

# *Central Texas* **Invasive Plants**



**AUSTIN**  
**INVASIVE**  
MANAGEMENT

**VOLUNTEER**  
**FIELD GUIDE**

[www.austintexas.gov/invasive](http://www.austintexas.gov/invasive)



# Central Texas Invasive Plants

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### Top 24 Austin Invasive Plants of 2013

United States Department of Agriculture plant codes are included in this guide. [plants.usda.gov](http://plants.usda.gov)

THIS PLANT LIST IS ONLY A RECOMMENDATION AND HAS NO LEGAL EFFECT IN THE STATE OF TEXAS. IT IS LAWFUL TO SELL, DISTRIBUTE, IMPORT, OR POSSESS A PLANT ON THIS LIST UNLESS THE TEXAS DEPARTMENT OF AGRICULTURE LABELS THE PLANT AS NOXIOUS OR INVASIVE ON THE DEPARTMENT'S PLANT LIST.

# Central Texas Invasive Plants

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### Top 24 Austin Invasive Plants of 2013

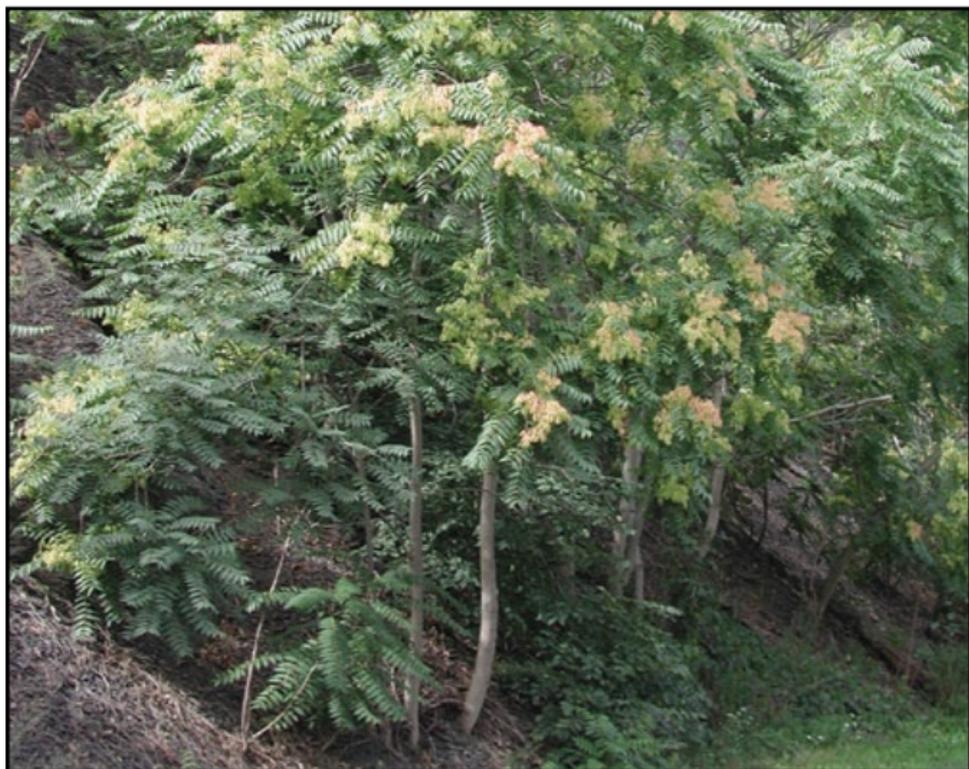
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# TREE OF HEAVEN

*Ailanthus altissima*

**AIAL**

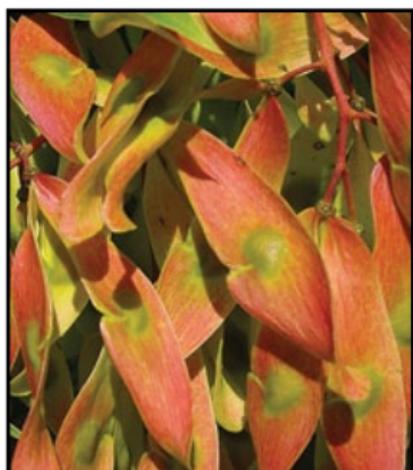


## Identification

- Deciduous overstory tree
- Light gray to whitish bark, fairly smooth
- Alternate, compound leaves
- Base leaflet will have glandular tooth near its base
- Seeds held in large papery samaras. One seed per samara



Leaf



Seeds

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# TREE OF HEAVEN

*Ailanthus altissima*

**AIAL**



## **Habitat:**

Along roads and right of ways; cannot tolerate flooding or extreme shade.

## **Ecological Impact:**

Allelopathic - produces toxins that suppress the growth of other plant species as well as changing the soil chemistry. Fast grower and spreads rapidly. May form monocultures over time.

## **Similar Native Species:**

Desert Willow, Honey Locust, Honey Mesquite, Retama, Fragrant Mimosa

## **Removal:**

Pull plants by hand when young. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

## **Spreading:**

Spreads by seeds from female trees and colonizes by root sprouts.



Flowering tree



Bloom

# MIMOSA, SILK TREE

*Albizia julibrissin*

## ALJU



### Identification

- Deciduous overstory tree
- Grows to 40'
- Light gray to whitish bark, fairly smooth with raised dots and dashes
- Alternate, compound leaves
- Often multi-trunked
- Base leaflet will have glandular tooth near its base
- Showy pink flowers bloom from spring to summer
- Seeds held in flat bean pod, 5-7" long



Seed Pods



Foliage

# MIMOSA, SILK TREE

*Albizia julibrissin*

ALJU



## **Habitat:**

Occurs on dry-to-wet sites along streambanks.

## **Ecological Impact:**

Competes with native trees and shrubs in open areas and forest edges. May create dense stands that reduce the sunlight and nutrients available to other plants.

## **Similar Native Species:**

Desert Willow, Honey Locust, Honey Mesquite, Retama, Fragrant Mimosa

## **Removal:**

Pull plants by hand when young. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

## **Spreading:**

Spreads by seeds, colonizes by root sprouts.

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# PAPER MULBERRY

*Broussonetia papyrifera*

BRPA4

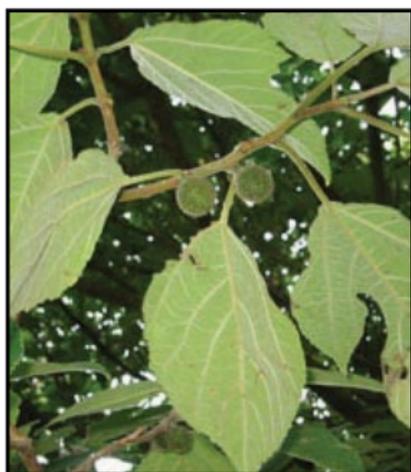


## Identification

- Deciduous overstory tree
- Grows up to 45'
- Leaf shape varies; some have a “mitten” appearance; fuzzy and rough on top, velvety underneath
- Fruits are round and red to orange
- Smooth bark with some furrows
- Soft brittle wood
- Milky white sap when leaves are broken off at the stem
- Twigs have reddish brown hairs



Male flower in spring



Fruit in summer

# PAPER MULBERRY

*Broussonetia papyrifera*

BRPA4



## **Habitat:**

Thrives in open habitats such as forests, field edges, river terraces, and disturbed areas. River terraces are especially prone to invasion by this tree species.

## **Ecological Impact:**

Exhibits aggressive growth and quickly invades disturbed lands displacing native plants. It has a shallow root system that make the trees susceptible to blow over during high winds.

## **Similar Native Species:**

Red Mulberry, Redbud, Catalpa, Cherry Laurel, Texas Persimmon

## **Removal:**

Remove small plants by hand. Use a Weed Wrench™ for 2.5" diameter and smaller.

## **Spreading:**

Spreads by seeds, colonizes by root sprouts.

# CHINESE PARASOL TREE

*Firmiana simplex*

**FISI2**



## Identification

- Deciduous overstory tree
- Grows to 30' - 40'
- Large 12" leaves with 3-5 lobes, leaves bright green above and fuzzy underside, yellow fall foliage
- Green bark
- Flowers in mid-summer



Green Bark



Leaf

# CHINESE PARASOL TREE

*Firmiana simplex*

FISI2



## Habitat:

Prefers moist areas

## Ecological Impact:

Crowds out native plants. A problem in southern hardwood forests. Most likely to be found in riparian areas in Austin

## Similar Native Species:

Bald Cypress, American Sycamore, Arizona Cypress

## Removal:

Pull plants by hand when young. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

## Spreading:

Spread by seeds



Leaves



Fruit

# PRIVETS, LARGE LEAF

*Ligustrum lucidum* - LILU2

*Ligustrum japonicum* - LIJA

*Ligustrum vulgare* - LIVU



## Identification

- Fast growing evergreen tree
- Grows to 15' to 40'
- Opposite leaves are dark green, with a paler green undersurface and have narrow, translucent margins
- Small white flowers bloom in spring
- Clusters of blue berries resembling a small grape cluster
- *L. vulgare* specific: deciduous shrub, fruit hangs on into winter



Flowers



Japanese Privet Leaves

## PRIVETS, LARGE LEAF

*Ligustrum lucidum* - LILU2

*Ligustrum japonicum* - LIJA

*Ligustrum vulgare* - LIVU



### **Habitat:**

Wooded and riparian areas.

### **Ecological Impact:**

Has the potential to replace mid-canopy trees in forests and completely dominate an area of forest or forest fragments if not controlled.

### **Similar Native Species:**

Cherry Laurel, Silktassle

### **Removal:**

Pull plants by hand when young. Use Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps – remove sprouts as they appear. Dispose of seeds.

### **Spreading:**

Spreads by seeds, colonizes by root sprouts.



Glossy Privet Leaves



Berries

# CHINABERRY

*Melia azedarach*

MEAZ



## Identification

- Deciduous, often multi-trunked, tree with an open crown
- Grows to 50'
- Alternate, musky smelling dark green leaves
- Young bark is smooth with white lenticels. Older bark is rougher
- Glossy greenish-brown stems with light dots
- Purple fragrant flowers in the spring
- Yellow fall foliage with yellow berries



Spring Flowers



Mature Fruit

# CHINABERRY

*Melia azedarach*

MEAZ



## Habitat:

Roadsides, older home sites and floodplains

## Ecological Impact:

Leaf litter alters soil chemistry by increasing the nitrogen and pH. Crowds out native plants. Has chemical defenses, few insects eat it. Berries poisonous to humans and some mammals.

## Similar Native Species:

Mexican Plum, Pecan, Honeylocust

## Removal:

Pull plants by hand when young. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

## Spreading:

Spreads vegetatively and by seed. Prolific seed producer.



Bark



Leaves

# CHINESE PISTACHE

*Pistacia chinensis*

PICH4



## Identification

- Compound opposite leaves with up to 10 pairs of leaflets
- Yellow to orange to scarlet leaves in the fall
- Grows to 25'
- Deciduous tree
- Glossy green leaflets in spring and summer
- Red seeds turn blue in fall



Red Fruit



Leaves

# CHINESE PISTACHE

*Pistacia chinensis*

PICH4



## Habitat:

Woodlands and fields near urban areas.

## Ecological Impact:

Recent escapes raise concerns about this tree replacing native species.

## Similar Native Species:

Bigtooth Maple, Texas Red Oak, Flame-leaf Sumac

## Removal:

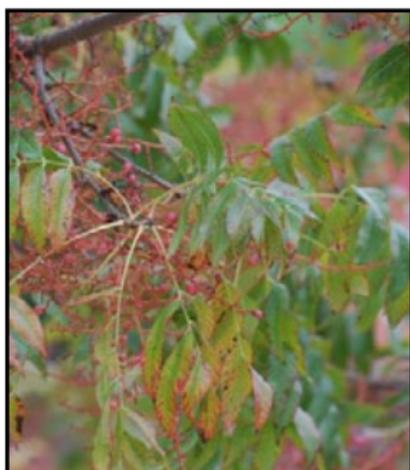
Pull plants by hand when young. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

## Spreading:

Spreads by seeds from mature female trees.



Seeds



Fall Foliage

# CHINESE TALLOW TREE

*Triadica sebifera*

TRSE6

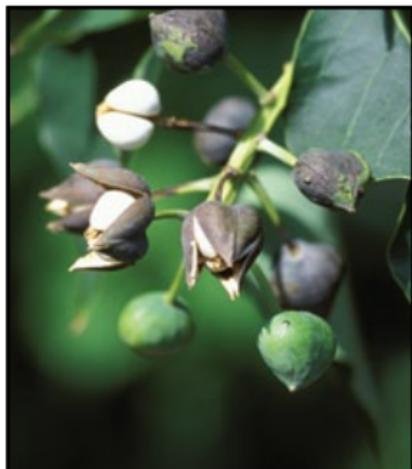


## Identification

- Deciduous tree
- Grows to 60'
- Heart-shaped alternate leaves
- Flowers with long yellow, spike-like branches in fall
- Three lobed small clustered fruits split to release popcorn-like seeds in spring
- Leaves release white, milky substance when cut



Flowers



Fruit

# CHINESE TALLOW TREE

*Triadica sebifera*

TRSE6



## Habitat:

Wetlands, stream banks, open fields and disturbed areas.

## Ecological Impact:

Severely impacts riparian areas and wet lands and can change the chemistry of water, increasing the rate of eutrophication. Leaves decay quickly, increasing the level of nitrogen and phosphorous.

## Similar Native Species:

Bigtooth Maple, Texas Redbud, Cedar Elm, Red Oak

## Removal:

Remove seedlings by hand. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as needed. Discard seeds.

## Spreading:

Spreads by seeds, colonizes by root sprouts.



Bark



Fall Foliage

## PRIVETS, SMALL LEAF

*Ligustrum quihoui* - LIQU2

*Ligustrum sinense* - LISI



### Identification

- Semi-evergreen to evergreen shrub
- Grows to 3' to 9'
- Opposite leaves, with short petioles; blades up to 2" long, usually rounded at the tip
- Flowers white, fragrant, about 3/8" wide, in narrow clusters up to 4" long, appearing from spring through summer
- Fruit berrylike, bluish black, in clusters, and hangs on into winter



Fall Berries



Leaves

## PRIVETS, SMALL LEAF

*Ligustrum quihoui* - LIQU2

*Ligustrum sinense* - LISI



### **Habitat:**

Wooded and riparian areas.

### **Ecological Impact:**

Out competes native vegetation and when not controlled can create a monoculture changing the understory of a forest. Often forms dense thickets, particularly in forests and creek sides.

### **Similar Native Species:**

Yaupon, Wax Myrtle, Possumhaw

### **Removal:**

Pull plants by hand when young. Use Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps – remove sprouts as they appear. Discard seeds.

### **Spreading:**

Birds disperse seeds rapidly.

# HEAVENLY BAMBOO, SACRED BAMBOO

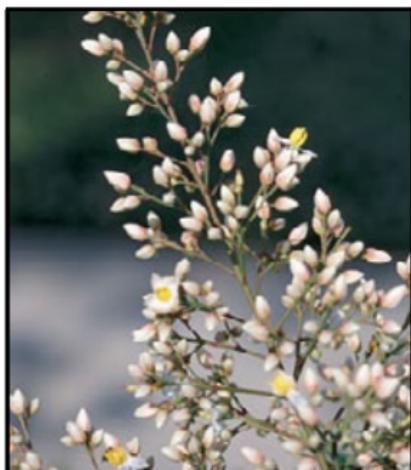
*Nandina domestica*

## NADO



### Identification

- Erect, evergreen shrub
- Grows to 8'
- Glossy, dark-green bipinnately compound leaves
- Multiple stems that resemble bamboo
- Leaves turn red in fall
- Red berries in fall and winter
- White to light pink blossoms



Flowers



Berries

# HEAVENLY BAMBOO, SACRED BAMBOO

*Nandina domestica*

**NADO**



## **Habitat:**

Shady areas of forests and wooded areas.

## **Ecological Impact:**

Crowds out native plants. Can dominate understory. Produces many bright red berries that are attractive to birds that disperse the seeds.

## **Similar Native Species:**

Texas Sage, Autumn Sage, Yaupon

## **Removal:**

If digging, remove all the roots. Cut plants as close to ground as possible. Repeat as plants resprout for several growing seasons until energy reserves of rhizomes are exhausted. Discard seeds.

## **Spreading:**

Spread by seeds and root sprouts. A 3' deep barrier enclosing the plant reduces spreading.

*Many horticultural cultivars exist, most of which are considered invasive. Some do not produce viable seeds.*

## TAIWANESE PHOTINIA

*Photinia serratifolia* - PHSE17

## RED TIPPED PHOTINIA

*Photinia x frazeri* - PHFR9



### Identification

- Erect, evergreen shrub
- Grows to 8' in Central Texas but may grow 15-30' in other areas
- Glossy, dark-green bipinnately compound leaves
- Leaves turn red in fall
- Red berries in fall and winter
- White to light pink blossoms



PHSE17



PHFR9

## TAIWANESE PHOTINIA

*Photinia serratifolia* - PHSE17

## RED TIPPED PHOTINIA

*Photinia x frazeri* - PHFR9



### Habitat:

Frequent in juniper-oak woodlands on limestone slopes and in canyon bottoms, often common near older residential developments.

### Ecological Impact:

Can crowd out native plants.

### Similar Native Species:

Cherry Laurel, Silk Tassel, Possumhaw, Evergreen Sumac

### Removal:

Pull plants by hand when young.  
Use Weed Wrench™ for 2.5" diameter and smaller.  
Cut trees to stumps – remove sprouts as they appear.  
Discard seeds.

### Spreading:

Spreads by seeds.



*P. serratifolia*



*P. x frazeri*

# SCARLET FIRETHORN

*Pyracantha coccinea*

**PYCO2**



## Identification

- Tangled evergreen shrub
- Grows to 20'
- Simple rounded leaves
- Short, straight side stems end in a point creating a thorn
- White flowers in spring through summer
- Clusters of fleshy orange-red berries in fall and winter



Berries



Flowers

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# SCARLET FIRETHORN

*Pyracantha coccinea*

**PYCO2**



## **Habitat:**

Edge of wooded areas.

## **Ecological Impact:**

Crowds out native plants. Can dominate understory.

## **Similar Native Species:**

Evergreen Sumac, Agarita, Yaupon

## **Removal:**

Cutback to base of plant with loppers or a tree saw.  
Discard seeds.

## **Spreading:**

Birds eat berries and disperse seeds.



Seeds



Diagram

# SALT CEDAR OR TAMARISK

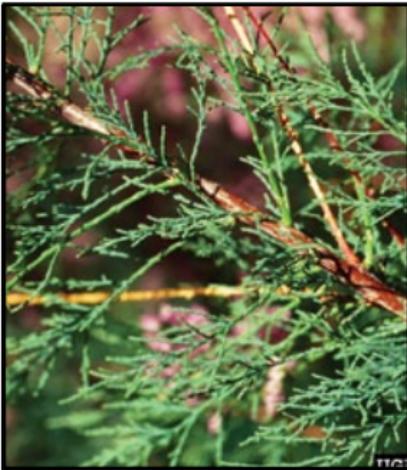
*Tamarix* spp.

## TAMAR2



### Identification

- Small tree, large shrub
- Grows to 10-15'
- Deciduous or evergreen
- Narrow, thin, grayish green alternate leaves
- Scale like leaves, reddish brown stems and bark
- Pink to white flowers spring through summer
- Forms dense thickets



Scale-like Leaves



Pink Flowers

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# SALT CEDAR OR TAMARISK

*Tamarix* spp.

## TAMAR2



### **Habitat:**

Riparian and wet areas.

### **Ecological Impact:**

Crowds out native plants. Degrades wildlife habitat of threatened and endangered species. Uses large quantities of scarce groundwater. Reduces stream flows and alters stream channels.

### **Similar Native Species:**

Desert Willow, Texas Redbud, Honey Mesquite, Black Willow

### **Removal:**

Hand pull plants under 1" diameter. Large thickets can be bulldozed by root plowing. Flooding will kill plants if root crowns are submerged for at least three months. Discard seeds.

### **Spreading:**

Spreads by seeds, vegetative roots.



Flowering Plant



Foliage

# LILAC CHASTE-TREE

*Vitex agnus-castus*

**VIAG**



## Identification

- Deciduous small tree or large shrub
- Grows to 20'
- Leaves are grayish green to dark green, finger-like, palmately compound with 5-9 leaflets
- Purple spikes of blooms spring to fall



Leaf



Fruit

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# LILAC CHASTE-TREE

*Vitex agnus-castus*

## VIAG

### **Habitat:**

Riparian areas.

### **Ecological Impact:**

Crowds out native plants especially in riparian areas. Invasions have been noted in Austin nature preserves. Do not plant near creeks and preserves

### **Similar Native Species:**

American Beautyberry, Red Buckeye, Mexican Buckeye

### **Removal:**

Remove seedlings by hand. Use a Weed Wrench™ for 2.5" diameter and smaller. Cut trees to stumps and remove sprouts as they appear. Discard seeds.

### **Spreading:**

Spread by seeds.



Flower



Leaf cluster

# JAPANESE HONEYSUCKLE

*Lonicera japonica*

**LOJA**



## Identification

- Semi-evergreen trailing or climbing vine
- Grows to 80+'
- Elongated, opposite leaves are usually glabrous
- White and yellow trumpet like flowers
- Black berries that can be dispersed by birds and mammals



Berries



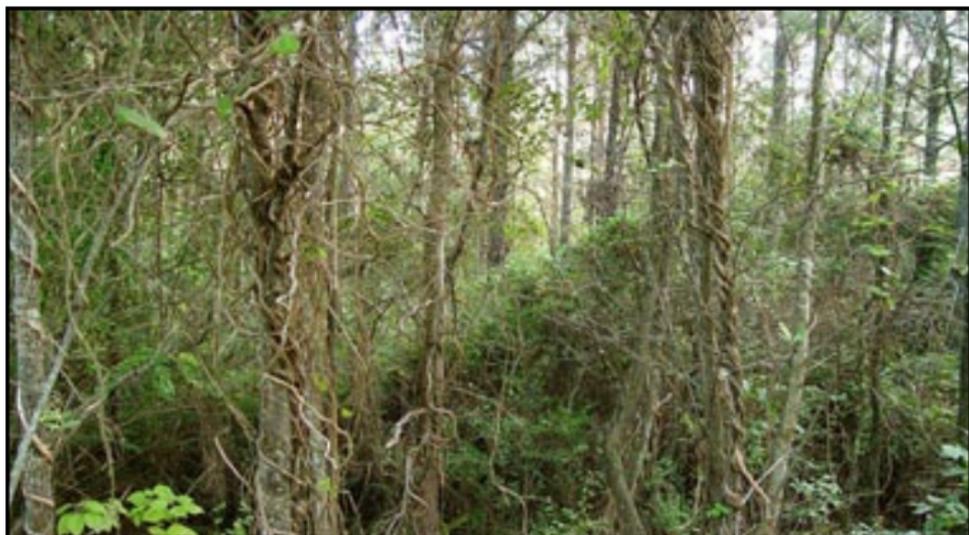
Flowers

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# JAPANESE HONEYSUCKLE

*Lonicera japonica*

## LOJA



### **Habitat:**

Disturbed areas, roadsides, woodland edges and abandoned fields.

### **Ecological Impact:**

Crowds out native plants. Can dominate groundcover and understory.

### **Similar Native Species:**

Coral Honeysuckle, Trumpet Vine, Purple Passion Vine, Crossvine

### **Removal:**

Remove small plants by hand including roots. Mowing may slow vegetative spread.

### **Spreading:**

Spreads vegetatively and by seeds.



Diagram



Leaves

# CATCLAW VINE

*Macfadyena unguis-cati*

## MAUN3



### Identification

- Climbing woody vine
- Branches and runners with adventitious aerial roots
- Leaves opposite, compound, with 2 leaflets
- Tips of tendril forks stiffly hooked, claw-like
- Flowers are yellow floral tubes with orange lines in the throat



Flower



Leaves

# CATCLAW VINE

*Macfadyena unguis-cati*

## MAUN3



### **Habitat:**

Wooded and riparian areas.

### **Ecological Impact:**

Dense mat will cover the forest floor and smother native vegetation, including trees. Areas that are susceptible to invasion to catclaw vine include river or stream banks, near human habitations, and undisturbed areas.

### **Similar Native Species:**

Carolina Jessamine, Trumpet Creeper, Crossvine

### **Removal:**

Dig up small plants by hand, including tubers. Mowing may slow vegetative spread and prevent the plant from producing seeds. Discard seeds.

### **Spreading:**

Spreads by long runners and by seed. Prolific seed producer.



Tuber



Tendrils

# KUDZU

*Pueraria montana* var. *lobata*

# PUMOL



## Identification

- Climbing, semi-woody perennial vine
- Grows to 100+' rapidly
- Alternate leaves with 3 leaflets, up to 4" across, hairy margins
- Hairy stems
- Purple clusters of pea like flowers; grape smell



Seed Pods

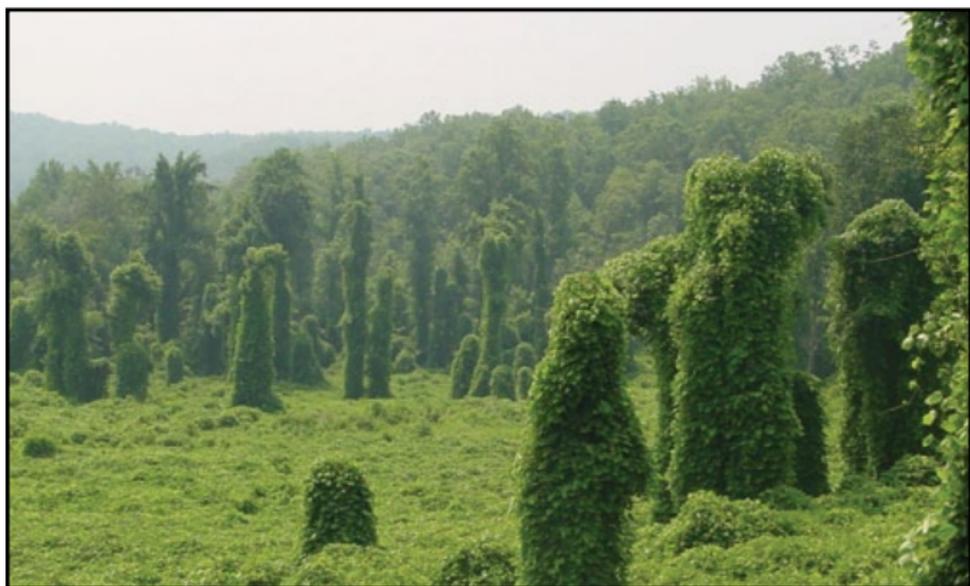


Leaves

# KUDZU

*Pueraria montana* var. *lobata*

# PUMOL



## Habitat:

Roadsides, abandoned lots and along stream banks.

## Ecological Impact:

Crowds out native plants. Can dominate understory.

## Similar Native Species:

Leather Flower, Purple Passionvine,  
Trumpet Creeper

## Removal:

Call 512-974-2550 immediately if sighted.

## Spreading:

Spreads primarily by runners, rhizomes and vines that root at the nodes to form new plants. To a lesser extent it may spread by seeds.



Flower



Bark

# CHINESE WISTERIA

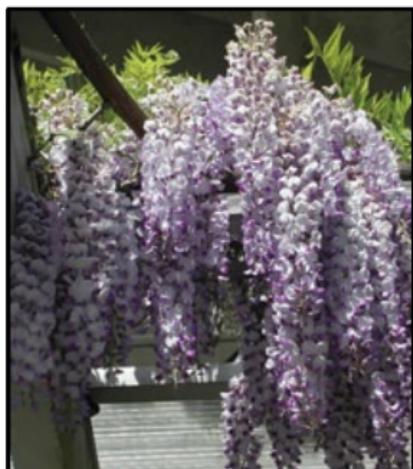
*Wisteria sinensis*

**WISI**



## Identification

- Deciduous, woody vine
- Grows to 70'
- Showy, abundant flowers in spring
- Flowers are pea-like and violet blue
- Long, green, flattened seed pod
- Alternate, pinnately compound leaves



Flowers



Vines

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# CHINESE WISTERIA

*Wisteria sinensis*

## WISI



### **Habitat:**

Disturbed areas, roadsides, forest edges, ditches; escapes near original plantings; can persist in low light settings.

### **Ecological Impact:**

Overpowers shrubs and trees by strangling or shading.

### **Similar Native Species:**

Texas Wisteria, Trumpet Vine, Crossvine, Mountain Laurel

### **Removal:**

Sever vine at base. Remove vines that are coiling around trunks to prevent girdling.

### **Spreading:**

Spreads by vegetative reproduction and seeds.



Leaves



Flowers

# MALTESE STAR THISTLE

*Centaurea melitensis*

**CEME2**



## Identification

- Annual weed to 24" tall
- Basal rosette (circle of leaves at ground level) appears in winter
- Rounded basal leaves pinnately lobed
- Spiny, yellow-flowered head
- Stems wing like in appearance



Flower

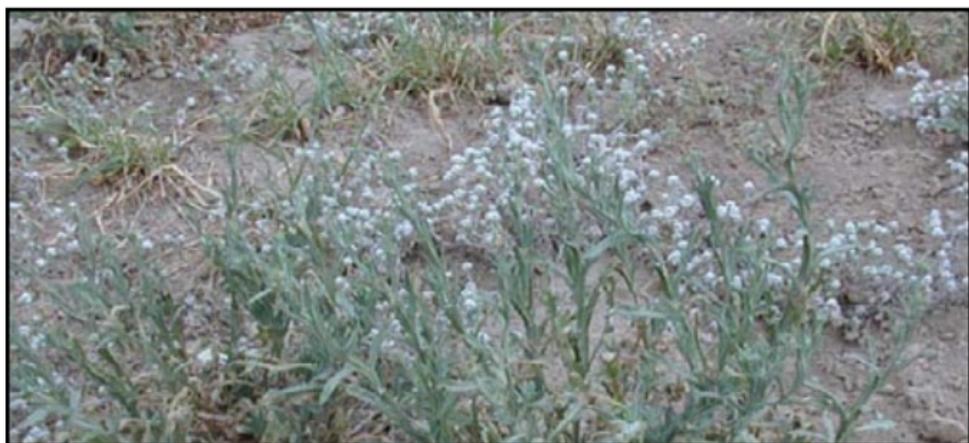


Stem

# MALTESE STAR THISTLE

*Centaurea melitensis*

## CEME2



### **Habitat:**

Open, sunny fields, disturbed areas, riparian areas.

### **Ecological Impact:**

Crowds out native plants especially in riparian areas. When star thistle infestations are high, native species can experience drought-like conditions even in years with normal rainfall.

### **Similar Native Species:**

Texas Thistle, Gaillardia, Engelmann's Daisy

### **Removal:**

Mow during early flowering stage or when buds have produced spines. Mow to a level where no leaves are present.

### **Spreading:**

Spreads by seeds. May produce thousands of seeds per plant.



Spines



Diagram

# ELEPHANT EAR

*Colocasia esculenta*

COES

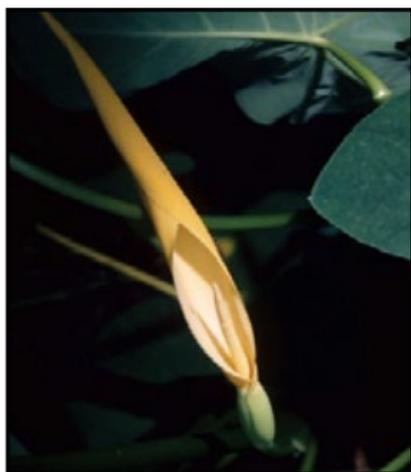


## Identification

- Herbaceous plant
- Grows to 3' tall
- Terrestrial and aquatic plant
- Basal, arrowhead shaped leaves
- Large tubers



Leaf



Flower

H  
E  
R  
B

# ELEPHANT EAR

*Colocasia esculenta*

## COES



### **Habitat:**

Along creekbanks and ponds.

### **Ecological Impact:**

Crowds out native plants, especially in riparian areas.

### **Similar Native Species:**

Delta Arrowhead, Maraca Amarilla, Pickerel Weed

### **Removal:**

Use a shovel to remove. When removing, care must be taken to keep plant intact and remove all fragments to discourage spread.

### **Spreading:**

Spreads vegetatively.



Roots



Stalks

# JAPANESE NETVEIN HOLLYFERN

## HOLLY FERN

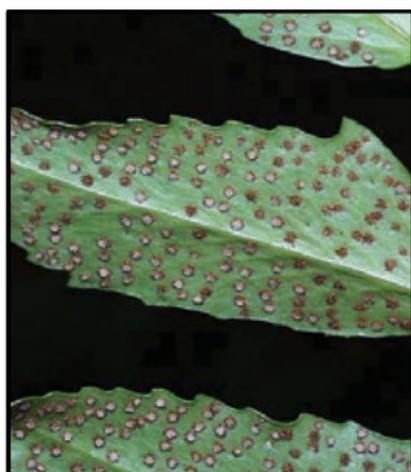
*Cyrtomium falcatum*

CYFA2



### Identification

- Evergreen fern
- Grows to 3'
- Foliage resembles holly
- Dark green serrated leaves
- Spores on bottom of the leaf



Spores under leaf



New growth

H  
E  
R  
B

# JAPANESE NETVEIN HOLLYFERN

## HOLLY FERN

*Cyrtomium falcatum*

CYFA2



### **Habitat:**

Shaded understory.

### **Ecological Impact:**

Crowds out native plants.

### **Similar Native Species:**

River Fern, Coralberry, Dwarf Yaupon

### **Removal:**

Dig up plants, getting all of the root system.

### **Spreading:**

Spread by spores.



Leaves



New growth

# ANNUAL BASTARD CABBAGE, TALL MUSTARD WEED

*Rapistrum rugosum*

**RARU**



## Identification

- Annual weed
- Grows to 30"
- Basal rosette in winter with leaves having deep sinuses
- Basal leaves dark green, deeply lobed and wrinkled
- Blooms yellow in early spring (blooms at the same time as bluebonnets)
- Flowers have 4 petals in cross-like arrangement
- Seed capsule is stalked with long beak at tip and contains 1-2 seeds



Leaf



Plant

# ANNUAL BASTARD CABBAGE

*Rapistrum rugosum*

**RARU**



## **Habitat:**

Roadsides, open sunny areas, disturbed areas, and degraded pastures.

## **Ecological Impact:**

Crowds out native plants, especially in riparian areas. Forms monoculture.

## **Similar Native Species:**

Engelmann's Daisy, Plains Coreopsis, Maximillian Sunflowers

## **Removal:**

Dig up whole plant including taproot and then plant native seeds to compete with invasive plant seeds left in the soil.

## **Spreading:**

Spreads by seeds and quickly covers ground with a blanket of leafy rosettes (circles of leaves at ground level).



Fruit

# BRAZILIAN VERBAIN

*Verbena brasiliensis*

**VEBR2**



## Identification

- Large herbaceous perennial
- Grows to 6'
- Square stem
- Elliptic to lanceolate leaves with serrated edges
- Opposite leaves and branching
- Purple flowers in late spring to summer



Flowers



Seed head

# BRAZILIAN VERBAIN

*Verbena brasiliensis*

**VEBR2**



## **Habitat:**

Roadsides, disturbed areas, along creeks.

## **Ecological Impact:**

Crowds out native plants, especially in riparian areas.

## **Similar Native Species:**

Prairie Verbena, Liatris, Woolly Ironweed

## **Removal:**

Pull plants by hand.

## **Spreading:**

Spreads by seeds.



Flowers



Stem

# GIANT REED

# GIANT CANE

*Arundo donax*

**ARDO4**



## Identification

- Perennial grass with woody canes
- Grows to 20'
- Alternate leaves with parallel veins
- Leaves are 2-3" at base and taper to a point
- Plume like flowers in late summer are 1-2'



Stalk



Flower

# GIANT REED GIANT CANE

*Arundo donax*

**ARDO4**



## **Habitat:**

Riparian and floodplain areas.

## **Ecological Impact:**

Crowds out native plants, especially in riparian areas.

## **Similar Native Species:**

Sotol, Sugarcane plumegrass, Thompson Yucca, Horsetail

## **Removal:**

Hand pull small plants. Hand-dig with a grubbing tool and remove all rootstalks.

## **Spreading:**

Spreads vegetatively.



Plant



Diagram

# KING RANCH BLUESTEM

*Bothriochloa ischaemum* var. *songarica*

**BOISS**



## Identification

- Perennial grass to 24" when flowering
- Extremely hairy ligule
- Round, blonde, straw like stems when dry
- Multiple spikelets have purplish hue when new
- Nodes are purple with fuzzy ring



Bunchgrass



Flowering

# KING RANCH BLUESTEM

*Bothriochloa ischaemum* var. *songarica*

**BOISS**



## **Habitat:**

Open fields and grasslands.

## **Ecological Impact:**

Forms monocultures that crowd out native plants.  
Destroys habitat of quail and other grassland birds.

## **Similar Native Species:**

Buffalo grass, Blue Grama grass, Little  
Bluestem grass

## **Removal:**

Mowing before seed heads are produced.  
Professionally supervised prescribed burns.

## **Spreading:**

Spreads by seed. Most infestations are due to  
intentional seeding for cattle or roadside vegetation.



Seeds



Clumpgrass

# BERMUDAGRASS

*Cynodon dactylon*

CYDA

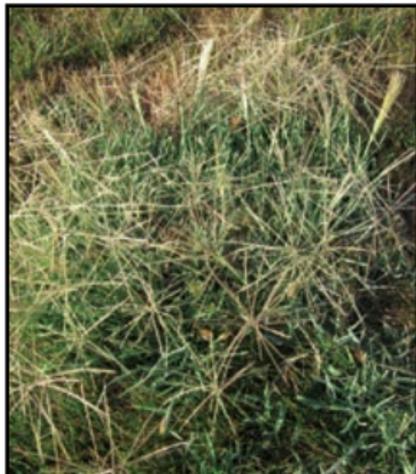


## Identification

- Grows to 1.5'
- Narrow leaf
- Forms a dense sod
- Creeping rhizomes and stolons
- Roots from base of plant and nodes/joints on runners



Roots



Flowering

# BERMUDAGRASS

*Cynodon dactylon*

## CYDA



### **Habitat:**

Gardens, sports fields, and other areas where it was introduced as turf. Grows best in full sun or partial sun.

### **Ecological Impact:**

Invades garden beds and competes with ornamental and vegetable plants. Spreads into disturbed areas and outcompetes other early successional species. Allelopathic – produces toxins that suppress the growth of other plant species.

### **Similar Native Species:**

Buffalograss, Blue Grama, Curly-Mesquite. It is recommended that a mix of native grasses or improved hybrids of Bermuda grass such as Tifgreen, Tifdwarf, Tifway and Santa Ana be used in areas where a durable lawn is desired as these hybrids do not produce seed.

### **Removal:**

Repeated hand removal of rhizomes and stolons. Solarization.

### **Spreading:**

Spreads by runners and seeds. Produces seeds that remain viable in soil for at least two years.

# GOLDEN BAMBOO

*Phyllostachys aurea*

PHAU8



## Identification

- Evergreen grass
- Grows to 16'-40'
- Long pointed leaves in fan like clusters
- Jointed stems
- Wood-like stem



Stems



Leaves

# GOLDEN BAMBOO

*Phyllostachys aurea*

PHAU8



## Habitat:

Old home sites and adjacent natural areas.

## Ecological Impact:

Crowds out native plants, especially in riparian areas.

## Similar Native Species:

Yaupon, Bamboo Muhly

## Removal:

Cut plants as close to ground as possible. Repeat as plants resprout for several growing seasons until energy reserves of rhizomes are exhausted. If digging, remove all the roots.

## Spreading:

Spreads by runners and root rhizomes. A 3' deep barrier surrounding the plant may reduce spread.



New root sprout



Foliage in July

# JOHNSONGRASS

*Sorghum halepense*

SOHA



## Identification

- Grows to 6'
- Wide leaf blade with white stripe down the center
- Thick, creeping underground stems



Young Flower



Flower

# JOHNSONGRASS

*Sorghum halepense*

## SOHA



### **Habitat:**

All soils, roadsides, creeksides, sunny to shady areas.

### **Ecological Impact:**

Crowds out native plants. Long term seed viability and extensive root system.

### **Similar Native Species:**

Little Bluestem, Bushy Bluestem, Lindheimer's Muhly

### **Removal:**

Manually remove as much of the root system as possible. Persistent so may take several tries.

### **Spreading:**

Spreads vegetatively and by seed.



Leaf



Roots

# WATER HYACINTH

*Eichhornia crassipes*

**EICR**

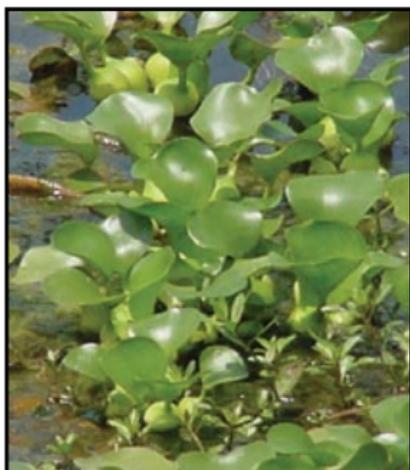


## Identification

- Aquatic plant that floats on water
- Thick, shiny, bright green, kidney-shaped leaves; 1-5" in width
- Large lavender flowers in groups of 8-15



Flower



Floating Vegetation

# WATER HYACINTH

*Eichhornia crassipes*

## EICR



### **Habitat:**

Found in all types of freshwater bodies. Grows anywhere it can avoid freezing temperatures.

### **Ecological Impact:**

Forms dense mat on top of the water that blocks sunlight from penetrating the water and results in decreased dissolved oxygen levels. Threatens water intakes and impedes boat traffic.

### **Removal:**

For small infestations, remove plants by hand or with a rake. Larger areas may need harvester machines.

### **Spreading:**

Spreads by rhizomes and prolific seeds. Population may double in 6-18 days.

**HYDRILLA**  
*Hydrilla verticillata*  
**HYVE3**



**Identification**

- Rooted, submersed aquatic plant
- Forms dense mats in water
- Grows in 1'-20' of water
- $\frac{3}{4}$ " leaves grow in whorls
- Fine teeth on edge of leaves
- Tiny flowers



Vegetation



Foliage

# HYDRILLA

*Hydrilla verticillata*

## HYVE3



### **Habitat:**

Fresh water bodies.

### **Ecological Impact:**

Forms dense underwater stands that reduce aquatic plant diversity. May reduce water quality as dense vegetation dies and decomposes. Threatens water intakes, recreation and navigation on the lake.

### **Similar Native Species:**

Southern Waternymph, Humped Bladderwort, American Eelgrass

### **Removal:**

Mechanical harvesters. Herbivorous fish such as sterile grass carp.

### **Spreading:**

Spreads by root crowns and plant fragments.

# EURASIAN WATERMILFOIL

*Myriophyllum spicatum*

**MYSP2**



## Identification

- Rooted, submersed, aquatic plant
- Grows in 3-10' of water
- Grayish-green leaves in whorls around stem
- Feathery appearance



Vegetation



Hydrilla Comparison

# EURASIAN WATERMILFOIL

*Myriophyllum spicatum*

**MYSP2**



## **Habitat:**

Spreads into disturbed water areas.

## **Ecological Impact:**

Ecological Impact: Forms dense mat on top of the water that blocks sunlight from penetrating the water and results in decreased dissolved oxygen levels. Impedes boat traffic.

## **Removal:**

For small areas remove by hand or with rake. For large areas, use mechanical harvester at the peak of biomass in early summer. Better results with repeated harvesting. All plant parts must be removed.

## **Spreading:**

Spreads by plant fragments.