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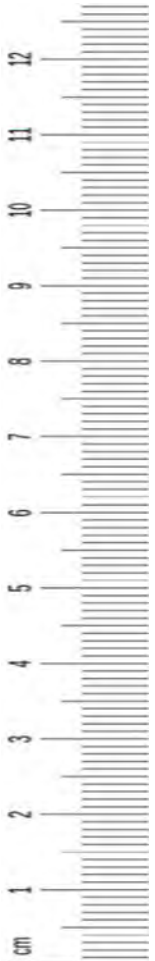
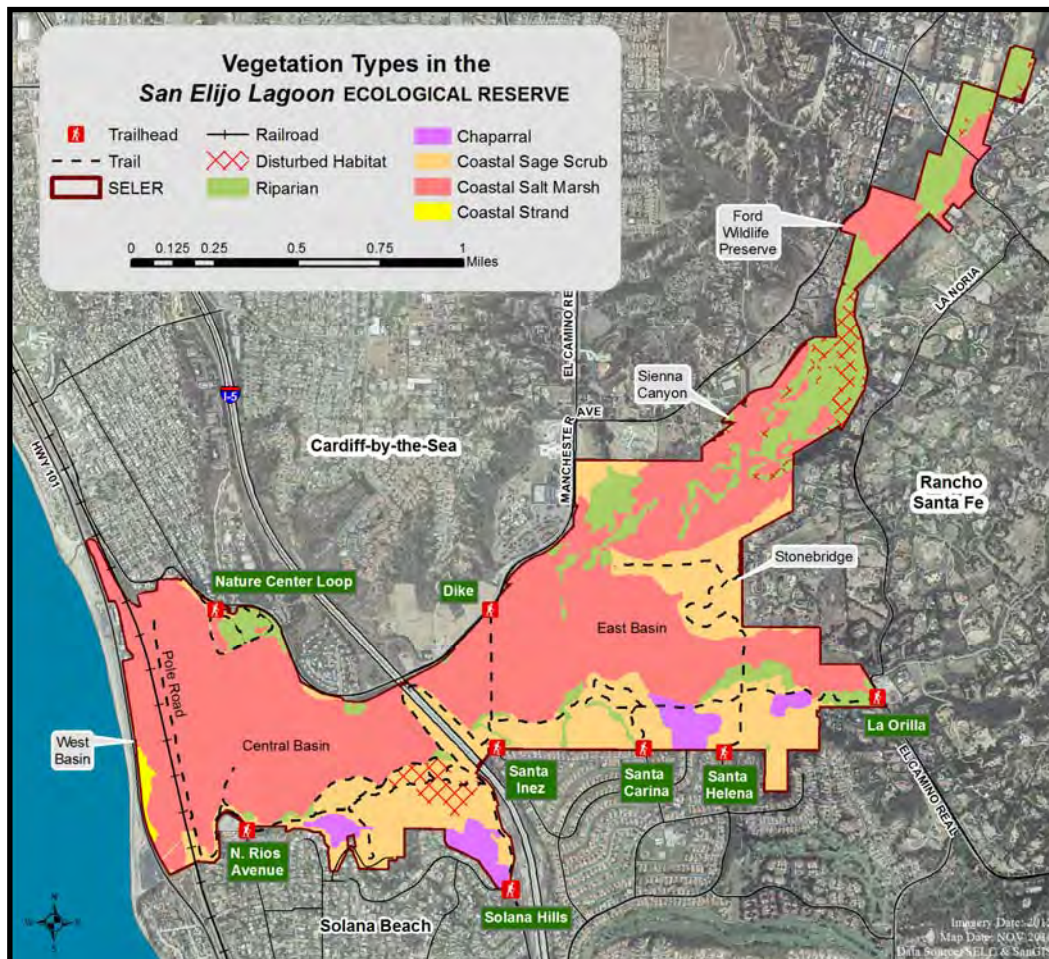
CONNECT. EXPERIENCE. PROTECT.

Invasive Plant Field Guide

San Elijo Lagoon Ecological Reserve

Prepared by Nature Collective Internship Program
and Community Habitat Restoration Program Staff

This guide lists and provides brief descriptions and photos of invasive plants that are managed in San Elijo Lagoon Ecological Reserve. The guide will help volunteers identify and learn more about the invasive plants they are working with to restore native habitats. Many thanks to the photographers that offer their photos for use.



Explanation of Terms

Family: Grouping of similar plants with distinct traits

Form: characteristic mode of growth by shape and height

Tree: woody plant of medium to tall height

Shrub: woody plant of relatively short height, many stems from base

Herb: non-woody plant

Vine: twining or climbing plant, attached by twisting onto support

Grass: herbaceous plants with narrow leaves growing from the base

Annual: completing full life cycle in one year or growing season

Perennial: completing life cycle in more than one year or growing season

Origin: the continent or region where the plant evolved

Flower: blooming season, color, and size

Zone: vegetation type and landform the plant grows among

Chaparral: vegetation characterized by mostly evergreen

shrubs with thick, leathery leaves, and stiff branches

Coastal Sage Scrub: coastal vegetation characterized by shrubs and subshrubs with flexible branches

Coastal Strand: beach and dune habitat, characterized by sandy soils, strong winds, salt spray, and wave action

Riparian: vegetation that occupy the banks, channels, and floodplains of waterways

Salt Marsh: treeless vegetation characterized by semiaquatic herbs or subshrubs that are permanently or periodically inundated by salt water

Control: method to remove/ manage invasive plants

Dig out root: use shovel to dig

out root ball, cause minimal soil disturbance

Hand pull: grip plant near its base, pull plant out removing as much of the root as possible

Remove flower/seed heads and prune back: use pruners to cut plant as specified, put flower/seed heads in bag

Report: Report to supervisor, GPS location and photo will be taken, noted for further action

Weed wrench: a tool that utilizes leverage to pull out small trees and shrubs

Threat Level: designation given to a species for its potential to impact native habitat in SELER

HIGH: plants with the potential to drastically alter native habitat in the reserve—these plants are a primary focus during Lagoon Platoon events and should be reported to supervisor if encountered

MEDIUM: plants that moderately impact native habitat in the reserve

LOW: plants with a limited impact to native habitat in the Reserve

Acacia spp.

wattle

Threat Level: **MEDIUM**



A. cyclops

Photo Credit: © 2010 Anthony Valois, NPS



A. longifolia

Photo Credit: © 2011 Anthony Valois, NPS

Family: Fabaceae

Form: Tree/large shrub, < 20' H

Origin: Australia

Flower: Winter/Spring/Summer, yellow, 0.5" - 2"

Zone: Coastal Sage Scrub, Riparian

Control: Hand pull (plant < 2' H), weed wrench



A. cyclops

Photo Credit: © 2014 Lori Nussbaum, Nature Collective



A. cyclops

Arundo donax

giant reed
Threat Level: **HIGH**



Photo Credit: © 2009 Anthony Valois, NPS

Family: Poaceae

Form: Perennial grass, 10' - 30' H

Origin: Mediterranean, India

Flower: Summer/Fall, plume-like cream to brown, 3'

Zone: Riparian

Control: Dig out root (plants < 6' H), report



Photo Credit: © 2005 Luigi Rignanese



Photo Credit: © 2009 Anthony Valois, NPS

Asparagus asparagoides

African asparagus fern
Threat Level: **MEDIUM**



Photo Credit: © 2011 Anthony Valois, NPS



Family: Asparagaceae

Form: Vine, > 5' L

Origin: South Africa

Flower: Spring/Summer, green-white, < 0.5"

Zone: Riparian

Control: Dig out root, report



Photo Credit: © 2011 Anthony Valois, NPS

Atriplex semibaccata

Australian saltbush
Threat Level: **MEDIUM**



Photo Credit: © 2007 Anthony Valois, NPS



Photo Credit: © 2007 Anthony Valois, NPS

Family: Chenopodiaceae

Form: Perennial herb, < 1' H x < 6' W

Origin: Australia

Flower: Spring/Summer/Fall, few flowers, red berry < .5"

Zone: Coastal Sage Scrub, Coastal Strand, Salt Marsh

Control: Hand pull



Photo Credit: © 2007 Anthony Valois, NPS

***Avena* spp.**

wild oat
Threat Level: **MEDIUM**



Photo Credit: © 2004-2008 Keir Morse www.keiriosity.com/



Photo Credit: © 2004-2008 Keir Morse www.keiriosity.com/



Photo Credit: © 2004-2008 Keir Morse www.keiriosity.com/

Family: Poaceae

Form: Annual grass, < 5' H

Origin: Eurasia

Flower: Spring, spikelets on wiry branchlets, bent awns

Zone: Chaparral, Coastal Sage Scrub

Control: Hand pull



Photo Credit: © 2006 Anthony Valois, NPS

***Brassica* spp.**

mustards

Threat Level: **MEDIUM**



Photo Credit: © 2009 Barry Breckling

Family: Brassicaceae

Form: Annual/perennial herb, 1' - 6' H

Origin: Europe, Africa, Mediterranean

Flower: Spring, yellow, < 1"

Zone: Coastal Sage Scrub, Coastal Strand, Riparian

Control: Hand pull



Photo Credit: © 2008 Anthony Valois, NPS



Photo Credit: © 2009 Zoya Akulova



Photo Credit: © 2008 Anthony Valois, NPS

***Bromus* spp.**

brome grass

Threat Level: **MEDIUM**



Photo Credit: © 2010 Michael O'Brien

Family: Poaceae

Form: Annual grass, < 3' H

Origin: Eurasia

Flower: Spring/Summer, spikelets compressed, < 4" awn

Zone: Coastal Sage Scrub

Control: Hand pull



Photo Credit: ©2006 Brent Miller



Photo Credit: © 2003 Keir Morse www.keiriosity.com/



Cakile maritima

European sea rocket
Threat Level: **MEDIUM**



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Photo Credit: © 2007 Keir Morse www.keiriosity.com/

Family: Brassicaceae

Form: Annual herb, 0.5' - 2' H

Origin: Europe

Flower: Spring/Summer, purple, 0.5"

Zone: Coastal Strand, Riparian

Control: Hand pull



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Carduus pycnocephalus

Italian thistle
Threat Level: **MEDIUM**



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2008 Zoya Akulova

Family: Asteraceae

Form: Annual herb, 2' - 4' H

Origin: Mediterranean

Flower: Spring/Summer, pink to purple, < 1"

Zone: Chaparral, Coastal Sage Scrub

Control: Hand pull



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Photo Credit: © 2006 Luigi Rignanese

***Carpobrotus* spp.**

ice plant
Threat Level: **MEDIUM**



Family: Aizoaceae

Form: Vine (mat forming succulent), > 20' L

Origin: South Africa

Flower: Spring/Summer, magenta/pink/yellow, < 1"

Zone: Chaparral, Coastal Sage Scrub, Coastal Strand, Riparian

Control: Hand pull



Photo Credit: © 2005-2007 Anthony Valois, NPS

Centaurea melitensis

Maltese star thistle
Threat Level: **MEDIUM**



Photo Credit: © 2004 Anthony Valois, NPS

Family: Asteraceae

Form: Annual herb, 1' - 3' H

Origin: Mediterranean

Flower: Spring/Summer, yellow, 0.5"

Zone: Chaparral, Coastal Sage Scrub, Coastal Strand

Control: Hand pull



Photo Credit: © 2013 Jean Pawek



Photo Credit: © 2007 J. Zylstra, SBNF

Conium maculatum

poison hemlock
Threat Level: **LOW**



Photo Credit: © 2005 Saxo, Wikimedia

Family: Apiaceae

Form: Annual herb, < 10' H

Origin: Eurasia

Flower: Spring/Summer, white, < 0.5"

Zone: Riparian

Control: Hand pull



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2011 Keir Morse www.keiriosity.com/

Convolvulus arvensis

field bindweed
Threat Level: **LOW**



Photo Credit: © 2013 Zoya Akulova



Photo Credit: © 2011 Zoya Akulova

Family: Convolvulaceae

Form: Vine, < 4' L

Origin: Eurasia

Flower: Spring/Summer, white or pinkish, 1" - 2"

Zone: Coastal Sage Scrub

Control: Hand pull



Photo Credit: © 2010 Barry Breckling



Photo Credit: © 2009 Barry Rice

***Cortaderia* spp.**

pampas grass
Threat Level: **HIGH**



C. selloana

Photo Credit: © 2009 Anthony Valois, NPS

Family: Poaceae

Form: Perennial grass, 4' - 10' H

Origin: South America, New Guinea

Flower: Spring, large pink or white plume, < 5'

Zone: Chaparral, Coastal Sage Scrub, Riparian

Control: Dig out root, remove flower heads, report



C. selloana

Photo Credit: © 2007 Forest and Kim Starr, wikimedia



C. selloana

Cynodon dactylon

Bermuda grass
Threat Level: **LOW**



Photo Credit: © 2011 Anthony Valois, NPS



Photo Credit: © 2011 Anthony Valois, NPS

Family: Poaceae

Form: Perennial grass, < 2' H

Origin: Africa

Flower: Spring, purple, < 0.5"

Zone: Riparian

Control: Report

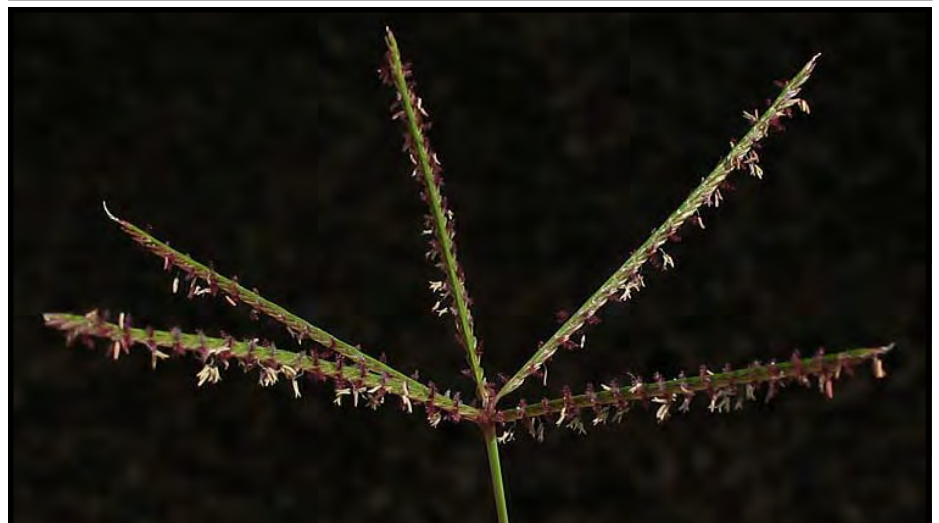


Photo Credit: © 2011 Anthony Valois, NPS

***Dipsacus* spp.**

wild teasel, fuller's teasel

Threat Level: **LOW**



Photo Credit: © 2013 Zoya Akulova



Photo Credit: © 2012 Anthony Valois, NPS



Photo Credit: © 2012 Anthony Valois, NPS

Family: Dipsacaceae

Form: Annual/Biennial Herb, 3'- 8' H

Origin: Europe

Flower: Summer, purple or pink, 1"- 4"

Zone: Riparian

Control: Dig out root, hand pull



Photo Credit: © 2012 Anthony Valois, NPS



Photo Credit: © 2006 Adonis (Don) Tate

Dittrichia graveolens

stinkwort

Threat Level: **HIGH**



Photo Credit: © 2008 Keir Morse www.keiriosity.com/

Family: Asteraceae

Form: Annual herb, 3' H

Origin: Mediterranean

Flower: Fall, yellow, < 0.5"

Zone: Coastal Sage Scrub, Coastal Strand

Control: Hand pull, report



Photo Credit: © 2014 Nature Collective



Photo Credit: © 2011 Zoya Akulova

Echium candicans

pride of Madeira

Threat Level: **LOW**



Photo Credit: © 2008 Jorge Fleige

Family: Boraginaceae

Form: Shrub, < 8' H

Origin: Madeira

Flower: Spring/Summer/Fall, blue to violet, < 1"

Zone: Coastal Sage Scrub

Control: Dig out root, prune back



Photo Credit: © 1995 Br. Alfred Brousseau, Saint Mary's College



Photo Credit: © 2011 Michael O'Brien

***Erodium* spp.**

storksbill

Threat Level: **LOW**



E. botrys



E. cicutarium

Photo Credit: © 2004 & 2011 Keir Morse www.keiriosity.com/



E. cicutarium

Photo Credit: © 2007 Keir Morse www.keiriosity.com/

Family: Geraniaceae

Form: Annual herb, < 2' H

Origin: Southern Europe

Flower: Spring, pink or purple, < 5"

Zone: Chaparral, Coastal Sage Scrub

Control: Hand pull



E. cicutarium

Photo Credit: © 2004 Keir Morse www.keiriosity.com/



E. botrys

Photo Credit: © 2003 & 2011 Keir Morse www.keiriosity.com/



E. botrys

© Keir Morse www.keiriosity.com/

***Eucalyptus* spp.**

red river gum, blue gum

Threat Level: **MEDIUM**



E. camaldulensis

Photo Credit: © 2011 Anthony Valois, NPS

Family: Myrtaceae

Form: Tree, 125' H

Origin: Australia

Flower: Fall/Winter/Spring, white/yellow/pink/red, 1"- 2"

Zone: Coastal Sage Scrub, Riparian

Control: Hand pull (plant < 2' H), weed wrench



E. camaldulensis



E. camaldulensis

Photo Credit: © 2011 Anthony Valois, NPS



E. globulus



E. globulus

Photo Credit: © 2011 Anthony Valois, NPS

Foeniculum vulgare

fennel

Threat Level: **MEDIUM**



Photo Credit: © 2010 Steven Thorsted

Family: Apiaceae

Form: Perennial herb, < 8' H

Origin: Mediterranean

Flower: Summer/early Fall, yellow, 2"- 6" clusters

Zone: Coastal Sage Scrub, Riparian

Control: Remove flower heads, prune back



Photo Credit: © 2010 Michael O'Brien



Photo Credit: © 2010 Steven Thorsted



Photo Credit: © 2005 Luigi Rignanese

Glebionis coronaria

garland daisy, crown daisy

Threat Level: **MEDIUM**



Photo Credit: © 2006 Anthony Valois, NPS

Family: Asteraceae

Form: Annual herb, 3' H

Origin: Mediterranean, Asia

Flower: Spring/Summer, white or yellow, 1"- 2"

Zone: Coastal Sage Scrub, Coastal Strand

Control: Hand pull



Photo Credit: © 2010 Michael O'Brien

***Hedera* spp.**

English ivy, Algerian ivy

Threat Level: **HIGH**



H. helix

Photo Credit: © 2005 Luigi Rignanese

Family: Araliaceae

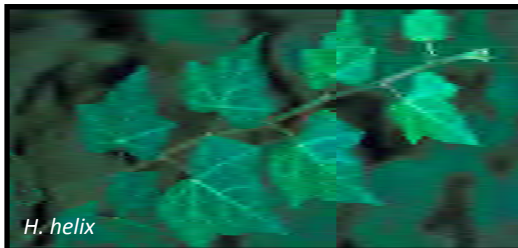
Form: Vine, < 100' L

Origin: Eurasia

Flower: Summer/Fall, white to green, < 0.5"

Zone: Riparian

Control: Report



H. helix

Photo Credit: © 1985 Joe DiTomaso



Hedera sp.

Photo Credit: © 2010 Michael O'Brien



Hedera sp.

Photo Credit: © 2005 Luigi Rignanese

Helminthotheca echoides

bristly ox-tongue

Threat Level: **LOW**



Photo Credit: © 2006 Anthony Valois, NPS

Family: Asteraceae

Form: Annual herb, < 3' H

Origin: Mediterranean

Flower: Summer/Fall, yellow, 1"

Zone: Riparian, Salt Marsh

Control: Hand pull



Photo Credit: © 2006 Anthony Valois, NPS



Photo Credit: © 2012 Zoya Azukova



Lactuca serriola

prickly lettuce

Threat Level: **LOW**



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2010 Zoya Akulova



Photo Credit: © 2014 Zoya Akulova

Family: Asteraceae

Form: Annual herb, < 8' H

Origin: Europe

Flower: Summer/early Fall, yellow, < 0.5"

Zone: Coastal Sage Scrub, Riparian

Control: Hand pull



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Photo Credit: © 2011 Michael O'Brien

Lepidium latifolium

perennial pepperweed

Threat Level: **HIGH**



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2004 Anthony Valois, NPS

Family: Brassicaceae

Form: Perennial herb, 1' - 4' H

Origin: Europe, Mediterranean, Asia

Flower: Spring/Summer, white, 5" - 6" clusters

Zone: Riparian

Control: Report



Photo Credit: © 2010 Zoya Akulova

***Limonium* spp.**

sea lavender

Threat Level: **MEDIUM**



Photo Credit: © 2014 Carolyn Martus



Photo Credit: © 2006 Anthony Valois, NPS

Family: Plumbaginaceae

Form: Perennial herb, < 3' H

Origin: Europe

Flower: Spring/Summer, pink/white/purple, 0.5"

Zone: Coastal Strand, Riparian, Salt Marsh

Control: Hand pull



Photo Credit: © 2009 Anthony Valois, NPS



Photo Credit: © 2011 CNPS, San Luis Obispo Chapter



Photo Credit: © 2006 Anthony Valois, NPS

Malephora crocea

coppery mesemb

Threat Level: **LOW**



Photo Credit: © 2007 Anthony Valois, NPS



Photo Credit: © 2007 Anthony Valois, NPS

Family: Aizoaceae

Form: Perennial herb, < 2' H x 5' - 20' L

Origin: South Africa

Flower: Spring/Summer/Fall, red/orange/yellow, < 1"

Zone: Coastal Sage Scrub, Coastal Strand, Riparian

Control: Hand pull



Photo Credit: © 2010 Michael O'Brien

Mesembryanthemum crystallinum

crystalline iceplant

Threat Level: **LOW**



Photo Credit: © 2004 Keir Morse www.keiriosity.com/



Photo Credit: © 2004 Keir Morse www.keiriosity.com/

Family: Aizoaceae

Form: Annual herb (succulent), < 3' L

Origin: South Africa

Flower: Spring/Summer, white to pinkish, < 0.5"

Zone: Coastal Sage Scrub, Coastal Strand

Control: Hand pull

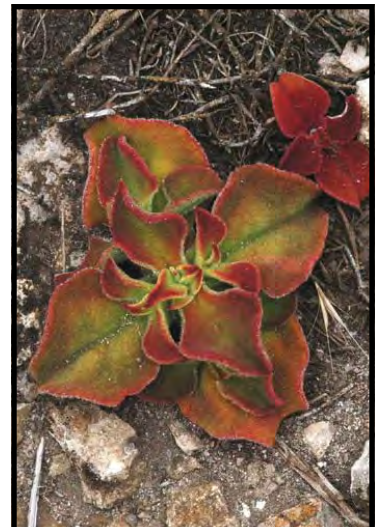


Photo Credit: © 2010 Gary A. Monroe

Myoporum laetum

lollypop tree
Threat Level: **LOW**



Photo Credit: © 2008 Anthony Valois, NPS



Photo Credit: © 2008 Anthony Valois, NPS

Family: Scrophulariaceae

Form: Shrub, 20' - 30' H x 10' - 20' W

Origin: New Zealand

Flower: Spring/Summer, white with purple spots, 0.5"

Zone: Riparian, Salt Marsh

Control: Hand pull, weed wrench



Photo Credit: © 2014 Lori Nussbaum, Nature Collective

Nicotiana glauca

tobacco tree
Threat Level: **MEDIUM**



Photo Credit: © 2011 Barry Breckling

Family: Solanaceae

Form: Shrub/tree, 10' - 20' H

Origin: South America

Flower: All year, yellow, long trumpet shaped, 2" - 3"

Zone: Coastal Sage Scrub, Riparian

Control: Hand pull, weed wrench



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2014 Lori Nussbaum, Nature Collective

Phoenix canariensis

Canary Island date palm

Threat Level: **MEDIUM**



Photo Credit: © 2010 Anthony Valois, NPS

Family: Arecaceae

Form: Tree, 40' - 60' H x 20' - 25' W

Origin: Canary Islands

Flower: Fall/Winter/Spring, cream, < 6'

Zone: Riparian, Salt Marsh

Control: Hand pull (plant < 6' H), report



Photo Credit: © 2010 Michael O'Brien

Plantago lanceolata

English plantain, rib-grass

Threat Level: **LOW**



Photo Credit: © 2013 Jean Pawek

Family: Plantaginaceae

Form: Perennial herb, 1' H

Origin: Europe

Flower: Spring/Summer, oval head, colorless or green

Zone: Riparian

Control: Dig out root, hand pull



Photo Credit: © 2007 Frank Vincentz



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Photo Credit: © 2010 Michael O'Brien

Raphanus sativus

wild radish

Threat Level: **MEDIUM**



Photo Credit: © 2014 Zoya Akulova



Photo Credit: © 2006 Franco Folini, Wikimedia

Family: Brassicaceae

Form: Annual herb, < 3' H

Origin: Mediterranean

Flower: Spring/Summer, white/yellow/lavender, < 0.5"

Zone: Coastal Sage Scrub, Coastal Strand, Riparian

Control: Dig out root, hand pull



Photo Credit: © 2013 Jean Pawek



Photo Credit: © 2004 Anthony Valois, NPS

Ricinus communis

castor bean

Threat Level: **MEDIUM**



Photo Credit: © 2013 Nature Collective

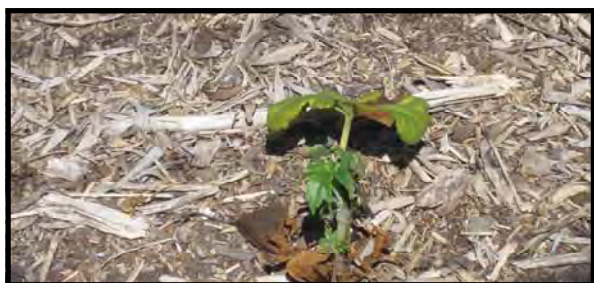


Photo Credit: © 2014 Lori Nussbaum, Nature Collective

Family: Euphorbiaceae

Form: Shrub, < 9' H

Origin: Mediterranean

Flower: All year, green or red, 5"

Zone: Riparian, Salt Marsh

Control: Hand pull (plant < 2' H), weed wrench



Photo Credit: © 2011 Keir Morse www.keiriosity.com/



Photo Credit: © 2004 Anthony Valois, NPS

Rubus armeniacus

Himalayan blackberry

Threat Level: **LOW**



Photo Credit: © 2007 Keir Morse www.keiriosity.com/



Photo Credit: © 2007 Keir Morse www.keiriosity.com/

Family: Rosaceae

Form: Shrub, < 6' H

Origin: Eurasia

Flower: Spring/Summer, white or pink, 0.5" - 1"

Zone: Riparian

Control: Dig out root, weed wrench



Photo Credit: © 2010 Anthony Valois, NPS

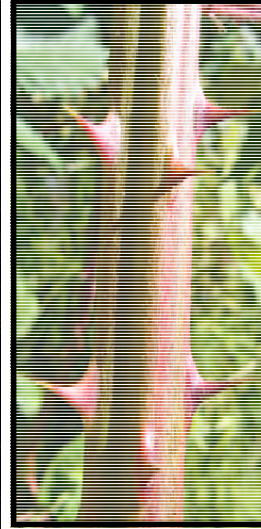


Photo Credit: © 2008-2009 Zoya Akulova



Salsola tragus

Russian thistle, tumbleweed

Threat Level: **LOW**



Photo Credit: © 2008 Anthony Valois, NPS



Photo Credit: © 2008 Anthony Valois, NPS

Family: Chenopodiaceae

Form: Annual herb, 4' H x 4' - 6' W

Origin: Eurasia

Flower: Summer/Fall, white or pink, < 0.5"

Zone: Chaparral, Coastal Sage Scrub, Coastal Strand

Control: Hand pull, sever at base of root with shovel



Photo Credit: © 2014 Lori Nussbaum, Nature Collective

***Schinus* spp.**

pepper tree
Threat Level: **LOW**



Photo Credit: © 2006 Anthony Valois, NPS



Photo Credit: © 2006 Anthony Valois, NPS

Family: Anacardiaceae

Form: Tree, 15' - 35' H

Origin: South America

Flower: Spring/Summer, white, < 1"

Zone: Riparian

Control: Hand pull (plant < 6' H), report, weed wrench



Photo Credit: © 2000 Joe DiTomaso

***Tamarix* spp.**

tamarisk, salt cedar
Threat Level: **MEDIUM**



Photo Credit: © 2008 Anthony Valois, NPS



Photo Credit: © 2009 Gary A. Monroe

Family: Tamaricaceae

Form: Shrub, < 18' H

Origin: Asia

Flower: Spring, white, pink, or red, 2" - 4"

Zone: Riparian

Control: Report



Photo Credit: © 2000 Joe DiTomaso

Tetragonia tetragonioides

New Zealand spinach

Threat Level: **LOW**



Photo Credit: © 2008 Anthony Valois, NPS

Family: Aizoaceae

Form: Annual herb, 1.5' - 2' H

Origin: New Zealand, Australia

Flower: Spring/Summer, yellow-green, < 0.5"

Zone: Coastal Strand, Salt Marsh

Control: Hand pull



Photo Credit: © 2008 Anthony Valois, NPS



Tropaeolum majus

garden nasturtium

Threat Level: **MEDIUM**



Photo Credit: © 2004 Anthony Valois, NPS



Photo Credit: © 2004 Anthony Valois, NPS

Family: Tropaeolaceae

Form: Annual herb, 3' - 10' H

Origin: South America

Flower: Spring, yellow or orange, 1" - 2.5"

Zone: Riparian

Control: Hand pull



Photo Credit: © 2004 Anthony Valois, NPS

Washingtonia robusta

Mexican fan palm

Threat Level: **MEDIUM**



Photo Credit: © 2010 Anthony Valois, NPS



Photo Credit: © 2011 Michael O'Brien

Family: Arecaceae

Form: Tree, 80' - 100' H

Origin: Baja California

Flower: Spring, white or yellow

Zone: Riparian

Control: Hand pull (plant < 6' H), report, weed wrench



Photo Credit: © 2010 Anthony Valois, NPS