

TERRESTRIAL INVASIVE WEEDS

OF THE LAKE TAHOE BASIN



A Comparison Guide
to Non-native Invasive Weeds & Common Look-alikes



LAKE TAHOE BASIN
WEED COORDINATING GROUP



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Graphic Design
Annaliese Miller

Illustrations © Annaliese Miller

Photography courtesy of:

Jim Belsher-Howe, Robin Breckenridge,
Beth Brenneman, Michael Charters, Joe DiTomaso,
Susan Donaldson, Laura Ann Eliassen, Tim Hanson,
Japhia Huhndorf, Ed King, Steve Matson, Annaliese Miller,
Keir Morse, Susi Urie, Kathy VanZuuk, Charles Webber,
Kathy Welch, Melanie Williams

Text

The Lake Tahoe Basin Weed Coordinating Group

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WHAT ARE NON-NATIVE INVASIVE WEEDS

For the purpose of this booklet, a non-native invasive weed is a plant growing outside of its natural range and threatening native species diversity. In this book we use the term weed and non-native invasive weed interchangeably. Not all non-native plants are invasive. Weeds readily establish in desired vegetation and spread in a variety of settings, especially where lands have been disturbed.

When weeds displace desired native plants they:

- Disrupt wildlife habitat
- Reduce hunting and fishing potential
- Change habitat aesthetics
- Inhibit recreational activities and tourism
- Crowd out endangered species
- Reduce forage value
- Increase soil erosion
- Threaten lake clarity

For example, in the Lake Tahoe Basin, weeds that have coarse or shallow root systems, such as perennial pepperweed and Dalmatian toadflax, increase soil erosion and threaten lake clarity.

Due to the severity of these impacts, California and Nevada have designated many of the weeds featured in this book as noxious under state law, requiring actions to prevent the introduction, establishment and spread of these detrimental pests.




If you find a non-native invasive weed, please report the infestation to the appropriate county (see contact numbers on the inside back cover) or go online to **tahoeinvasiveweeds.org** and complete the reporting form.

HOW TO USE THE GUIDEBOOK

The guidebook will help you identify non-native invasive weeds threatening the Lake Tahoe Basin. Common “look-alikes” are also included to help you differentiate between desirable native plants and invasive weeds.

Each plant profile includes management information. Some invasive weeds may be controlled effectively by homeowners, while others require professional assistance.

Look for these face icons at the top of the page:

-  = Non-native invasive weeds **Report (pg. 87)**
-  = Desirable look-alikes (native and non-invasive)
-  = Plants that could potentially become invasive.
(You may choose to avoid planting species that may become invasive on your property.)

California and Nevada designate particularly troublesome non-native invasive weeds as noxious weeds. Both states use a rating system based on distribution and relative tenacity to assist in prioritizing noxious weed control and eradication efforts. The ratings below are provided for each species.

“A” rated: found in limited distribution throughout the state and considered top priority for eradication and control before they become widespread.

“B” rated: may be established in scattered populations in the state; treatment priority is determined on a case-by-case basis depending on the value of resources being compromised, local distribution and available resources.

“C” rated: generally established and widespread.

Relative abundance of each species is also provided.

- Widespread:** Found at numerous locations in the Lake Tahoe Basin.
- Moderate:** Found at several locations; large populations may occur at a few locations.
- Infrequent:** Only at one or a few locations; no large populations.

PREVENTING THE SPREAD OF WEEDS

Prevention is the least expensive and most effective way to halt the spread of non-native invasive weeds.

This requires:

- Educating workers and the public about the importance of managing weeds on an ongoing basis
- Properly identifying weed species
- Avoiding or treating existing weed populations
- Preventing weed seeds or other plant parts from establishing new or bigger populations

Steps you can take:

1. Use this book to identify invasive weeds in your area.
2. Inspect your work or play area. Identify any invasive weeds; map the location of the weeds.
3. Clean vehicles, shovels and other soil-disturbing equipment prior to entering a site to avoid introducing weeds.
4. Don't introduce weed-contaminated soil, fill, or other materials to new sites. Use certified weed-free products.
5. Check shoes, clothing, bicycles and vehicles regularly for weed seeds or other plant parts. Carefully remove and dispose of weedy materials.
6. Pressure-wash vehicles and equipment after driving in weedy areas. Periodically monitor and treat areas to prevent weedy plants from establishing.
7. Establish a decontamination area such as a tarp for cleaning clothing and equipment.
8. Don't walk, ride or drive through infestations. When operating vehicles, stay on established roads or trails.
9. If dogs accompany you, check their paws and coats for weed seeds and other plant parts and remove them.
10. Don't plant weeds in your garden or landscape.
11. Get advice for treatment on private property from your local county agriculture department or weed district.
(See contact information on back page.)

WEED MAPPING

The Lake Tahoe Basin Weed Coordinating Group has been mapping weeds in the basin since 2002. Regular mapping and inventory helps us determine which species are present in the basin and implement appropriate management actions. We also track patterns of spread and plan preventive practices.

We welcome your mapping information. Go to **tahoeinvasiveweeds.org** and complete the reporting form. You'll also find additional photos and information about invasive weeds, plus maps showing locations of known infestations in the Lake Tahoe area.

When collecting data, please include:

- Date surveyed
- Weed name (preferably the scientific name)
- Latitude and longitude of the observation if available
- Thorough description of the location
- Number of plants
- Pictures if possible

Please do not take any management actions or remove plants until they have been positively identified. Consult your county weed contact for assistance. See page 87.

Free invasive weed mapping Apps available:

- Calflora Observer Pro – calflora.org
- EDDMapS West – edddmaps.org/west



LAKE TAHOE BASIN
WEED COORDINATING GROUP
tahoeinvasiveweeds.org

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THISTLES AND LOOK-ALIKES

☹ Invasive				
BULL THISTLE	<i>Cirsium vulgare</i>	CIVU	12-13	
CANADA THISTLE	<i>Cirsium arvense</i>	CIAR4	14-15	
MUSK THISTLE	<i>Carduus nutans</i>	CANU4	16-17	
SCOTCH THISTLE	<i>Onopordum acanthium</i>	ONAC	18-19	
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☺ Look-alike				
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INDEX	COMMON NAME	Scientific Name	CODE	Page
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TOADFLAX AND LOOK-ALIKES

☹ Invasive				
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YELLOW TOADFLAX	<i>Linaria vulgaris</i>	LIVU2	52-53	
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☹ Invasive				
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GRASSES AND LOOK-ALIKES

☹ Invasive				
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JOINTED GOATGRASS	<i>Aegilops cylindrica</i>	AECY	66-67	
MEDUSAHEAD	<i>Elymus caput-medusae</i>	ELCA13	68-69	
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TREE OF HEAVEN	<i>Ailanthus altissima</i>	AIAL	82-83	

QUICK REFERENCE ID

THISTLES	Flower Head	Leaves
Bull Thistle	 vase	 rough, prominent veins
Canada Thistle	 drop	 lobed, spiny
Musk Thistle	 disk	 midrib, hairless
Scotch Thistle	 oval	 cobweb hairy
Anderson's Thistle (look-alike)	 cylinder	 small flat hairs
Elk Thistle (look-alike)	 no stems	 long hairs

QUICK REFERENCE ID

KNAPWEEDS	Bracts	Lower Leaves
Diffuse Knapweed	 spiny combs	 deeply lobed
Russian Knapweed	 papery	 lobed
Spotted Knapweed	 spots	 deeply lobed
Aster spp. (look-alike)	 no spines, yellow disk	 narrow, entire
Bachelor's Buttons (look-alike)	 no spots	 narrow, entire

QUICK REFERENCE ID

YELLOW ASTERS

Bracts

Stems

Yellow
Starthistle



long, stout spines
straw colored



lateral
spines
at base



winged
stem

Flowers/Plant

Stems

Rush
Skeletonweed



mostly smooth,
hairless



bottom
of stem
with stiff
downward
pointing
hairs

Stinkwort



sticky-glandular,
smells of camphor



densely
branched

QUICK REFERENCE ID

TOADFLAX

Flower Spur

Leaves

Dalmatian
Toadflax



long,
somewhat
curved or
straight



leaves ovate,
tips pointed,
clasp stem

Yellow
Toadflax



long, straight
sometimes
slightly
curved



leaves linear,
pointed at
both ends

Snapdragon
(look-alike)



no spur



lower leaves
lanceolate

BROOMS

Seed Pods

Leaves

Stems

Scotch
Broom



only
margins
hairy



3 leaflets,
sometimes
simple



sharply
5 angled

Spanish
Broom



hairy



simple



round
finely ribbed

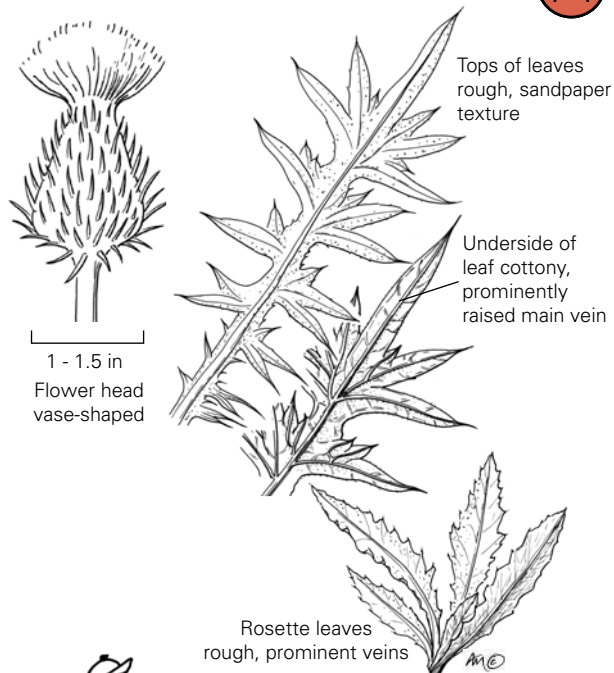
BULL THISTLE *Cirsium vulgare* CIVU



Plant, Breneman; Flower, Donaldson

Also Known As	Common thistle
Origin	Eurasia
Habitat	Meadows, roadsides, disturbed sites
Life Cycle	Biennial
Flowering Time	Mid-July to fall
Relative Abundance	Widespread
Management	Dig, removing top 2 inches of root; herbicides are available
Noxious Weed List	Nevada NO; California C-rated

Non-native Invasive



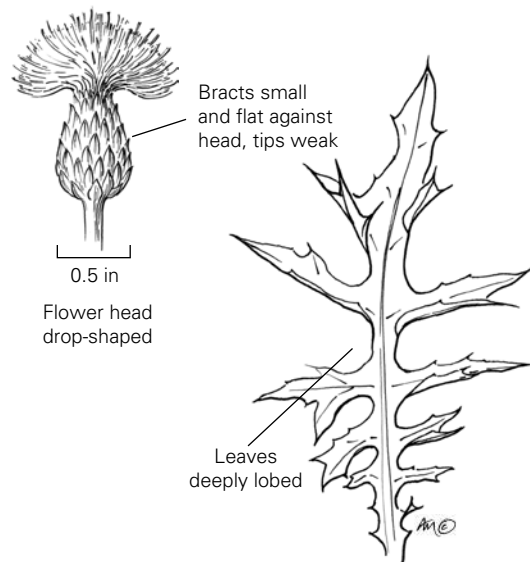
- Height: 1 - 6 ft, commonly 2 - 3 ft
- Stems: spiny and winged
- Leaves: sandpaper texture, prominent veins
- Flowers: in clusters at ends of branches
- Flower color: pink to purple



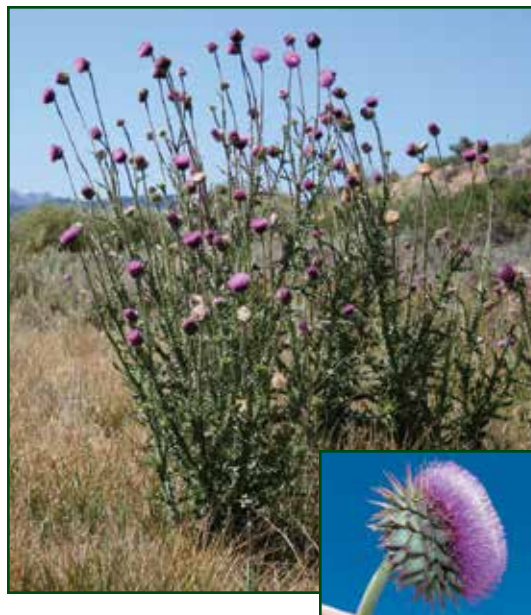
Donaldson



Also Known As	Field thistle
Origin	Europe
Habitat	Roadsides, rangelands, forests, lawns, gardens, moist and disturbed sites
Life Cycle	Perennial; reproduces from creeping roots and seeds
Flowering Time	Mid-July to fall
Relative Abundance	Infrequent
Management	Aggressive; pulling and burning favor root resprouting; chemical control is needed
Noxious Weed List	Nevada C-rated; California B-rated

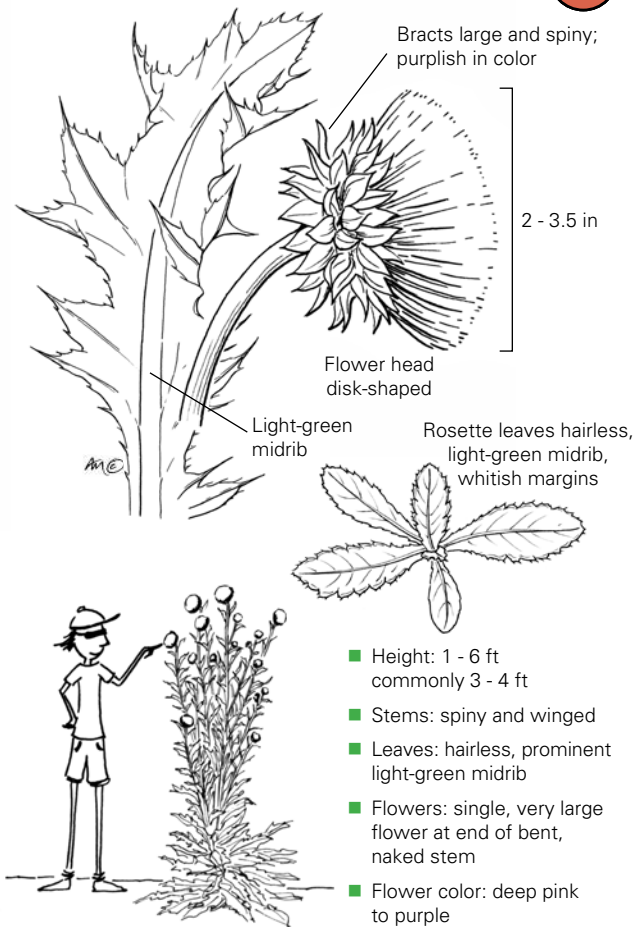


- Height: 1.5 - 4 ft, commonly 2 - 3 ft
- Stems: smooth and ridged with no spines
- Leaves: smooth and sessile
- Flowers: multiple small flower heads in clusters on each stem
- Flower color: light purple to white



Plant, Miller, Flower, Donaldson

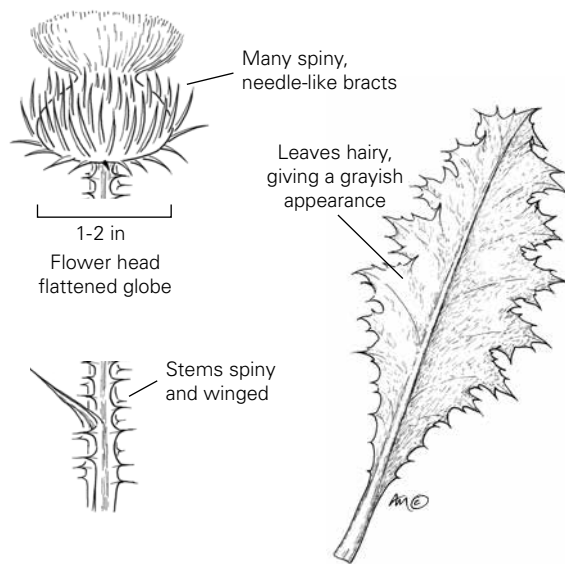
Also Known As	Nodding thistle
Origin	Europe
Habitat	Pastures, forest, rangelands, roadsides, waste areas, ditches
Life Cycle	Biennial
Flowering Time	Mid-July to fall
Relative Abundance	Infrequent
Management	Dig, removing top 2 inches of root; herbicides are available
Noxious Weed List	Nevada C-rated; California A-rated





Donaldson

Also Known As	Winged thistle
Origin	Europe
Habitat	Waste areas, roadsides, disturbed soils
Life Cycle	Biennial; rarely annual
Flowering Time	Mid-July to fall
Relative Abundance	Infrequent
Management	Dig, removing top 2 inches of root; herbicides are available
Noxious Weed List	Nevada C-rated; California A-rated

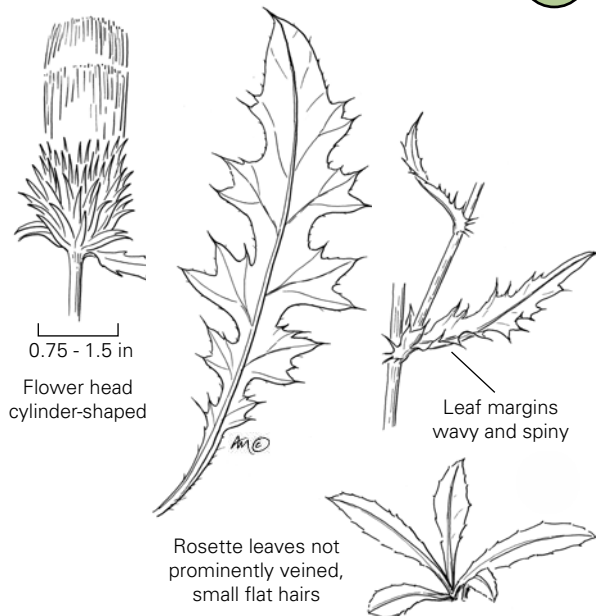


- Height: up to 10 ft, commonly 5+ ft (the tallest of the thistles)
- Stems: spiny, prominently winged
- Leaves: hairy and sessile
- Flowers: in groups of 2 or 3 on branched tips
- Flower color: purple



Breneman

Also Known As	Rose thistle
Origin	Native
Habitat	Open places, woodlands, forests
Life Cycle	Biennial
Flowering Time	July to fall
Relative Abundance	Widespread
Management	Desirable native plant; do not disturb
Noxious Weed List	None, Native

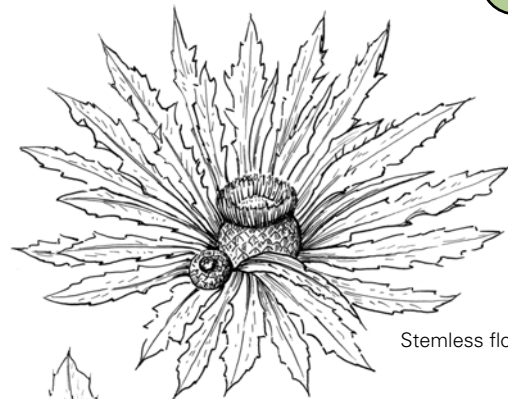


- Height: 2 - 4 ft
- Stems: purplish and thornless
- Leaves: divided and wavy with spiny margin
- Flowers: single flower at end of stem
- Flower color: rose red to reddish purple



Breneman

Also Known As	Drummond's thistle
Origin	Native
Habitat	Moist places at mid to high elevations
Life Cycle	Biennial
Flowering Time	June to August
Relative Abundance	Moderate
Management	Desirable native plant; do not disturb
Noxious Weed List	None, Native



Stemless flower



Rosette leaves have long golden hairs; long fine spines at leaf margins

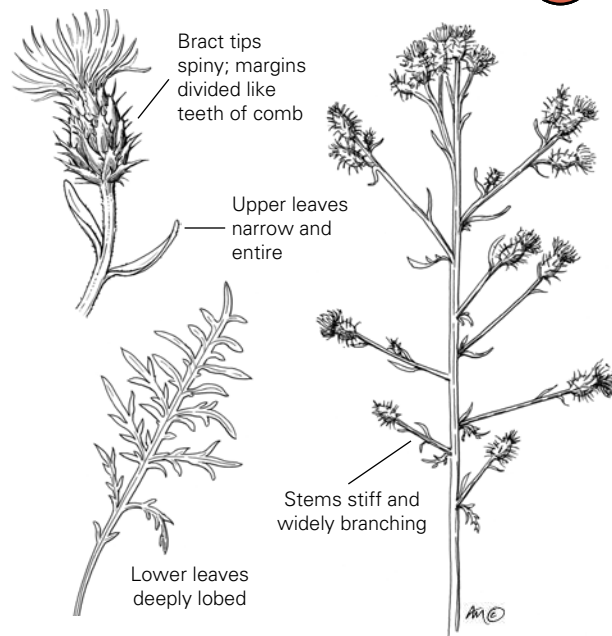
- Height: up to 3 ft, generally less than 1 ft
- Stems: usually no stems; forms round flat rosette
- Leaves: lobed, somewhat spiny, pale green foliage
- Flowers: extend directly from rosette
- Flower color: white to pale lavender





Donaldson

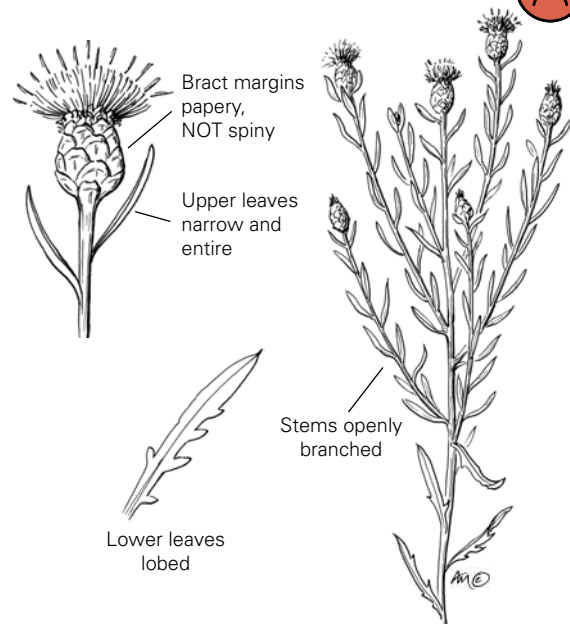
Also Known As	Tumble knapweed
Origin	Southeastern Eurasia
Habitat	Roadsides, waste areas, dry rangelands, disturbed sites
Life Cycle	Annual to short-lived perennial
Flowering Time	June to August
Relative Abundance	Infrequent
Management	Minimize seed production; pull or dig plants several times per year and monitor for several years; herbicides are available
Noxious Weed List	Nevada B-rated; California A-rated



- Height: 1 - 2.5 ft
- Stems: rough to touch
- Leaves: upper, entire; lower, deeply lobed
- Growth form: maintains bush shape; after frost, can break off and tumble
- Flower color: white to pale pink



Also Known As	Creeping knapweed
Origin	Central Asia
Habitat	Roadsides, riverbanks, ditches, pastures, waste places
Life Cycle	Perennial; reproduces from creeping roots
Flowering Time	July to fall
Relative Abundance	Infrequent
Management	Cut or mow prior to seed set to reduce current year's growth; chemical control is needed
Noxious Weed List	Nevada C-rated; California B-rated

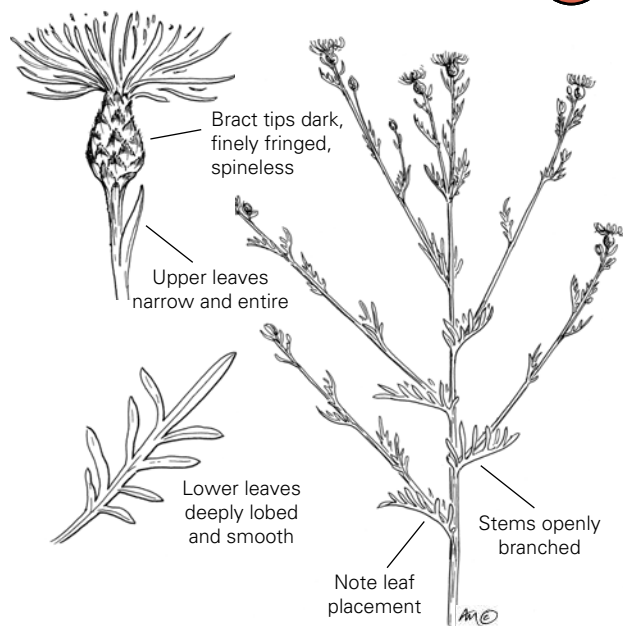


- Height: 1 - 3 ft, generally 2 - 3 ft
- Stems: erect, cobwebby
- Leaves: upper, entire; lower and rosette, lobed
- Growth form: thick rounded clumps with drooping branches
- Root: black below crown
- Flower color: pink to purple



Plant, Breckinridge CDF, Flower, Donaldson

Also Known As	<i>Centaurea stoebe</i>
Origin	Europe
Habitat	Disturbed soil, rangelands, pastures, meadows, roadsides, areas with summer rainfall
Life Cycle	Perennial; sometimes biennial, can reproduce vegetatively from roots
Flowering Time	July to early September
Relative Abundance	Moderate
Management	Chemical control is needed
Noxious Weed List	Nevada A-rated; California A-rated



- Height: 1 - 5 ft; generally closer to 3 ft
- Stems: erect and rough
- Leaves: upper, linear; lower, divided
- Growth form: tall with open branching
- Flower color: pink to purple

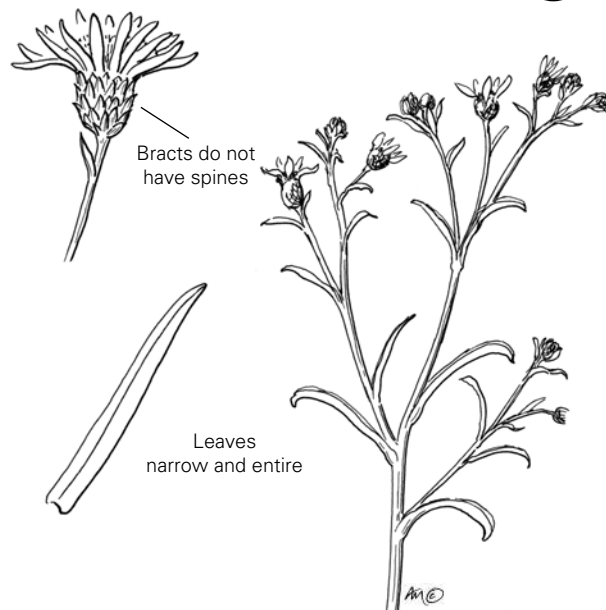
AMERICAN-ASTER *Symphyotrichum* spp.



Donaldson

Also Known As	Various
Origin	Native
Habitat	Meadows, gardens
Life Cycle	Annual or perennial
Flowering Time	Late July to fall
Relative Abundance	Widespread
Management	Desirable native plant; do not disturb
Noxious Weed List	None, Native

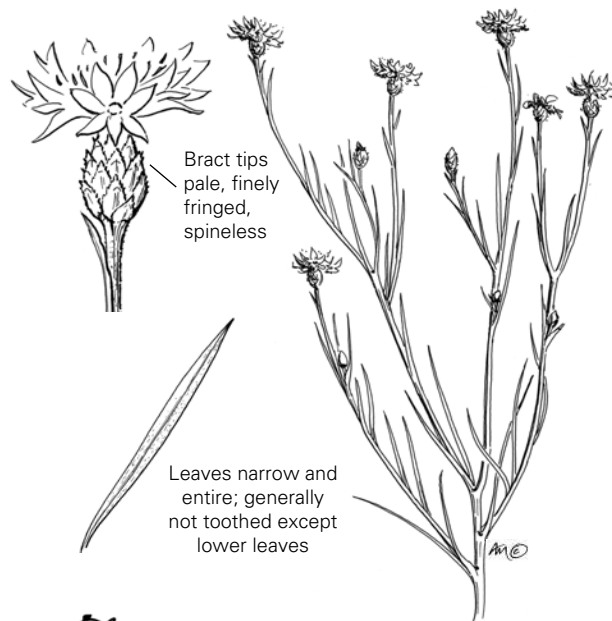
Native Look-alike



- Height: variable, often 1 - 2 ft
- Stems: smooth to hairy
- Leaves: upper and lower leaves narrow and entire
- Growth form: ranges from short to tall
- Flower color: variable, often pink to purple with yellow center



Also Known As	Cornflower
Origin	Southern Europe, can be invasive, has escaped from cultivation
Habitat	Disturbed grasslands, open woods, ornamental plantings
Life Cycle	Annual
Flowering Time	July to September
Relative Abundance	Widespread
Management	Mechanical controls (pull, dig, hoe); herbicides are available
Noxious Weed List	Nevada NO; California NO

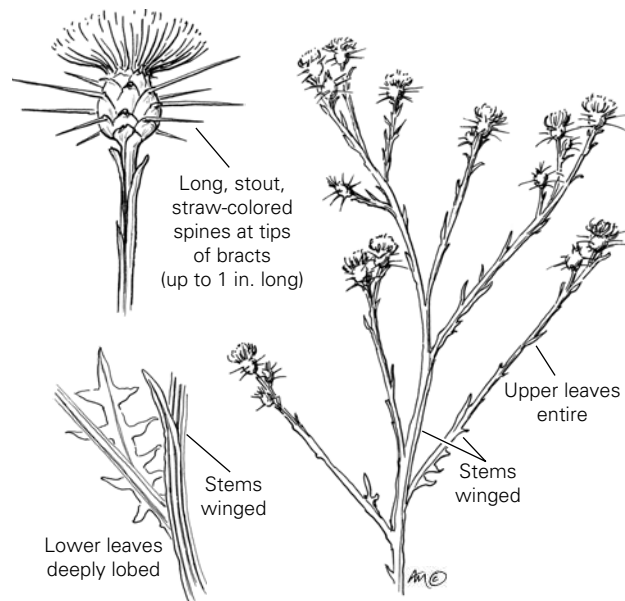


- Height: up to 3 ft
- Stems: erect and branching
- Leaves: grayish and hairy; upper and lower leaves narrow and entire
- Growth form: tall, bushy
- Flower color: multicolored (white, blue, purple, pink, red)



Donaldson

Also Known As	None
Origin	Southern Europe
Habitat	Roadsides, waste areas, grasslands
Life Cycle	Annual
Flowering Time	Late June to September
Relative Abundance	Infrequent
Management	Pull, dig or mow at first sign of yellow flowers; herbicides are available
Noxious Weed List	Nevada A-rated; California C-rated

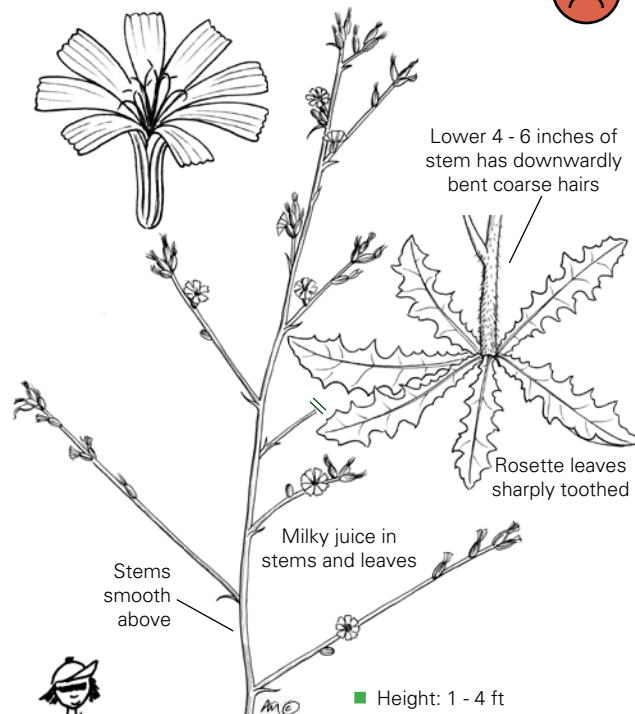


- Height: 0.5 - 5 ft, commonly 2 ft
- Stems: winged
- Leaves: gray and hairy; upper, entire; lower, deeply lobed
- Growth form: stiffly branching
- Flower color: yellow



D. Tomaso

Also Known As	Skeleton weed, hogbite
Origin	Southern Europe
Habitat	Roadsides, rangelands, pastures, disturbed soils
Life Cycle	Perennial with extensive, deep root system
Flowering Time	Mid-July through frost
Relative Abundance	Infrequent
Management	Digging and pulling will favor root sprouting and regrowth; herbicides available
Noxious Weed List	Nevada A-rated; California A-rated



- Height: 1 - 4 ft
- Stems: rigid and wiry; highly branched; cut surfaces exude milky sap
- Leaves: upper, narrow and entire, inconspicuous; stems often lack leaves
- Growth form: bushy
- Flower color: yellow

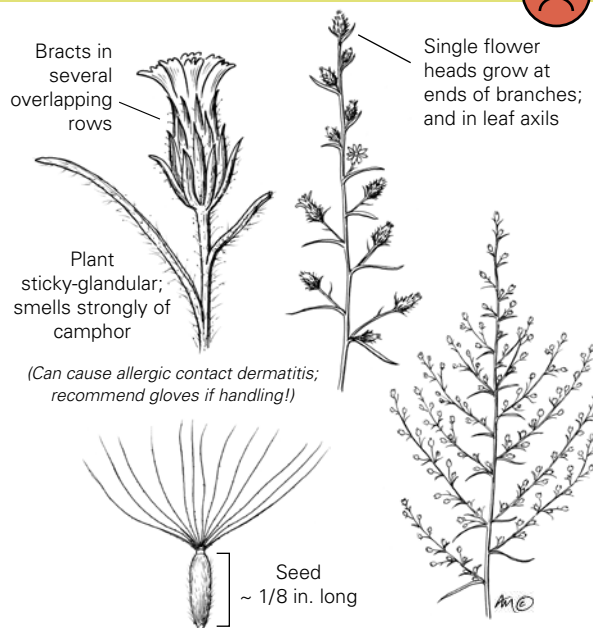
STINKWORT *Dittrichia graveolens* DIGR3



Plant, King, Flower, Williams

Also Known As	None
Habitat	Meadows, roadsides, waste places, gardens
Origin	Southern Europe
Life Cycle	Annual
Flowering Time	September to November
Relative Abundance	Moderate
Management	Dig or hand pull (wear protective clothing to avoid contact with skin); herbicides available
Noxious Weed List	Nevada NO; California B-rated

Non-native Invasive



- Height: 0.5 - 3 ft
- Stems: many-branched, sticky-glandular
- Leaves: narrow, alternate, reduced upwards, and sticky-glandular
- Flower heads: single flower heads grow at ends of branches; and in leaf axils
- Flower color: yellow

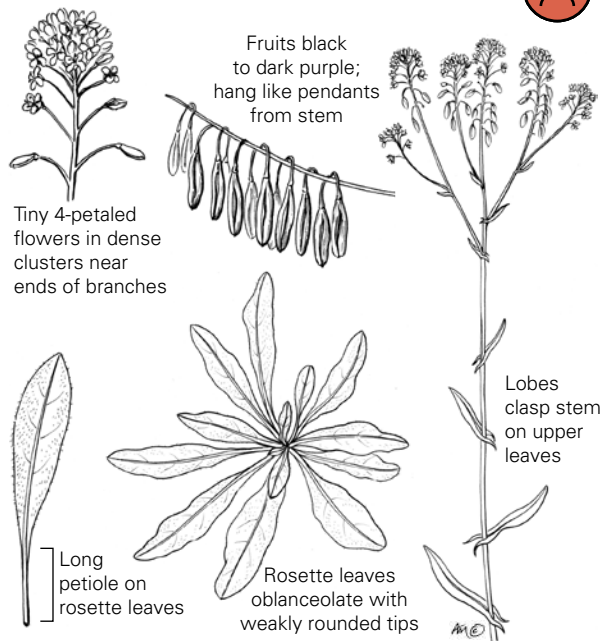
DYER'S WOAD *Isatis tinctoria* ISTI



Plant, Welch, Flower, Belsher-Howe

Also Known As	Marlahan mustard
Origin	Europe
Habitat	Meadows, roadsides, streambanks, rangelands
Life Cycle	Biennial to short lived perennial
Flowering Time	June to July
Relative Abundance	Infrequent
Management	Dig, removing top 2 inches of root; observe site yearly to look for sprouting rosettes; herbicides are available
Noxious Weed List	Nevada A-rated; California B-rated

Non-native Invasive

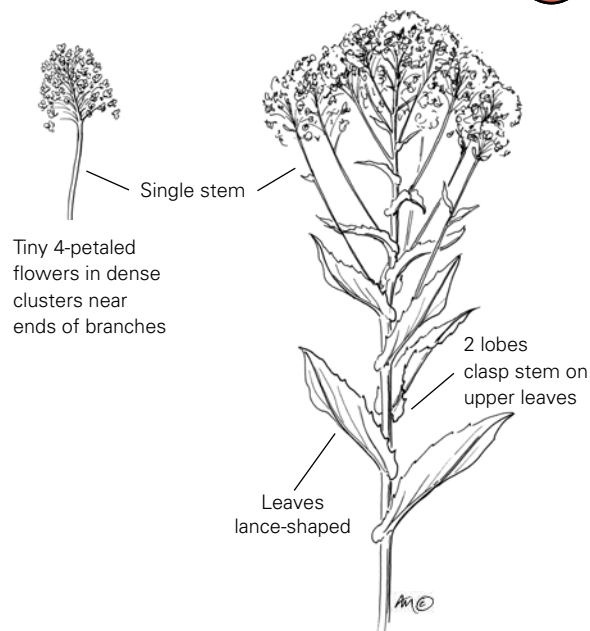


- Height: up to 4 ft.
- Stems: single stem gives rise to multiple branches with multiple flower clusters
- Leaves: blue-green foliage with cream-colored midrib; upper leaves clasp stem, arrowhead-shaped; lower leaves petiolate
- Flower color: yellow



Donaldson

Also Known As	Whitetop, short whitetop
Origin	Eurasia
Habitat	Meadows, fields, roadsides, ditches, streambanks, rangelands
Life Cycle	Perennial; reproduces from creeping roots
Flowering Time	May to June
Relative Abundance	Infrequent
Management	Do not pull as plants will grow from root fragments; chemical control is needed
Noxious Weed List	Nevada C-rated; California B-rated

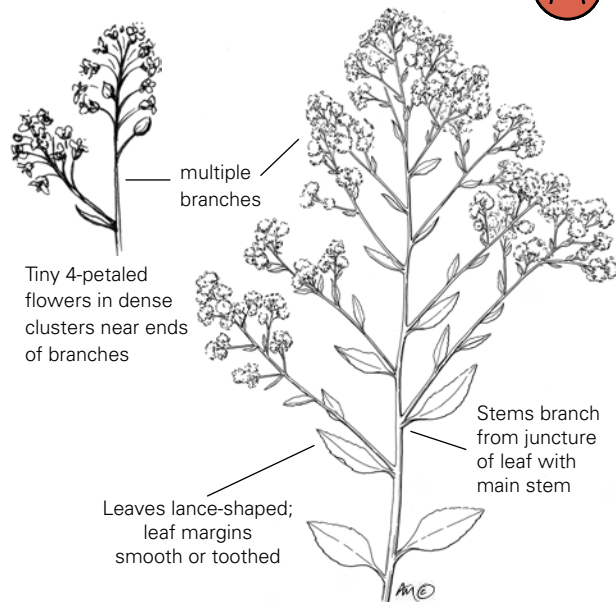


- Height: up to 2 ft, commonly 1 ft
- Stems: single stem gives rise to one flower cluster
- Leaves: blue-green foliage; upper leaves clasp stem; lower leaves petiolate
- Flower color: white



Donaldson

Also Known As	Tall Whitetop
Origin	Eurasia
Habitat	Riparian areas, floodplains, meadows, seasonally wet areas, roadsides
Life Cycle	Perennial; reproduces from creeping roots and root fragments
Flowering Time	Late June to August
Relative Abundance	Moderate
Management	Do not pull, dig, or cut the roots, as this may stimulate new growth; chemical control is needed
Noxious Weed List	Nevada C-rated; California B-rated

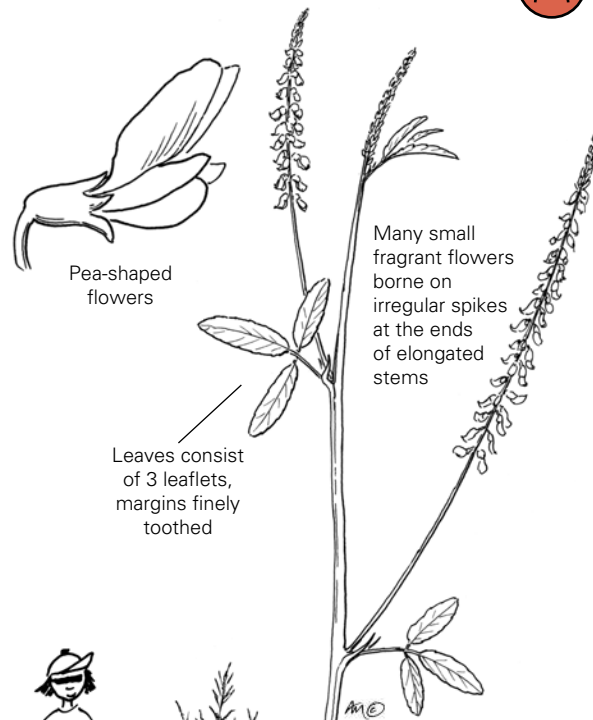


- Height: 1 - 6 ft, commonly 3+ ft
- Stems: multiple branches grow from each stem
- Leaves: upper leaves, sessile; lower leaves, petiolate; basal leaves, much larger than upper leaves
- Flower color: white



Bremner

Also Known As	None
Origin	Non-native, used in soil stabilization mixes
Habitat	Roadsides, waste areas
Life Cycle	Annual to biennial
Flowering Time	June to August
Relative Abundance	Widespread
Management	Hand pull wearing gloves; dig or mow prior to seed set; herbicides available
Noxious Weed List	Nevada NO; California NO

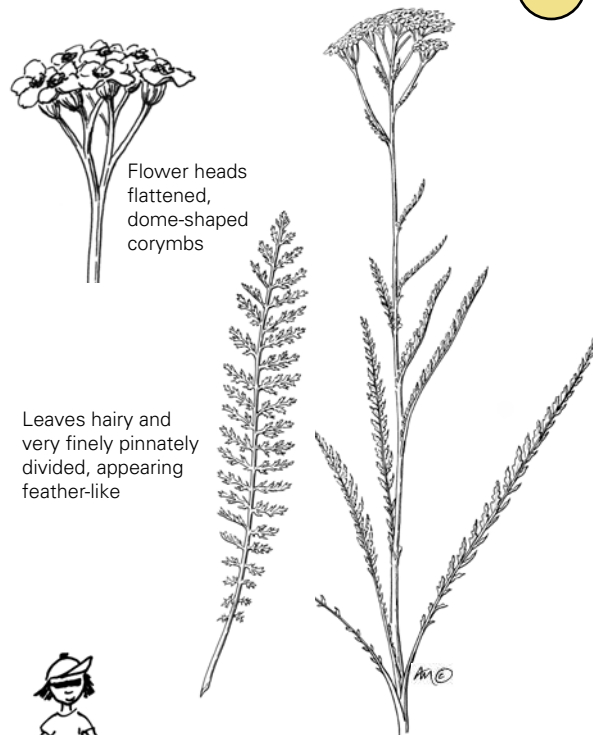


- Height: 2 - 6 ft. commonly about 3 - 5 ft.
- Stems: well-branched and coarse
- Leaves: 3 leaflets
- Flower color: white



Plant: Breneman; Flower: Donaldson

Also Known As	Common yarrow, milfoil
Origin	Native and introduced, can be invasive
Habitat	Gardens, meadows, grasslands, forests
Life Cycle	Perennial
Flowering Time	June to September
Relative Abundance	Widespread
Management	Dig, removing as much root as possible; forms dense mat if mowed; chemical control is available
Noxious Weed List	None, Native



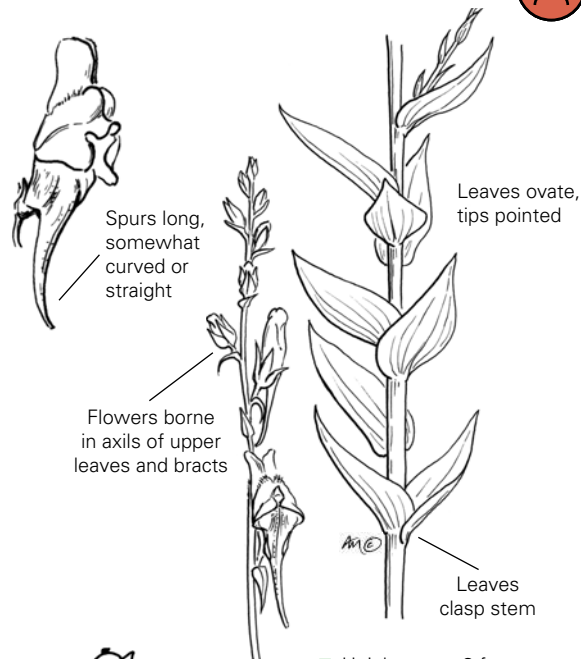
Flower heads flattened, dome-shaped corymbs

Leaves hairy and very finely pinnately divided, appearing feather-like

- Height: 2 - 3 ft
- Stems: hairy-wooly
- Leaves: feather-like; evenly distributed along stem; lower leaves larger
- Flower color: white or pink



Also Known As	Wild snapdragon, <i>Linaria genistifolia</i> ssp. <i>dalmatica</i>
Origin	Mediterranean
Habitat	Roadsides, pastures, rangelands, cultivated fields
Life Cycle	Perennial
Flowering Time	July to fall
Relative Abundance	Moderate
Management	Pull or dig for several years, removing as much root as possible; do not mow; chemical control is available
Noxious Weed List	Nevada B-rated; California A-rated

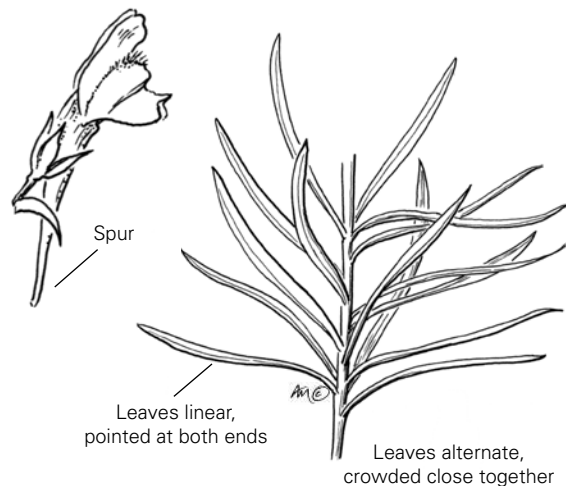


- Height: up to 3 ft
- Stems: erect and branched
- Leaves: ovate, alternate and entire; succulent and waxy
- Growth form: more scattered than yellow toadflax
- Flower color: yellow, with orange, bearded throat



Plant, Breneman; Flower, Charles Webber © CA Academy of Sciences

Also Known As	Butter and eggs
Origin	Mediterranean
Habitat	Rangelands, roadsides, waste places, cultivated fields
Life Cycle	Perennial
Flowering Time	July to fall
Relative Abundance	Moderate
Management	Pull or dig for several years, removing as much root as possible; do not mow; chemical control is available
Noxious Weed List	Nevada A-rated; California NO

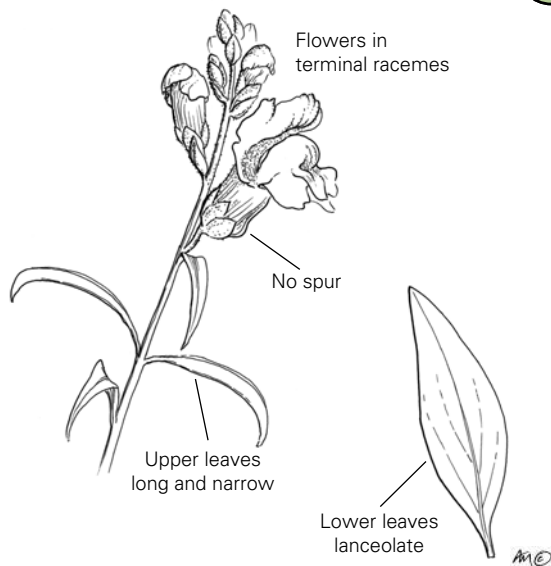


- Height: 1 - 2 ft; shorter than dalmatian toadflax
- Leaves: linear, smooth to sparsely hairy; succulent and waxy
- Growth form: tends to grow in crowded patches
- Flower color: yellow, with orange, bearded throat



Plant, Bremner, Flower, Donaldson

Also Known As	None
Origin	Non-native
Habitat	Ornamental gardens
Life Cycle	Annual to perennial
Flowering Time	June to fall
Relative Abundance	Widespread
Management	None; recommended garden flower
Noxious Weed List	Nevada NO; California NO



- Height: 0.5 - 3 ft
- Leaves: upper, long and narrow; lower, lanceolate; soft, not waxy
- Flowers: fuzzy-hairy
- Flower color: yellow, but other colors are available

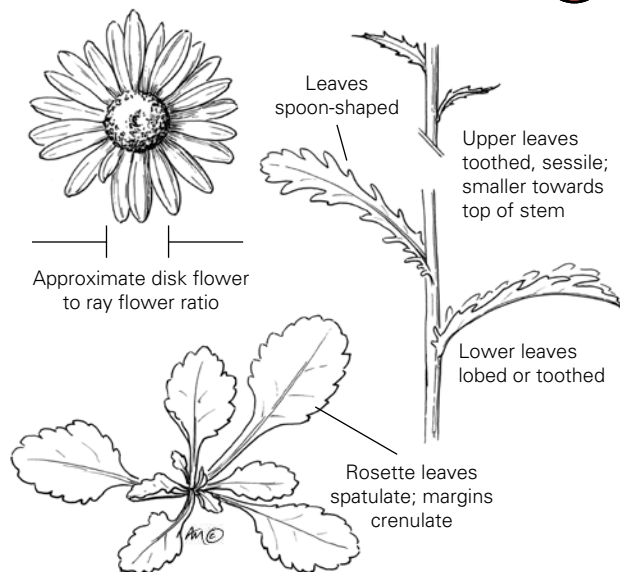
OXEYE DAISY *Leucanthemum vulgare* LEVU



Donaldson

Also Known As	White daisy
Origin	Europe
Habitat	Meadows, roadsides, waste places, gardens
Life Cycle	Perennial
Flowering Time	June to August
Relative Abundance	Widespread
Management	Pull or dig before seed production; herbicides are available
Noxious Weed List	Nevada NO; California NO

Non-native Invasive



- Height: 0.8 - 2 ft
- Stems: smooth to slightly hairy
- Leaves: upper, toothed and sessile; lower, pinnately lobed or toothed
- Flowers: single flower heads grow at ends of branches; bracts are lined in black
- Flower color: white with yellow center



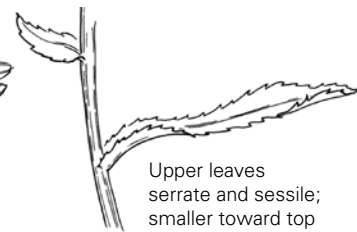
Plant, Breneman; Flower, Donaldson



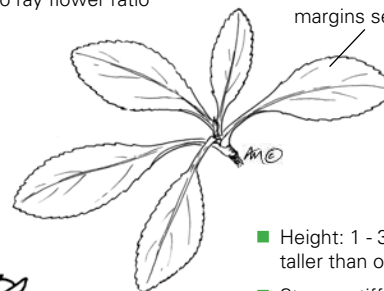
Also Known As	None
Origin	Non-native, naturalized
Habitat	Well-drained soil, full sun, ornamental gardens
Life Cycle	Perennial
Flowering Time	July to September
Relative Abundance	Widespread
Management	None; recommended garden flower
Noxious Weed List	Nevada NO; California NO



Approximate disk flower
to ray flower ratio



Upper leaves
serrate and sessile;
smaller toward top
of stem



Rosette leaves oval;
margins serrate



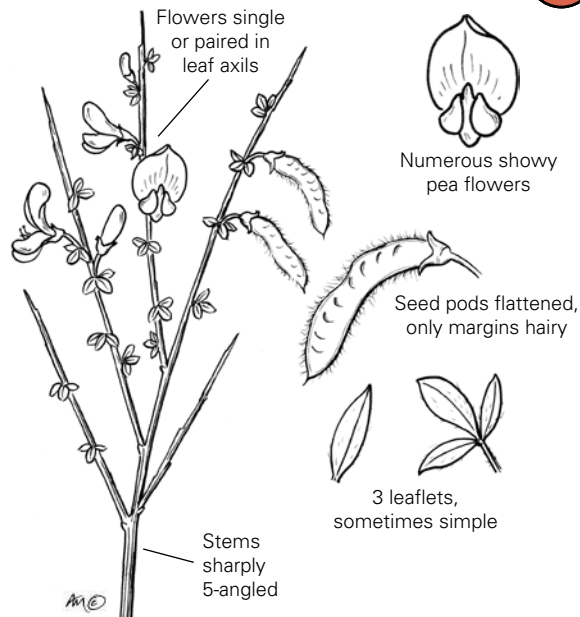
- Height: 1 - 3 ft, taller than oxeye daisy
- Stems: stiff, more-or-less smooth
- Leaves: upper, serrate and sessile; lower, petiolate
- Flowers: single flower heads grow at ends of branches; heads larger than oxeye daisy
- Flower color: white with yellow center



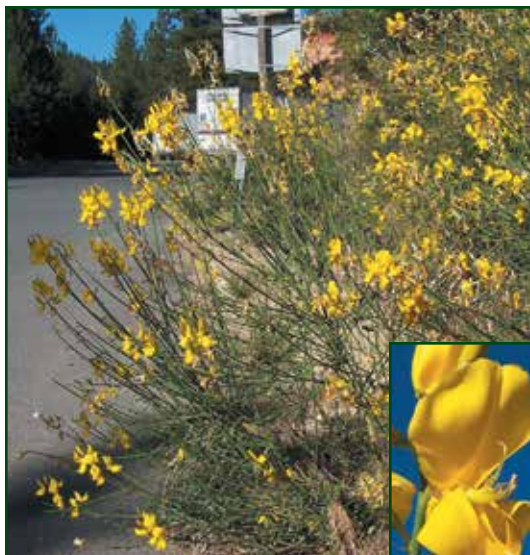
Plant, VanZuuk; Flower, Keir Morse



Also Known As	Common broom, English broom
Origin	Europe and north Africa
Habitat	Pastures, forests, waste areas
Life Cycle	Long lived perennial
Flowering Time	May to July
Relative Abundance	Moderate
Management	Pull with heavy-duty weed wrench removing as much root as possible; observe site yearly and pull seedlings; chemical control most effective treatment
Noxious Weed List	Nevada NO; California C-rated

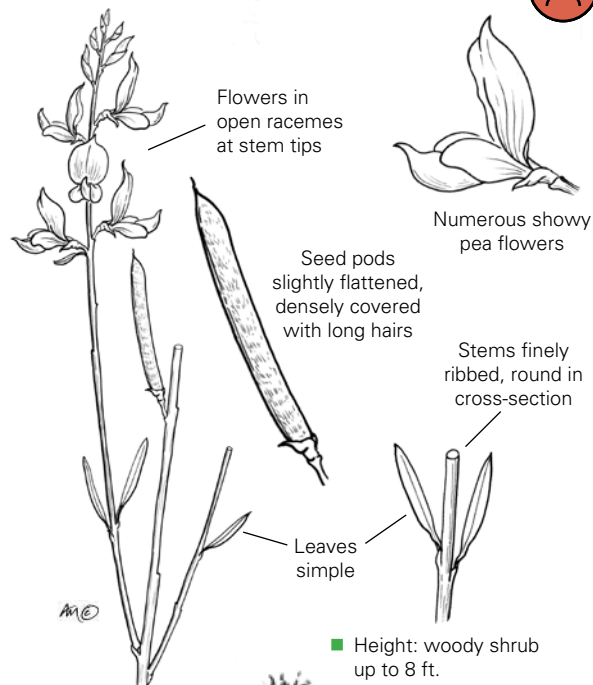


- Height: woody shrub up to 8 ft.
- Stems: 5-angled; star-shaped cross-section
- Branches: dark green; more-or-less erect
- Leaves: 3 leaflets, sometimes simple on new twigs, deciduous
- Flower color: deep yellow; slight to no fragrance



Donaldson

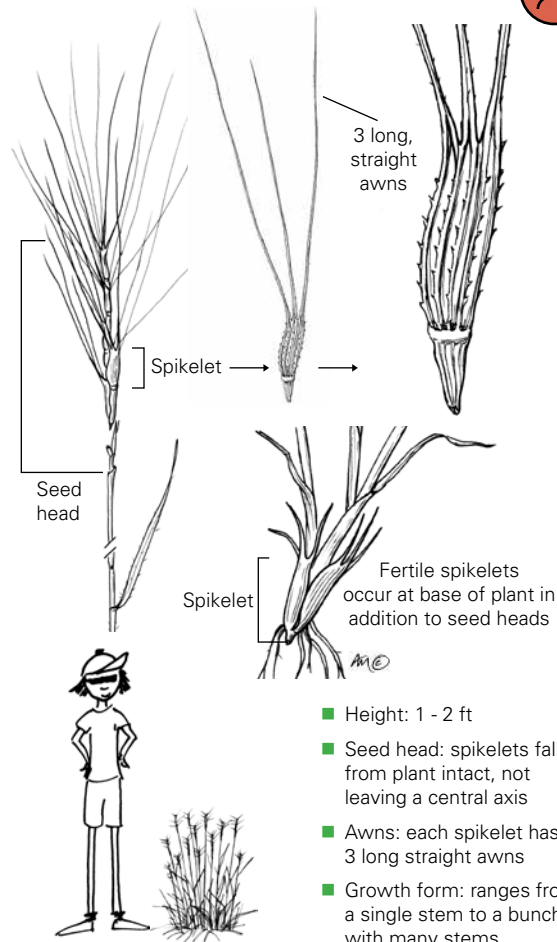
Also Known As	Weaver's broom
Origin	Mediterranean
Habitat	Roadsides, forests and rangelands
Life Cycle	Long lived perennial
Flowering Time	May to July
Relative Abundance	Moderate
Management	Pull with heavy-duty weed wrench removing as much root as possible; observe site yearly and pull seedlings; chemical control most effective treatment
Noxious Weed List	Nevada NO; California C-rated



- Height: woody shrub up to 8 ft.
- Stems: smooth or finely ribbed; round cross-section
- Branches: dark green; more-or-less erect
- Leaves: simple, entire; sparse and deciduous
- Flower color: yellow; strong fragrance



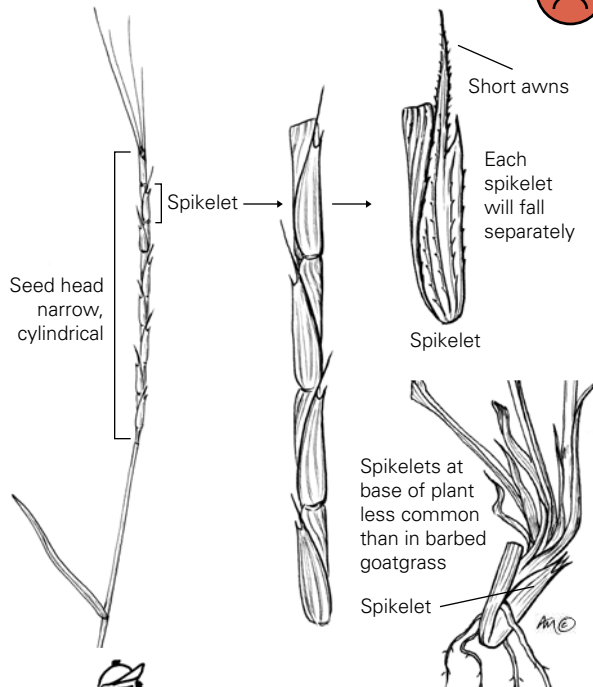
Also Known As	None
Habitat	Rangelands, roadsides, disturbed places
Origin	Mediterranean, Europe, western Asia
Life Cycle	Annual
Flowering Time	May to July
Relative Abundance	Moderate
Management	Handpull; herbicides available
Noxious Weed List	Nevada A-rated; California B-rated



- Height: 1 - 2 ft
- Seed head: spikelets fall from plant intact, not leaving a central axis
- Awns: each spikelet has 3 long straight awns
- Growth form: ranges from a single stem to a bunch with many stems



Also Known As	None
Habitat	Roadsides, disturbed, dry places, cultivated fields
Origin	Mediterranean, Europe, western Asia
Life Cycle	Annual
Flowering Time	May to July
Relative Abundance	Infrequent
Management	Handpull; herbicides available
Noxious Weed List	Nevada A-rated; California B-rated



- Height: 1 - 2 ft
- Seed head: spikelets fall from plant intact, not leaving a central axis
- Awns: very short except for on the top spikelet
- Growth form: ranges from a single stem to a bunch with many stems



Also Known As *Taeniatherum caput-medusae*

Habitat Rangelands, roadsides, disturbed places

Origin Europe

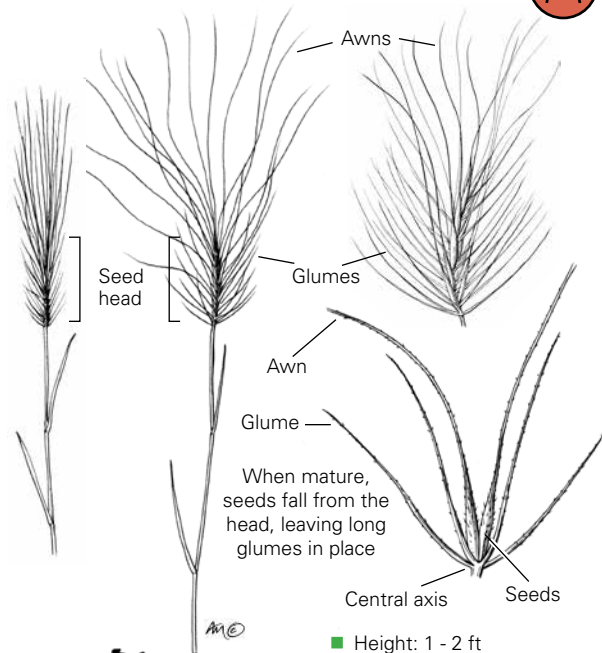
Life Cycle Annual

Flowering Time April to July

Relative Abundance Common

Management Rake and remove existing thatch, handpull small infestations; herbicides available

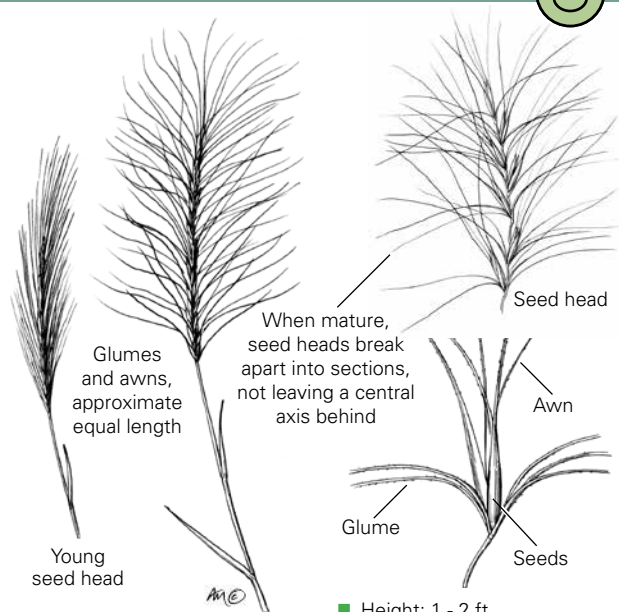
Noxious Weed List Nevada B-rated; California C-rated



- Height: 1 - 2 ft
- Seed head: central axis with glumes persist into winter
- Upper awns long and wavy, 1.12 - 4 in; lower glumes shorter, 0.2- 3.14 in
- Growth form: ranges from a single stem to a bunch with many stems
- Key feature: very long, upward-pointing, wavy awns



Also Known As	Bottlebrush
Habitat	Forests, grasslands, most plant communities
Origin	Native
Life Cycle	Perennial
Flowering Time	June to August
Relative Abundance	Common
Management	None
Noxious Weed List	None, Native

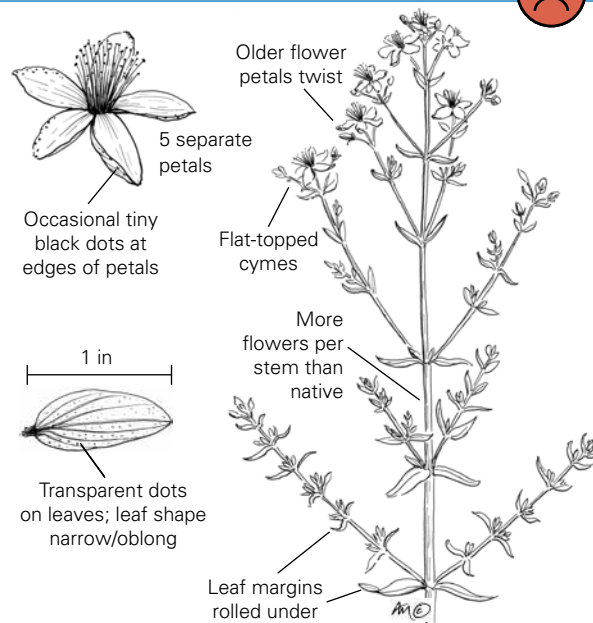


- Height: 1 - 2 ft
- Seed head: spikelets fall from plant intact, not leaving a central axis
- Glumes and awns: approx. equal length, 0.6 - 4.7 in; often reddish when young, straw-colored when mature
- Growth form: generally in bunches with several to many stems
- Key feature: glumes and awns bent to nearly horizontal when mature



Breneman

Also Known As	St. John's Wort
Origin	Europe
Habitat	Pastures, meadows, roadsides, waste areas
Life Cycle	Perennial
Flowering Time	June to late September
Relative Abundance	Moderate
Management	Pull or dig repeatedly; use biocontrol insects; chemicals are available
Noxious Weed List	Nevada A-rated; California C-rated

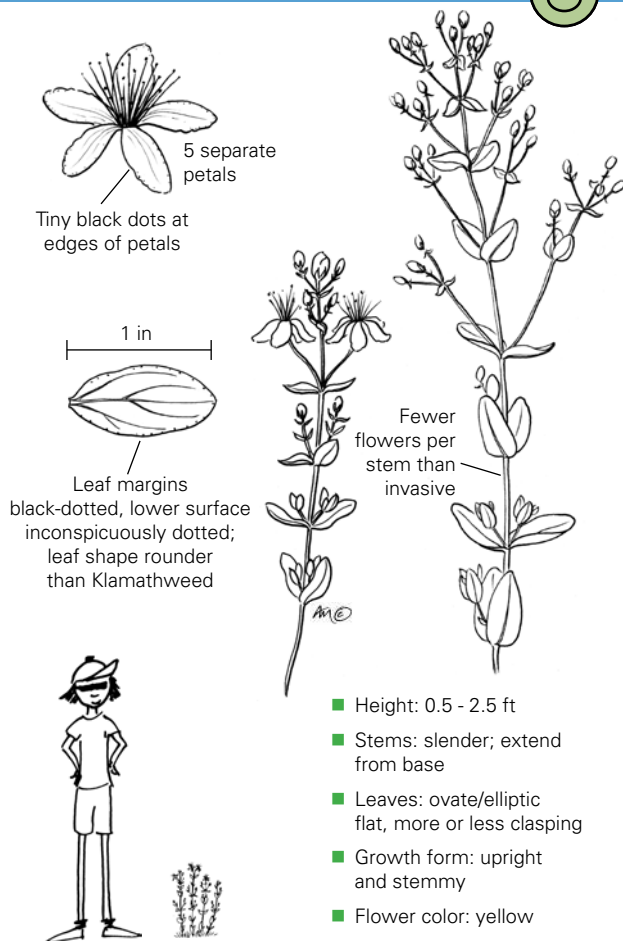


- Height: 1 - 3+ ft
- Stems: erect with numerous rust-colored branches
- Leaves: narrowly oblong, entire, opposite, sessile; not over 1 in long
- Growth form: bushy
- Branches: somewhat 2-ridged and woody at the base
- Flower color: yellow



Plant, Eliassen Calphotos - Flower, Matson Calphotos

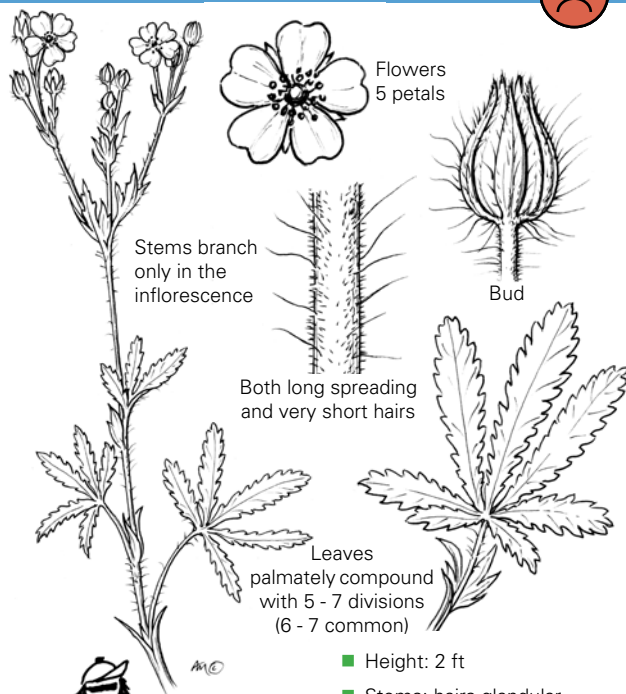
Also Known As	None
Origin	Native
Habitat	Streambanks, meadows
Life Cycle	Tap-rooted perennial
Flowering Time	Summer
Relative Abundance	Moderate
Management	Desirable native plant; do not disturb
Noxious Weed List	None, Native





D. Tomaso

Also Known As	Roughfruit cinquefoil
Origin	Eurasia
Habitat	Roadsides, pastures, rangeland, wildlands, disturbed areas
Life Cycle	Tap-rooted perennial
Flowering Time	May to July
Relative Abundance	Infrequent
Management	Dig, removing as much root as possible; herbicides are available
Noxious Weed List	Nevada A-rated; California A-rated

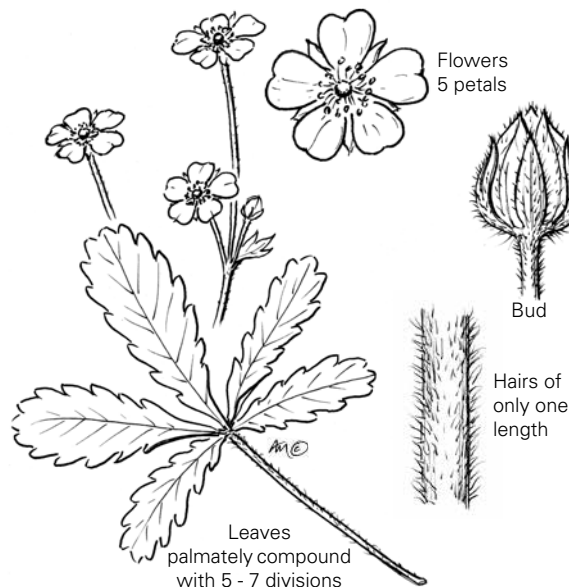


- Height: 2 ft
- Stems: hairs glandular, almost appearing shiny
- Leaves: upper and lower surfaces stiff-hairy; undersides green (not silvery like most potentillas); hairs glandular, almost appearing shiny
- Growth form: shrub
- Flower color: light yellow



Plant, Chien, CalPhotos, Flower, D.Tomaso

Also Known As	Graceful cinquefoil, western cinquefoil
Origin	Native
Habitat	High mountain meadows, open forests
Life Cycle	Perennial
Flowering Time	July to August
Relative Abundance	Widespread
Management	Desirable native plant; do not disturb
Noxious Weed List	None, Native

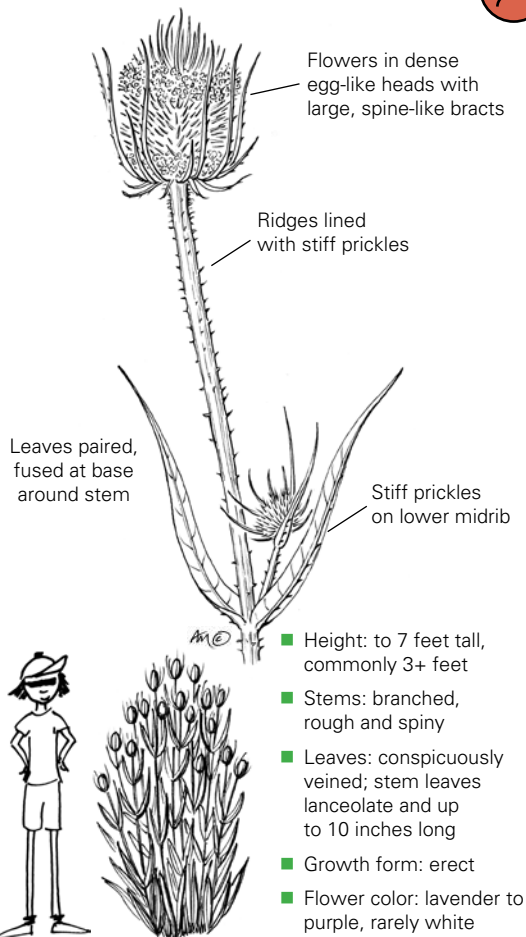


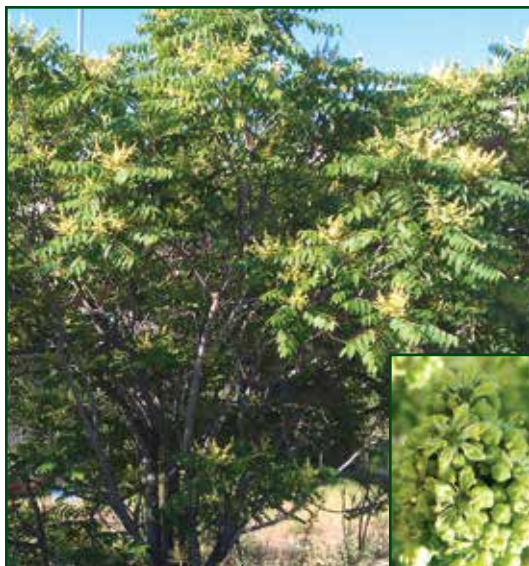
- Height: to 2.5 feet tall
- Stems: have hairs of only one length
- Leaves: hairy, especially below; undersides gray-green, silvery; leaf margins evenly toothed
- Flower color: yellow



D.Tomaso

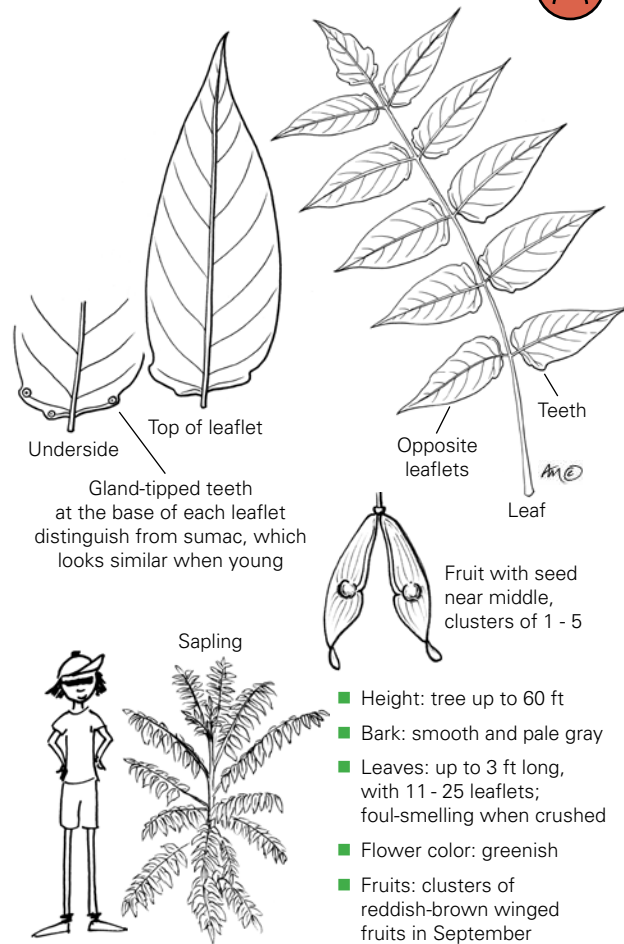
Also Known As	Common teasel, wild teasel
Origin	Europe
Habitat	Irrigation ditches, canals, wetlands, riparian areas, disturbed sites
Life Cycle	Tap-rooted biennial
Flowering Time	July to fall
Relative Abundance	Infrequent
Management	Dig or hand-pull, removing as much root as possible; herbicides are available
Noxious Weed List	Nevada NO; California NO





Plant, Williams; Flower, T. Hanson

Also Known As	Stink tree
Habitat	Disturbed areas, riparian areas, often near old habitations
Origin	China
Life Cycle	Tree; perennial; reproduces from creeping roots and seeds
Flowering Time	June
Relative Abundance	Infrequent
Management	Hand pull seedlings; weed wrench saplings, but must extract entire root; herbicides available
Noxious Weed List	Nevada NO; California C-rated



GLOSSARY

Alternate: Borne singly at each node, such as leaves.

Awn: A thin, bristle-like extension, often part of a grass seed head.

Axil: The point formed between the stem and any part, such as a leaf, attached to it.

Bract: A modified leaf at the base of a flower.

Corymb: A flat-topped or round-topped arrangement of flowers where the lower flower stalks are longer than the upper stalks.

Crenulate: Having very small, rounded teeth on the leaf margin.

Cyme: A flat-topped or round-topped arrangement of flowers in which the terminal flower blooms first.

Disk flower: The tiny, tubular flower of the Asteraceae that forms the center disk of the flowerhead.

Divided: Deeply lobed leaf in which lobes are indented to the base or the midrib.

Elliptic: Shaped like an ellipse or a narrow oval, broadest in the middle.

Entire: The margins are smooth, without teeth or lobes.

Glume: Sterile bract or bracts at the base of a grass spikelet.

Inflorescence: A flower cluster.

Linear: Narrow and flat with sides or edges parallel, as in a leaf.

Lobed: Bearing lobes cut less than halfway to base or midvein.

Margin: The outer edge of the leaf, which may be smooth, serrated, lobed, etc.

Midrib: The middle vein of a leaf.

Ob lanceolate: leaf shape in which the length is at least 3x longer than wide, but broadest above middle.

Oblong: Leaf shape in which the leaf is two to four times longer than it is wide, with nearly parallel sides.

Opposite: Leaves or other structures borne across from each other at the same node.

GLOSSARY

Ovate Leaf: Egg-shaped leaf that is attached at the broad end.

Palmate: Having three or more veins or lobes radiating from a central point, similar to the fingers on a hand.

Panicle: A branched inflorescence in which the flowers bloom from the bottom up.

Petiole: The stalk of a leaf.

Pinnate: A compound leaf with leaflets arranged on opposite sides of the axis.

Raceme: A simple, elongated arrangement of flowers.

Ray flower: The long, narrow flower that radiates outward from the disk flower in the Asteraceae family. Each ray flower resembles a single petal.

Rhizomatous: Having rhizomes, or horizontal underground stems that produce shoots above and roots at distinct nodes.

Rosette: A dense, basal cluster of leaves arranged in a circular fashion around one point, usually at ground level.

Serrate: With sharp teeth directed forward; generally refers to leaf edges.

Sessile: Without a stalk of any kind; for example, a leaf directly attached to a stem.

Spatulate: Shaped like a spatula, with a rounded blade that tapers to the base.

Spike: An unbranched, long flower stalk in which the flowers attach directly to the stem and mature from the bottom upwards.

Spikelet: In grasses, the basic unit of the seed head, sometimes falling intact from plant.

Toothed: Having sharp points or lobes along a margin, as on a leaf.

Umbel: A flat-topped flower arrangement.

Winged stem: A stem with one or more thin, flat margins protruding along the length of the stem.

ADDITIONAL RESOURCES

State and Federal Noxious Weed Lists

Nevada Department of Agriculture
agri.nv.gov/Plant/Noxious_Weeds/Noxious_Weeds_Home

California Department of Food & Agriculture
cdfa.ca.gov/plant/ipc/encycloweedia/encycloweedia_hp.html

U.S. Department of Agriculture - Federal Noxious Weed List
plants.usda.gov/java/noxious

Plant Photos, Plant Distribution, Smartphone Mapping Applications

Lake Tahoe Basin Weed Coordinating Group
tahoeinvasiveweeds.org

Calflora calflora.org

CalWeedMapper calweedmapper.cal-ipc.org

EDDMapS West eddmaps.org/west

California Invasive Plant Council cal-ipc.org

Plant Ecology and Treatment Information

University of California
Weed Research & Information Center
wric.ucdavis.edu

Techline Invasive Plant News techlinenews.com

Aquatic Invasive Weeds

Tahoe Resource Conservation District tahoeacd.org

Tahoe Regional Planning Agency trpa.org

League to Save Lake Tahoe keeptahoeblue.org

REPORTING & CONTACT INFORMATION

To report a weed sighting online, or to contact the Lake Tahoe Basin Invasive Weed Coordinating Group, go to **tahoeinvasiveweeds.org**.

To report weeds or for control recommendations:

Nevada

Douglas County Weed District (775) 782-9835

Washoe County Weed Reporting (775) 784-4848
washoeweeds.org

California

Placer County Agriculture Department (530) 889-7372

El Dorado County Agriculture Department (530) 621-5520

For homeowner site visits:

Tahoe Resource Conservation District (530) 543-1501
(California) Ext. 113

Nevada Tahoe Conservation District (775) 586-1610

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