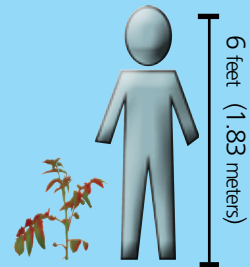
Known Parks:
DEVA, JOTR,
LAKE, MOJA

Watch For In:
GRBA, PARA

Growing Season:
Winter - Summer

Flowering Times:
March - July

Plant Height
<4.5 ft
(<1.4 m)



Common sowthistle (*Sonchus oleraceus*)

Sunflower Family - Asteraceae

Habitat: Roadsides, fields, washes



Don't Confuse With Native:

Mojave ragwort
(*Senecio mohavensis*)

Leaves lack toothed edges;
flower 6-7 mm (~¼ in) wide



Forb

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Annual

Puncturevine (*Tribulus terrestris*)

Plant: Low growing, mat forming

Stems/Branches: Stems <1 m (3¼ ft) long, hairy

Leaves: 3-5 cm (1⅛-2 in) long, directly across from one another on stem, **3-7 pairs of leaves per stem**

Flowers: Yellow, 5-15 mm (~½-1⅛ in) long

Fruit/Seeds: Fruits gray to yellowish tan, with hairs and **spines**



Puncturevine is low growing and forms mats

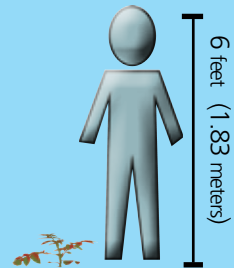
Known Parks:
DEVA, GRBA, JOTR,
LAKE, MOJA, PARA

Watch For In:
MANZ

Growing Season:
Spring - Summer

Flowering Times:
March - October

Stem Height
<1 ft
(<0.3 m)



Puncturevine (*Tribulus terrestris*)

Caltrop Family - Zygophyllaceae

Habitat: Disturbed areas, roadsides, developed areas (picnic areas, viewpoints, campgrounds)

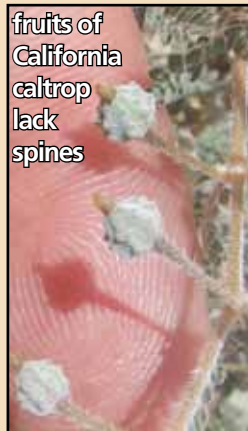


Don't Confuse With Native:

California caltrop

(*Kallstroemia californica*)

Very similar stems and branches; **fruits lack spines**



Forb

For full list of photo credits, visit: <http://go.nps.gov/mojn-ipg>

Annual



Acknowledgements

The Mojave Desert Network Inventory & Monitoring Program would like to extend its appreciation to all who assisted in the creation of this guide, granted permission for photo usage, and provided feedback throughout the process.

References

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MOJN I&M Network Parks:

Death Valley NP (DEVA)
Great Basin NP (GRBA)
Joshua Tree NP (JOTR)
Lake Mead NRA (LAKE)
Manzanar NHS (MANZ)
Mojave NPres (MOJA)
Grand Canyon-Parashant NM (PARA)
Tule Springs Fossil Beds NM (TUSK)



