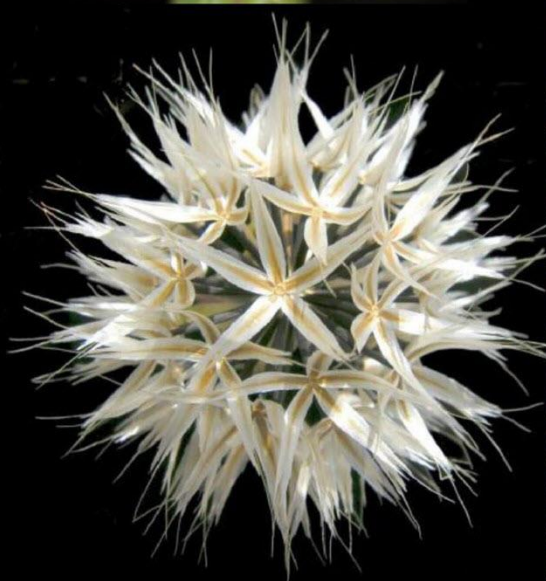


# Field Key to the East Bay Dandelion Tribe



# Introduction

The East Bay (Alameda and Contra Costa Counties) has 29 species in the Dandelion Tribe (the *Cichorieae*). As you can see above, their flower and seed heads present a wide variety of beautiful patterns. Stems and leaves also grow to species-specific designs.

This field guide uses a simple key to introduce you to those patterns and their variations. To understand the terms I use, if you're not already an expert with asters, you might like to start with "What's a Dandelion?"

Have fun with it!

## Table of Contents

### What's a Dandelion?



An introduction to dandelion parts, how they work and how dandelions relate to other asters.

### Field Key

**Section 1: Bare stems**

These plants have bare flower stalks (scapose) that rise from near the ground. They have only basal leaves.

If your plant has stem leaves or branches, skip to Section 2.

Plant Name / Things to Look For	Flower Head	Basal Leaves	Pappus
<b>Group 1: Bare stems; narrow, rising basal leaves; pappus looks like a papery starburst.</b> These genera hybridize. <b>Coast Microseris</b> <i>Microseris bigelovii</i> CA native	<b>Medium head (1/2")</b> Yellow or orange rays Sometimes purple-marked involucres.	<b>Basal leaves long narrow, opposite lobes</b> <b>Flat rosette</b> <b>Not hairy</b>	<b>Papery starburst</b> Columnar fruits tipped with 5 papery scales, each tipped with a prickle.
<b>Bare stem 1/2-2"</b> <b>Yellow/Orange rays</b> Found near the coast. <b>Long basal leaves with narrow, opposite lobes.</b> <b>Pappus a papery starburst.</b>	<b>Douglas' Silverpuffs</b> (Small head 1/2")	<b>Basal leaves mid (1/4")</b>	<b>Papery starburst</b>

Designed to take in the field, this key organizes plants by similar characteristics.

Check out these useful references when using the key:

[Distribution Maps](#)  
[Terms Used in the Key](#)

### Interactive Guide

If you have an internet connection, use [PlantID.net](https://PlantID.net) to search by what you know.

Once you find a species, read illustrated stories about your plant.

# What's a Dandelion?

## Dandelion Flower Heads

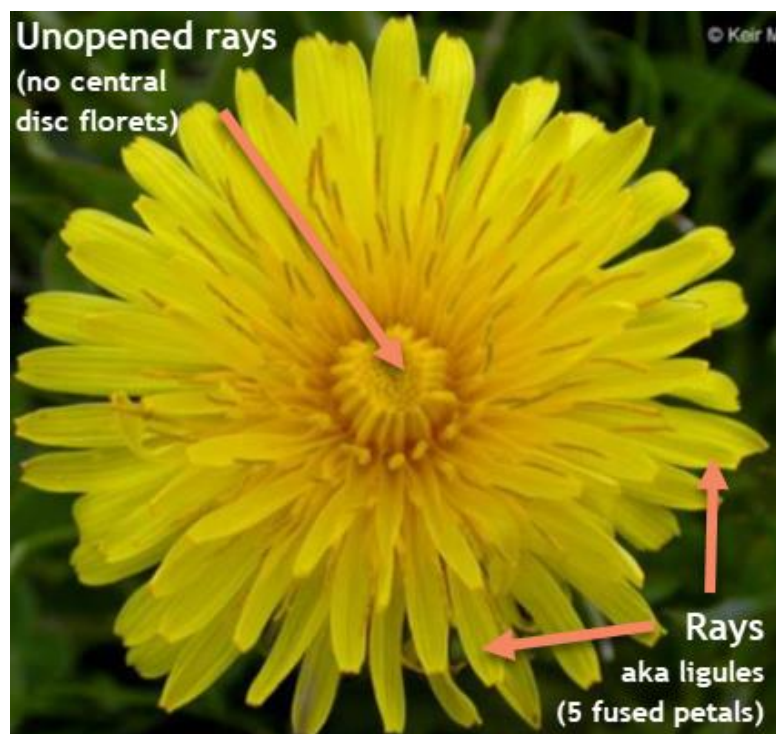
Dandelions are a tribe in the **Aster Family**. Aster blooms are organized in **flower heads** which hold many **florets**.

With dandelions, a flower head contains florets that radiate out from a central base, so they're called **rays**. You might suppose that each ray is a petal but it's actually a complete floret, containing not just fused petals but reproductive parts at its base.

Other Asters may also have ray florets, but dandelion flower heads are distinct in a couple of ways:

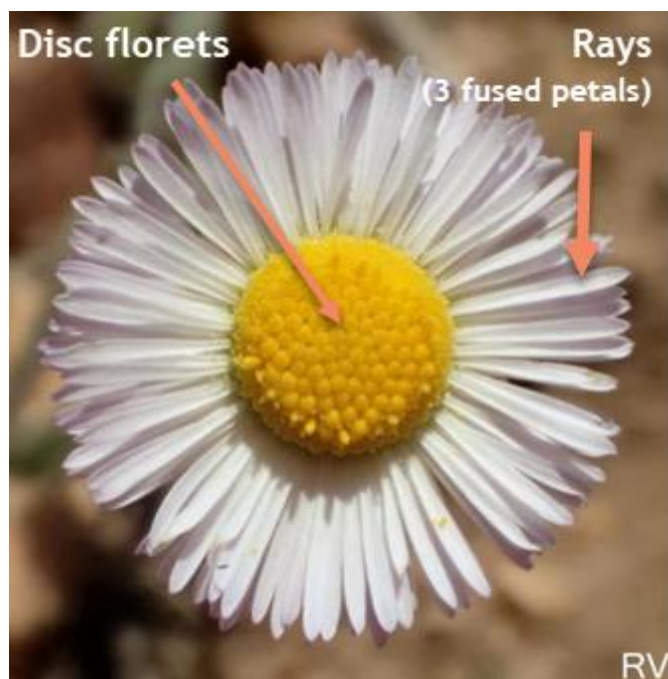
- Other Aster flower heads **always** have central **disc florets** in addition to possible ray florets. Disc florets are held in the center of the flower head and have no obvious petals. Dandelions **never** have central disc florets.
- Also, a dandelion ray floret has **5 fused petals**, called a **ligule**. Other aster rays have only 3 fused petals.

### Dandelion flower heads have no disc florets.



Common Dandelion – Keir Morse

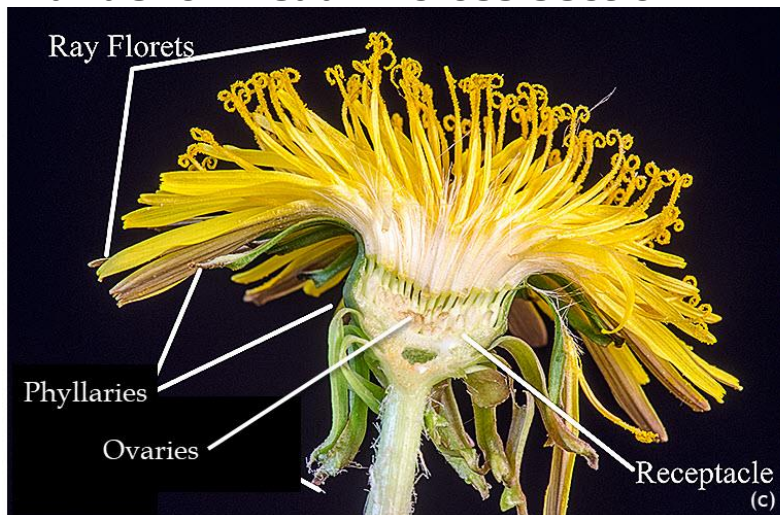
### Other aster flower heads have disc florets.



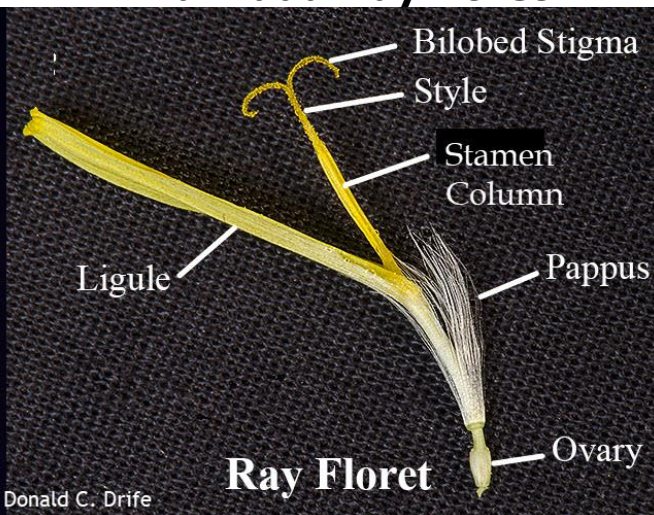
Diffuse Daisy – Ron Vanderhoff.  
This is not a dandelion.

Here's how dandelion heads and rays are organized.

### Dandelion head in cross section



### An individual ray floret



Images © Donald C. Drife, michigannatureguy.com/blog

The flower head has a **receptacle** at its base that sits at the top of a stem. Each **ray floret** connects to a spot on the receptacle. An involucre of leaf-like **phyllaries**, often green, wraps around the flower head, providing protection to the head, especially when it is young. These phyllaries are often distinctive, making a good ID characteristic.

Each ray floret has an **ovary** at its base that sits on the receptacle. When pollinated, the ovary develops into a **fruit** containing a single **seed**, a thin covering, and **pappus** that will help the seed float away on the wind when it's mature.

Several structures grow out of the top of each ovary. 5 fused petals extend outward, creating a visual display that attracts pollinators. Remember that there are many ray florets on the head, so the flower head looks like a many-petaled flower.

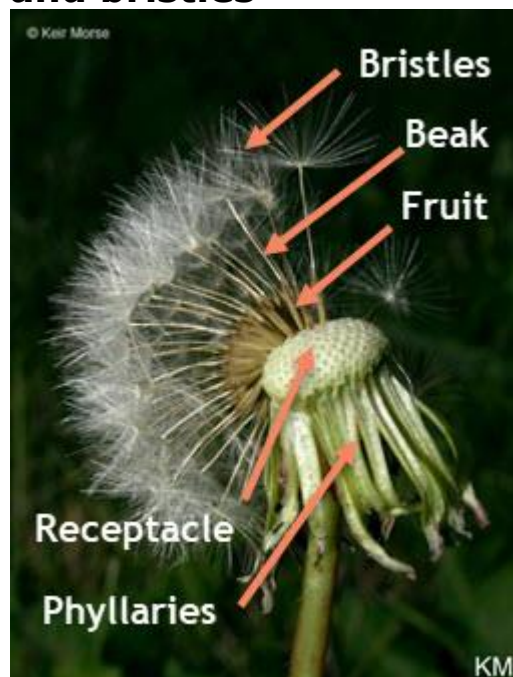
Growing up from the ovary is a hollow **column of 5 fused stamens** covered with male **pollen**. Inside the column, a female **style** grows, pushing pollen out as it extends beyond the **stamen column**. After the pollen is spent, the style opens up a receptive bi-lobed **stigma**, ready to receive pollen from other flowers of its species.

Dandelion flower heads vary by the number of rays they produce. For instance, chicory and wire lettuce produce only a handful or a couple dozen rays, making them easy to distinguish from heads of over 100 rays.

## Pappus – a Dandelion Parachute

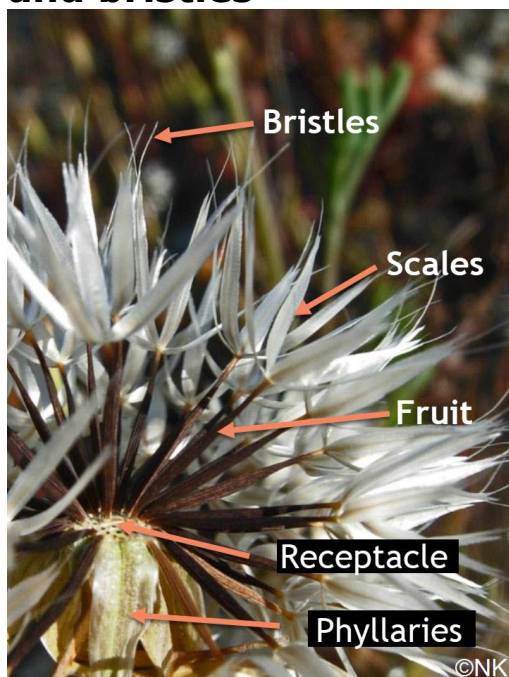
Also growing out of the top of each ovary, and outside the base of each floret's 5 fused petals, is **pappus**. It's made up of **bristles**, and sometimes **scales** as well. During flowering, pappus parts are small but once the floret is pollinated, pappus grows in species-specific patterns.

### Fruit, narrow beak and bristles



Common Dandelion – Keir Morse

### Elongated fruit, scales and bristles



Silver Puffs – © Neil Kramer

### Plumose bristles



Bristly Ox Tongue  
© Neil Kramer

When an ovary is pollinated, it becomes an emerging fruit. The fruit begins a complex generation of cells as it starts to develop a new living thing. For instance, the fruit often grows a narrow column at its tip, called a **beak**. Pappus scales and bristles grow from the top of the fruit, preparing an effective parachute for when the fruit and its seed are mature and ready to fly to a new location.

Almost every dandelion grows pappus, but with different materials and in different patterns. This makes pappus a useful character to check when figuring out what species you have.

- Many times, an inverted cone of dozens of **bristles** grows on top of each fruit (see the first picture above). The individual bristles are hair-like, forming a light parachute to catch the wind. Some bristles are **plumose**, with fuzz along their length, increasing their wind resistance (see the third picture above).

- Another pappus arrangement includes **scales**. Scales are thin and long but also have width. They create a papery surface, making a sail to catch the wind. They often end in a hair-like bristle (see papery starburst below).

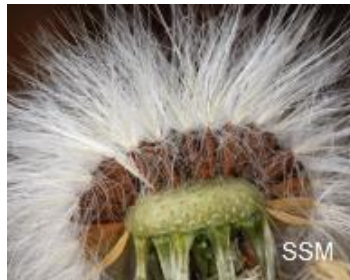
Pappus components combine to create several distinctive looks which I refer to in the key:

Fluffy sphere



Fruits have beaks that end in many bristles. The overall effect is a fluffy sphere, with space on the inside.

Dense sphere



Fruits do not have beaks, so bristles grow closely to them, creating a dense sphere without space on the inside.

Brush shape



Fruits do not have beaks. There are only a handful of fruits, so the overall effect is spaced bristles, rather than a dense sphere.

Papery starburst



Fruits connect to triangular, flat, papery scales that end in a bristle. I call this distinctive look a papery starburst.

Beautiful pappus is a hallmark of dandelions. Use the key to have fun looking at it closely.

## Dandelion Leaves



Douglas' Silverpuff



Hairy Cat's Ear



Bristly Ox Tongue



White flowered  
Hawkweed

Dandelion leaves vary a lot, which makes them a great identification tool.

- Most species have basal leaves, either lying along the ground in a rosette, or reaching up like blades of grass.
- Stem leaves tend to get smaller as you go up the stem. Some wrap around the stem.
- Leaves are generally long ovalish shapes or narrower, and often have **lobes** along their edges. The shape and pattern of these lobes is often useful in identification.

## Dandelion Stems

Most dandelion stems have a milky white sap which you can see if a stem or branch is broken. Other asters typically do not.

Several dandelion species have stems that are bare, free of leaves or branches. They support a single flower head at their top, often drooping when in bud and becoming erect in flower.

Other dandelion stems are full of leaves and often branched.

# Field Key to the East Bay Dandelion Tribe (Cichorieae)

Find a group description that best describes your plant, and click it.

If you don't have flowers, leaves and pappus to look at, you may have to check out more than one group.

Don't know what a word means? For instance, don't know what a "papery starburst" is or don't know what I mean by "ovalish"? See "[Terms Used in the Key.](#)"

## Bare Stems

- 1 Basal leaves **narrow**; pappus a **papery starburst**.
- 2 Basal leaves **narrow**; pappus a **fluffy** or **dense sphere**.
- 3 Basal leaves **ovalish**, in a **rosette**; pappus a **fluffy sphere**.

## Leafy/Branched Stems

- 1 Flower heads of a **few rays, along the stem**.
- 2 Lots of **ovalish, prickly-bristly** stem leaves.
- 3 Lots of **ovalish, not-prickly-bristly** stem leaves.
- 4 Stem leaves **tiny**; stem sometimes **branched**; basal rosette.
- 5 Few or no branches; **narrow, rising** basal leaves.



# Bare stems

These plants have bare flower stalks (**scapose**) that rise from near the ground. They have only **basal leaves**.

If your plant has stem leaves or branches, skip to **Leafy Branched Stems**.









Bigflower Dandelion



Douglas' Microseris



Mountain Dandelion

	Flower Heads	Basal Leaves	Pappus
<b>Group 1: Basal leaves narrow; pappus a papery starburst.</b>			
<p><b>Coast Microseris</b> <i>Microseris bigelovii</i> AC native</p> <p><b>Bare stem, 1/2-2'</b></p> <p><b>Medium Yellow/Orange</b> head. Found near the coast. Basal leaves <b>narrow, pinnate</b> with <b>blunt tips</b>.</p> <p><b>Pappus</b> a papery starburst.</p>	<p><b>Medium head (3/4").</b> <b>Yellow</b> or <b>orange rays</b> Two sets of purple-marked <b>phyllaries</b>. Minute scales on stem.</p> 	<p><b>Basal leaves medium, (4").</b> <b>Narrow, pinnate lobes</b> with <b>blunt tips</b>.</p> 	<p>Medium <b>papery starburst</b>. (1") Columnar <b>fruits</b> tipped w/ 5 <b>papery scales</b>, each tipped with a <b>bristle</b>.</p> 
<p><b>Douglas' Silverpuffs</b> <i>Microseris douglasii</i> <i>ssp. douglasii</i> <i>ssp. tenella</i> AC, CCC native</p> <p><b>Bare stem, 1/2-2'</b></p> <p><b>Small Yellow/White</b> head. Phyllary &lt; ray length. Basal leaves rising, narrow. <b>Pappus</b> varies by ssp.</p>	<p><b>Small head (1/2").</b> <b>Yellow</b> or <b>white rays</b> Nodding in bud. Phyllary &lt; ray length. Minute scales on stem.</p> 	<p><b>Basal leaves long, (4-6").</b> Rising, narrow.</p> 	<p><b>Big Papery starburst</b> (1 1/4"). Columnar fruits w/ 5 <b>bristle-tipped papery scales</b>. <i>ssp. tenella</i> smaller (&lt;1") shorter fruits, bristle but <b>no scales</b>.</p> 

## Bare Stems

### Flower Head

### Basal Leaves

### Pappus

**Continued:** Basal leaves **narrow**; pappus a **papery starburst**.

#### Grassland Silverpuffs

*Stebbinsoseris heterocarpa*  
AC, CCC native

**Bare stem, 1/2-2'**

**Small Yellow/White**  
head.

**Phyllary = ray** length.

**Long**, narrow, rising  
basal leaves.

Pappus a **papery**  
**starburst**.

**Small head (1/2")**  
**Yellow or white rays**  
**Phyllary = ray** length.



**Basal leaves long**  
(6-10")

Rising, narrow.  
Not hairy.



**Big papery starburst**  
(1 1/4")

Columnar fruits tipped  
w/ **5 papery scales**  
with a **notched tip**. A  
**bristle** extends from  
the notch.



#### Needle Microseris

*Microseris acuminata*  
AC, CCC native

**Bare stem to 1'**

**Big, yellow** head.

**Narrow** basal leaves  
with **linear** lobes.

Pappus a **papery**  
**starburst**. Scales long  
and flat with needle-like  
bristles.

**Big head (1")**  
**~24 yellow rays**  
Two sets of purple-  
marked phyllaries.  
Minute scales on stem.



**Basal leaves medium**

Upright, narrow, with  
linear lobes.

Minute scales on stem.



**Big papery starburst**  
(1 1/2")

Each fruit ends in 5 flat  
**scales** each tipped with  
a needle-like bristle.



#### San Joaquin Microseris

*Microseris campestris*  
AC, CCC native

**Bare stem to 1'**

**Medium yellow/white**  
head.

Lobed basal leaves.

Pappus a **papery**  
**starburst**. Scales short  
and inrolled.

**Medium head (3/4")**  
**Yellow or white rays**  
Two sets of purple-  
marked phyllaries.  
Minute scales on stem.



**Basal leaves medium**

Lobed.









**Small Papery**  
**starburst** (<1")




Each fruit ends in 5  
curved **scales** each  
tipped with a single  
short bristle.



## Bare Stems

	Flower Head	Basal Leaves	Pappus
<p><b>Elegant Silverpuffs</b> <i>Microseris elegans</i> CCC native</p> <p><b>Bare stem</b> to 1'</p> <p><b>Medium yellow/orange</b> rays. Lobed basal leaves. Pappus a small <b>papery starburst</b>. Scales short and flat.</p>	<p><b>Medium head (3/4")</b> <b>Yellow or orange rays</b> Minute scales on stem.</p> 	<p><b>Medium basal leaves</b> Pinnately lobed.</p> 	<p>Small <b>Papery starburst</b> (&lt;3/4") Short wedge-shaped fruit. Scales are really short (1/25").</p> 
<p><b>Silver Puffs</b> <i>Uropappus lindleyi</i> AC, CCC native</p> <p><b>1/2-2' tall.</b> <b>Small, yellow</b> head nestled in <b>long green</b> phyllaries. Narrow leaves with <b>soft hair</b>. Pappus a <b>papery starburst</b>, brighter and bigger than other Silver Puffs.</p>	<p><b>Small head (1/2").</b> Many <b>yellow rays</b> ~8 <b>Phyllaries</b> &gt;&gt; rays.</p> 	<p><b>Basal leaves medium</b> (4-6"). <b>Rising, narrow. Soft hairy.</b></p> 	<p><b>Biggest Papery starburst</b> (2") Columnar fruit tipped w/ 5 <b>papery scales</b>.</p> 

### Group 2: Basal leaves **narrow**; pappus a **fluffy** or **dense sphere**.

<p><b>Bigflower Dandelion</b> <i>Agoseris grandiflora</i> <i>var. grandiflora</i> AC, CCC native</p> <p><b>Tall, bare stem, 2-3'.</b> <b>Big, yellow head.</b> Phyllaries can be hairy, and/or marked. Rising, narrow basal leaves. Pappus a big fluffy sphere.</p>	<p><b>Big head (1 1/2").</b> Many <b>yellow rays</b>. Several rows of large phyllaries. Green phyllaries often have rose-colored centers.</p> 	<p><b>Basal leaves long</b> (8") Narrow, rising leaves. Narrow, <b>pinnate lobes</b>. Stem hairy near base.</p> 	<p><b>Big fluffy sphere</b> (1-2") Many <b>long beaks</b> (1/2"), each tipped with dozens of <b>bristles</b>.</p> 
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## Bare Stems

### Flower Head

### Basal Leaves

### Pappus

**Continued:** Basal leaves **narrow**; pappus a **fluffy** or **dense sphere**.

#### Mountain Dandelion

*Agoseris heterophylla*  
var. *cryptopleura*  
var. *heterophylla*

AC, CCC native

**Bare stem 1'.**

**Yellow head.**

Annual, slender taproot.

Rising, narrow basal leaves.

Pappus a fluffy sphere.

**Small head (1/3")** var.

*heterophylla*, or

**Big head (1")**

(pictured) var.

*cryptopleura*

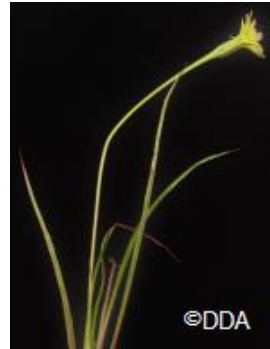
Many **yellow rays**



**Basal leaves med (4")**

**Rising, narrow.**

Hairy, smooth edges.



**Fluffy sphere (1")**

>100 **beaks** (1/3"), each tipped with **2 or 3 sets of bristles**.



#### Spear Leaved Agoseris

*Agoseris retrorsa*

AC, CCC native

**Bare stem, 1-2'.**

**Big, yellow head.**

Sometimes **woolly** phyllaries and leaves.

Narrow basal leaves with pinnate, linear, **back-pointing lobes**.

Pappus a big fluffy sphere.

**Big head (1")**

**Yellow rays**

Several ranks of phyllaries, hairy and often purple near the base.



**Basal leaves long (8").**

Narrow, back-pointing pinnate **lobes**.

Sometimes woolly.



**Big fluffy sphere (2")**

Short fruit tapers abruptly to a **long beak** (1/2"), which is tipped with dozens of **bristles**.



#### Desert Dandelion

*Malacothrix californica*

CCC native

**Bare stem, to 18".**

**Medium, yellow head.**

**Malacothrix look** – longer and paler outer rays. Outer fruit pappus is different.

Narrow basal leaves woolly at their base.

Pappus a dense sphere of fine, white bristles.

**Medium head (3/4")**

Many **yellow rays**.

Red streaks behind.



**Narrow basal leaves.**

Long woolly hairs at leaf base.



**Dense sphere**

A dense cone of bristles tips each fruit. Outer fruits have only two bristles.



## Bare Stems

### Flower Head

### Basal Leaves

### Pappus

**Group 3:** Basal leaves **ovalish**, in a **rosette**; pappus a **fluffy sphere**.

#### Woolly Goat Chicory

*Agoseris hirsuta*

AC native

**Bare stem about 1'.**  
**Medium, yellow head.**  
**Pinnate** basal leaves,  
**densely hairy.**

*Hirsuta* is Greek for hairy.

Pappus a fluffy sphere.

**Medium head (¾")**

Many **yellow rays**

Often purple under rays and on phyllaries.



**Basal leaves long (6-10")**

**Variable lobes.**

**Densely hairy.**



**Fluffy sphere (1")**

Many **beaks (⅓")** each tipped with **3 or 4 sets of bristles.**



#### Common Dandelion

*Taraxacum officinale*

AC, CCC not native

**Short, bare stem < 1'.**  
**Big, yellow head.**

The dandelion we all know.

Dense rosette, lobes pointing backwards, **not hairy.**

Large, fluffy pappus.

Common/widespread.

**Big head (1½")**

Many **yellow rays**

Often, stamen columns are **darker yellow** and **ray backsides** are **pale brown** up the middle.



**Long (7")**

**Lobes** generally **point backwards.**

**Not hairy.**

Tangled rosette.



**Fluffy sphere >1" dia.**

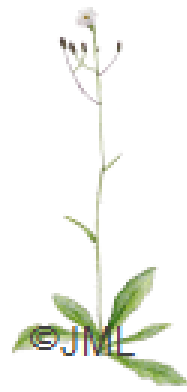
Many **long beaks (½")**, each tipped with dozens of bristles.



# Leafy/Branched Stems

These flowers share a stem with leaves and branches. Sometimes, the leaves are merely bumps on the stem but the stem is not unmarked.

If your plant has bare stem, skip to [Bare Stems](#).









White Hawkweed

Nipplewort



Smooth Cat's Ear

	Flower Head	Leaves	Pappus
<b>Group 1: Flower heads of a few rays, along the stem.</b>			
<p><b>Rod Wirelettuce</b> <i>Stephanomeria virgata</i> <i>ssp. pleurocarpa</i> AC, CCC native</p> <p><b>2-6' tall.</b></p> <p><b>Medium pink/white heads.</b></p> <p><b>Wirelettuce look</b> – flower heads of <b>few rays</b> along a <b>mostly bare, wiry</b> stem.</p> <p>Phyllaries, in two series, lie <b>flat</b>.</p>	<p><b>Medium head (3/4")</b> <b>~7 Pink or white rays</b> <b>Heads along stem</b></p> <p>Phyllaries, in two series, lie <b>flat</b>.</p> 	<p><b>Basal leaves short (2") and narrow</b> <b>Stem leaves tiny.</b></p> 	<p><b>Brush shape.</b> <b>~7 fruits, each tipped with plumose bristles.</b></p> 
<p><b>Santa Barbara Wirelettuce</b> <i>Stephanomeria elata</i> AC, CCC native</p> <p><b>2-3' tall</b></p> <p><b>Medium, pink heads.</b></p> <p><b>Wirelettuce look</b> – flower heads of <b>few rays</b> along a <b>mostly bare, wiry</b> stem.</p> <p>Outer phyllaries are <b>reflexed</b>.</p>	<p><b>Medium head (3/4")</b> <b>Pink rays (~6)</b> <b>Heads along stem.</b></p> <p>Outer phyllaries reflexed.</p> 	<p><b>Basal leaves short (2") and narrow</b> <b>Stem leaves tiny.</b></p> 	<p><b>Brush shape.</b> <b>~6 fruits, each tipped with plumose bristles.</b></p> 

## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Continued:** Flower heads of a **few rays, along the stem.**

**Small Wirelettuce**  
*Stephanomeria exigua*  
CCC native

**2-6' tall.**

**Small, white/pink** heads.

**Wirelettuce look** – flower heads of **few rays** along a **mostly bare, wiry** stem.

Phyllaries, in two series, lie **flat**.

Stem leaves bract-like.

**Small head (½")**  
**~8 Pink or white rays**  
**Heads along stem**

Inner phyllaries are narrow and long, not overlapping.



SSM

**Basal leaves wither** by blooming. **Stem leaves are bracts.**

**Stem wiry, bluish green, hairless.**



**Brush shape**

**~8 fruits**, each tipped with **plumose bristles**.



**Willow Lettuce**  
*Lactuca saligna*  
AC, CCC not native

**1-3' tall.**

**Medium, yellow** heads of **few rays** along a **mostly bare** stem.

Long narrow leaves clasp stem.

**Medium head (¾")**  
**Yellow rays (6-12)**  
**Heads along stem.**



AF

**No basal leaves**  
**Stem leaves narrow**, sometimes prickly-bristly.



WL

**Brush shape**

**~9 fruits** each tipped with white **bristles**.



ZAB

**Skeleton Weed**  
*Chondrilla juncea*  
AC not native

**To 4' tall**, w/ branches.

**Big, yellow** heads of **few rays** on short stalks along a **mostly bare** stem.

**Downward pointing bristles** at stem bottom.

Pappus soft brush shape.

**Big head (1")**  
**9-12 yellow rays**  
Head base columnar.  
Short stalks along stem.

Narrow, green phyllaries.



ZAB

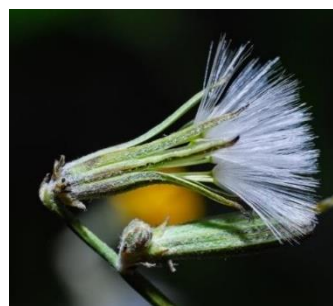
**Basal leaves** medium (4")  
Lobes highly variable.  
Stem leaves smaller.






MB

**Brush shape**







Short fruit, **long beak** (½"), each tipped with dozens of white **bristles**.



## Leafy/Branched Stems

	Flower Head	Leaves	Pappus
<p><b>Chicory</b> <i>Cichorium intybus</i> AC, CCC not native</p> <p><b>2-6' tall.</b> Erect.</p> <p><b>Big, blue heads</b> of about a <b>dozen rays</b> along the stem are distinctive.</p> <p>Many large, ovalish, clasping stem leaves.</p>	<p><b>Big head (1¼")</b> <b>Blue rays (~15)</b> <b>Heads along stem.</b></p> 	<p><b>Long leaves below,</b> smaller higher up. Variably lobed, hairy.</p> 	<p><b>No noticeable pappus</b></p> <p>Whole plant:</p> 

### Group 2: Lots of ovalish, prickly-bristly stem leaves.

<p><b>Common Sow Thistle</b> <i>Sonchus oleraceus</i> AC, CCC not native</p> <p><b>1-4' tall.</b> Thick stem.</p> <p><b>Big, yellow/white heads.</b></p> <p><b>Fat stem, not hairy.</b></p> <p>Large <b>clasping leaves</b> are <b>not long-spined.</b></p> <p>Common/widespread.</p>	<p><b>Big head (1") .</b> Many <b>yellow</b> or <b>white rays (&gt;100).</b> <b>Vase-shaped head.</b></p> 	<p><b>Big leaves (3-9") .</b> Margins with no bristles or <b>tiny bristles.</b> Leaves <b>clasp stem w/ flat, pointed tip.</b></p> 	<p><b>Dense sphere.</b> <b>No beaks.</b> Fruits are <b>flat.</b> Bristles 2x fruit length.</p> 
<p><b>Prickly Sow Thistle</b> <i>Sonchus asper ssp. asper</i> AC, CCC not native</p> <p><b>1-4' tall.</b></p> <p><b>Medium, yellow heads</b> of many rays.</p> <p><b>Fat stem, not hairy.</b></p> <p><b>Large clasping leaves</b> have <b>long, spiny teeth.</b></p> <p>Common/widespread.</p>	<p><b>Medium head (¾").</b> Many <b>yellow rays (&gt;100) .</b> Stem not hairy. Vase profile.</p> 	<p><b>Long leaves (6-9").</b> Margins with <b>long, spiny teeth.</b> Leaves <b>clasp stem w/ rounded, curling tip.</b></p> 	<p><b>Dense sphere.</b> <b>No beaks.</b> Fruits are <b>flat.</b> Bristles 3x fruit length.</p> 



## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Continued:** Lots of **ovalish, prickly-bristly** stem leaves.

#### **Bristly Ox Tongue**

*Helminthotheca  
echioides*

AC, CCC not native

**3-7' tall.** Stout stem.

**Big, yellow** heads.

**Distinctive white  
bumps** on leaves.

**Bristles throughout.**

**Big, triangular  
phyllaries** make a cup  
below the flower head.

Common/widespread.

**Big head (1¼")**

Many **yellow rays**

**Big triangular  
phyllaries**

Outer rays are often  
purple underneath.



**Basal leaves medium  
(~4")**

**Obvious white  
bumps.**

**Bristly.**

Stem leaves smaller  
higher up the stem.



**Fluffy sphere (1")**

¼" **beaks**, each tipped  
with **dozens of ¼"**  
**plumose bristles.**



#### **Prickly Lettuce**

*Lactuca serriola*

AC, CCC not native

**1-4' tall. Stiff,** thick  
stem, **prickly-bristly.**

**Small yellow** heads.

A **handful** of **wide** rays.

**No** basal leaves.

Sometimes prickly-  
bristly near stem base.

Common/widespread.

**Small head (½")**

**Yellow rays (~15),**  
wide at tip.

Heads on branching  
stalks.



**No** basal leaves.

**Leaf** margins are  
**prickly-bristly**, as well  
as the central vein.

Clasp stem, pointed tip.



**Open sphere**

**~15 beaks (¼"),**  
each tipped with whitish  
bristles.



#### **Poison Wild Lettuce**

*Lactuca virosa*

AC, CCC not native

**3-6' tall. Stiff,** thick  
stem.

**Many small yellow**  
heads.

A **handful** of rays.

**Basal leaves** in a  
**persistent rosette.**

Sometimes prickly-  
bristly near stem base.

**Small head (½")**

**Pale yellow rays  
(~15),** wide at tip.

Many heads in a cluster  
at the top.



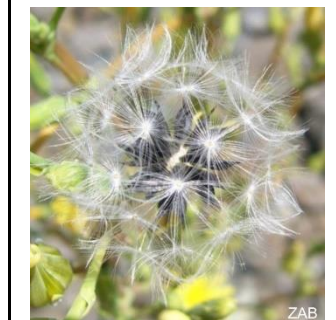
**Large, unlobed basal  
leaves** in a persistent  
rosette.

Many wide, toothed,  
broadly-clasping stem  
leaves with a prickly  
vein.



**Open sphere**

**~15 black fruits,** each  
with white **beaks (¼")**  
tipped with whitish  
bristles.



## Leafy/Branched Stems

**Flower Head**

**Leaves**

**Pappus**

**Group 3:** Lots of **ovalish, not-prickly-bristly** stem leaves.

**Common Sow**

**Thistle** *Sonchus oleraceus*

AC, CCC not native

1-4' **tall**. Thick stem.

**Big, yellow/white** heads.

**Fat stem, not hairy.**

Large **clasp**ing leaves are **not long-spined**.

Common/widespread.

**Big head (1")** .

Many **yellow** or **white** rays (**>100**).

**Vase-shaped** head.



**Big leaves (3-9")** .

Margins with no bristles or **tiny bristles**.

Leaves **clasp stem** w/ **flat, pointed tip**.



**Dense sphere.**

**No beaks.**

Fruits are **flat**.

Bristles 2x fruit length.



**California Chicory**

*Rafinesquia californica*

CCC native

**2-4' tall**, erect.

**Big, white heads** in an array near the top.

Often rose-tinged.

Involucre a long narrow cylinder (1/2" or more).

Stem leaves clasping.

Not hairy.

**Big head (1")**

**White rays (~20)**

Often rose-tinged.

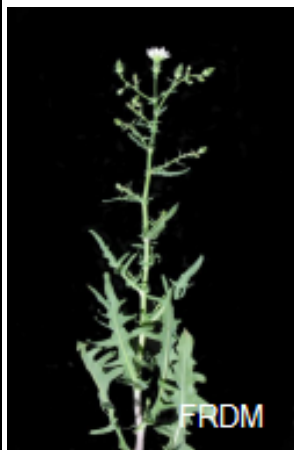
Long, narrow phyllaries + short, recurving ones.



**Basal leaves med (4")**

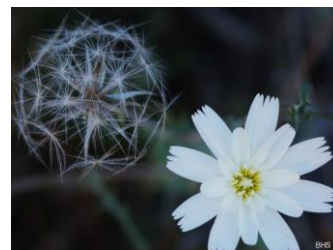
**Stem leaves clasp**ing

Smaller higher up.



**Open sphere (1")**

**~20 beaks (1/4")**, each tipped with a cone of 1/4" plumose **bristles**.



**Snake's Head**

*Malacothrix coulteri*

AC, CCC native

**2' tall**

**Medium pale yellow (white)** heads.

**Malacothrix look** – outer rays 1/4" longer.

Round phyllaries with reddish markings.

Leaves clasp stem, ear-like at base.

**Medium head (2/3")**

Many **yellow (white) rays**. Outer rays longer.

Round phyllaries in many series, reddish mid-stripe.



**Basal rosette** of ovalish leaves.

Heavy stem w/ clasping leaves.



**Dense sphere**

Small fruit packed tightly, fine bristles.



## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Continued:** Lots of **ovalish, not-prickly-bristly** stem leaves.

#### Crete Weed

*Hedypnois rhagadioloides*  
CCC not native

**Prostrate stems to 1'.**

**Small yellow** heads.

Distinctive rough pappus with woody, incurved phyllaries.

Disturbed, sandy spots.

**Small head (1/2")**

**Yellow rays (~30)**

**Heads on stalks at top and in leaf axils.**



**Basal leaves medium (3")**

Shallow lobes, scattered hairs.

**Stem leaves clasp**



**Brush shape**

**No beaks**

Mature phyllaries are incurved and woody.



**Group 4:** Stem leaves **tiny**; stem sometimes **branched**; basal rosette.

#### White Flowered Hawkweed

*Hieracium albiflorum*  
AC, CCC native

**1-4' tall;** erect.

Taller than others in this group.

**Small, white** heads in an open cluster.

**Coarse hairy.**

Smooth-edged basal leaves.

**Small head (1/3")**

**White rays (~25)**

Heads form an open cluster at the top of the stem.



**Basal leaves med (4")**

Smooth margin.

Coarse hairs.

**Small, narrow leaves** on the lower stem.



**Brush shape**

**No beaks.**

Bristles form a brush at the end of the fruit.



#### Cleveland's Malacothrix

*Malacothrix clevelandii*  
CCC native

**~1' tall, not hairy.**

**Small yellow** heads.

**Malacothrix look** – outer rays 1/10" longer. Outer fruits with a single bristle.

Pappus sphere a bit bigger than floral heads.

**Small head (1/3")**

Many **yellow rays.**

Narrow, tall heads.



**Basal leaves narrow** w/ equally spaced **pinnate** lobes.

Small stem leaves.



**Open sphere**

Many **thin bristles** **curve out** from **short** **fruits.**



## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Continued:** Stem leaves **tiny**; stem sometimes **branched**; basal rosette.

**Woolly Malacothrix**  
*Malacothrix floccifera*  
AC, CCC native

**To 18"** tall. Stem **not hairy**.

**Small white (yellow)** heads, often lavender-striped behind.

**Malacothrix look** – outer rays ~1/4" longer, outer fruits no pappus.

**Woolly** basal rosette.

**Small head (1/2")**

~**30 white (yellow) rays**. Outer 1/4" longer.

Phyllaries narrow in 2 rows.



**Basal rosette**

Small stem leaves don't wrap.

White hair tufts on lobes.



**Small sphere (1/2").**

Tiny fruit, no pappus on outer ring of fruits.



**Smooth Cat's Ear**  
*Hypochaeris glabra*  
AC, CCC not native

**1-2'** tall, often branched

**Small yellow** heads with about 30 rays.

**Scale-like** stem leaves.

**Small** basal leaves are **smooth-edged**, like a cat's ear.

**Not hairy**.

Common/widespread.

**Small head (1/3")**

**Yellow rays (~30)**



**Small basal leaves (2-3")** in a **rosette**, often **shallowly lobed**.

**Stem leaves not obvious**, scale-like.



**Fluffy sphere (1")**

~**20 beaks** on inner fruits, each tipped with about 12 bristles.

Outer fruits no beaks.



**Hairy Cats Ear**  
*Hypochaeris radicata*  
AC, CCC not native

**1-2'** tall, often branched

**Big yellow heads (1 1/4")** with ~25 rays.

**Scale-like** stem leaves.

**Big** basal leaves have **large, uneven "bites"** taken out of them, like a cat after a fight.

Short, **coarse hairs**.

**Big head (1 1/4")**

**Yellow rays (~25)**

Common/widespread.



**Big basal leaves (3-6")** in a **rosette** with **deep, pinnate lobes**.

**Stem leaves not obvious**, scale-like.



**Fluffy sphere (1")**

~**25 beaks (1/4")**, each tipped w/ ~12 bristles.



## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Continued:** Stem leaves **tiny**; stem sometimes **branched**; basal rosette.

#### Italian Hawksbeard

*Crepis bursifolia*

AC not native

**To 14" tall**, short hairs.

**Big, yellow** heads.

Leaves are all **near the ground** and have **irregular lobes**.

Pappus is a fluffy sphere.

This is a common **lawn weed**. A few **waifs** are found in Oakland.

**Big head (1")**

**~50 yellow rays**

A single head at the top of each stem or branch.



ZAB

**Basal and stem** leaves **medium (2-10")**

**Irregular lobes**; larger lobe at tip.



ZAB

**Fluffy sphere.**

Short fruit, **long beak** (2x fruit - 1/2"), each tipped with an inverted cone of white **bristles**.



ZAB

#### Smooth Hawksbeard

*Crepis capillaris*

AC not native

**1-3' tall**

**Medium, yellow** heads in a **flat-topped cluster**

Often **short hairy**.

Pinnate leaf **lobes pointing out** or **backwards**.

**Medium head (3/4")**

**Yellow rays (~40) hairy**

**Inflorescence flat-topped**



BB

**Basal leaves medium (4")**, diminishing rising up the stem.

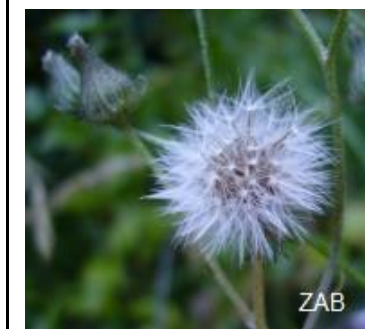
**Lobes highly variable.**



ZAB

**Medium-dense sphere; no beaks.**

Many bristles grow at the end of each fruit.



ZAB

#### Beaked Hawksbeard

*Crepis vesicaria ssp. taraxacifolia*

AC not native

**1-4' tall**, many branches.

Stem **hollow, ribbed**.

Sometimes hairy.

Large lower leaves, deeply and irregularly lobed.

**Medium head (3/4")**

Many **yellow rays**.

**Many branches**, tipped with flower heads.



WL

**Long basal leaves (to 14")** have deep, irregular lobes, the largest at the tip.

Leaves diminish rising up the stem.



BHS

**Fluffy sphere**

Short fruit = **short beak** (1/8"), tipped with an inverted cone of white bristles.



ZAB

## Leafy/Branched Stems

### Flower Head

### Leaves

### Pappus

**Group 5:** Few or no branches; **narrow, rising** basal leaves.

**Woodland Silverpuffs**

*Microseris sylvatica*  
CCC native

½–2' tall. Scaly stem.  
**Big, yellow** heads.  
Leafy near base.  
Long straw-colored fruit.  
Large papery starburst  
**Endemic** to Central Valley and surrounding foothills.

**Big head (1½")**  
**Yellow rays**

Phyllaries << rays  
Short, outer phyllaries become recurved.



**Long** basal leaves (~8"), pinnately lobed.  
Stem leaves clasping.



**Papery starburst**

Long straw-colored fruit, long scales and bristles; 2" diameter.



**Silver Puffs**

*Uropappus lindleyi*  
AC, CCC native

½–2' tall. Stem may be branched and leafy.  
**Small, yellow** head nestled in **long green phyllaries**.  
Narrow leaves w/ soft hair.  
Pappus a big, bright, **papery starburst**

**Small head (½")**  
**Many yellow rays**

~8 phyllaries >> rays  
Phyllaries green, narrow, pointed.



**Basal leaves medium (4–6")**  
**Narrow, pointing up.**  
**Soft hairy.**



**Papery starburst**

5 big, papery scales, each notched and tipped with a bristle.



**Salsify**

*Tragopogon porrifolius*  
AC, CCC not native

1–3' tall; erect.  
**Big, purple** head nestled in **long green phyllaries**.  
Not Hairy.  
Pappus a **fluffy sphere**, **bigger** than other dandelions (3").

**Big head (2")**  
**Purple rays (~50)**  
**Bulge at bottom**  
~8 phyllaries >> rays

Phyllaries green, narrow, pointed.



**No basal leaves.**  
**Stem leaves long (8"), grass-like,** clasping stem.



**Very big fluffy sphere (3")**

~50 long beaks (1"), each tipped with **dozens of plumose bristles**.



# Distribution Maps

Maps courtesy of [Calflora.org](http://Calflora.org)



*Agoseris grandiflora*  
Giant Mtn Dandelion



*Agoseris heterophylla*  
Mountain Dandelion  
yellow = var. *cryptopleura*



*Agoseris hirsuta*  
Woolly Goat Chicory



*Agoseris retrorsa*  
Spear Leaved Agoseris



*Chondrilla juncea*  
Skeleton Weed



*Cichorium intybus*  
Chicory



*Crepis bursifolia*  
Italian Hawksbeard



*Crepis vesicaria*  
Weedy Hawksbeard



*Hedypnois rhagadioloides*  
Crete Weed



*Helminthotheca echioides*  
Bristly Ox Tongue



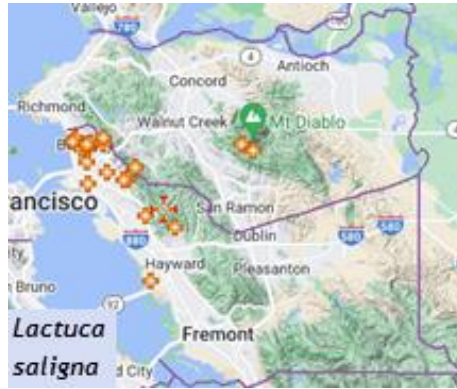
*Hieracium albiflorum*  
White Flowered  
Hawkweed



*Hypochaeris glabra*  
Smooth Cat's Ear



Hairy Cat's Ear



Willow Lettuce



Prickly Lettuce



Poison Wild Lettuce



Desert Dandelion



Cleveland's Malacothrix



Snake's head



Woolly Malacothrix



Needle Microseris



Coast Microseris



San Joaquin Microseris



Douglas' Microseris  
yellow=ssp. *tenella*





Elegant Silverpuffs



Woodland Silverpuffs



California Chicory



Prickly Sow Thistle



Sow Thistle



Grassland Stebbinsoseris



Santa Barbara  
Stephanomeria



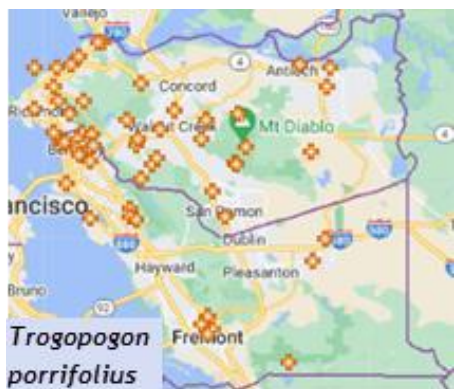
Small Wirelettuce



Tall Stephanomeria



Common Dandelion



Salsify



Silver Puffs

# Terms Used in the Key

**Bare stem (scapose)** – Flower stalks are separate from the rest of the plant. The stalks have no leaves or branch and arise from near the ground. These plants have only basal leaves.

**Basal leaves** emerge from the root area at the base of the plant, as opposed to stem leaves. A **rosette** is basal leaves forming a circle (pointing in all directions), running along the ground. Other basal leaves point upward from the ground – a useful distinction when identifying a plant.

**Beak** – a narrow neck that grows at the top of a pollinated fruit. The beak extends the reach of the **pappus**, making a bigger parachute to catch the wind.

**Bristle** – a hair-like growth. Pappus is often made up of many bristles.

**Flower Head** – All asters, including dandelions, have their florets arranged in flower heads. When you look at what looks like a many-petalled dandelion flower, you're actually looking at a collection of many florets, each pointing outward, gathered into a flower head.

**Fruit** – When an **ovary** is fertilized by a pollen grain, it starts to grow as a fruit. The fruit changes in shape and grows a skin around a single seed. In some cases, the fruit grows a narrow **beak** at its outer tip.

**Hairy** is used when a plant is obviously hairy, either on the stem, leaves or flower head. If a species varies in hairiness, hairiness isn't mentioned.

**Hybridize** – In general, plants reproduce sexually with members of their own species. However, some plants are also able to hybridize - reproducing with members of one or a few other species. If the resulting hybrids are fertile, they form a new species. *Stebbinsoseris* and some *Microseris* dandelions are hybrid species.

**Leafy/branched stem** – Flower heads don't have separate ground-based stalks but are connected to the main plant stem.

**Linear** – a shape that's very narrow, compared to its length, like a line.

**Lobe** – a protruding shape at the side of a leaf. The lobes in this picture are **pinnate**, typical of dandelion leaves, with a series of lobes on both sides of the central leaf vein.



Bigflower Dandelion

**Med** – abbreviation for medium.

**Narrow & Ovalish** – Narrow leaves are generally more than 10 times as long as they are wide, ignoring any side lobes. Ovalish leaves are the traditional dandelion shape, often with lobes or teeth along the margins.

**Ovary** – Located at the base of a floret, the ovary contains female genetic material. The ovary is pollinated if a grain of pollen reaches it. The genetic material of the pollen and ovary combine to create a new individual, which starts growing as a fruit.

**Pappus** - [bristles](#) and [scales](#) at the top of a fruit/seed that will catch the wind and carry it to a new location. The key refers to overall pappus looks. Here are links that describe them:

- [Fluffy Sphere](#)
- [Dense Sphere](#)
- [Brush Shape](#)
- [Papery Starburst](#)

**Persistent** – a part that stays on the plant a long time, such as persistent phyllaries or leaves that stay on the plant when it goes to seed.

**Phyllaries** – green bracts that surround the base of an aster flower head. They often form 2 or more layers, with the inner phyllaries longer. Each bract is called a phyllary.

**Prostrate** – Lying along the ground.

**Ray** – a single floret of a dandelion, consisting of 5 fused petals (a ligule) and reproductive parts, connected to the flower head base.

**Scale** – a scale is flat. In pappus, scales have a narrow triangular shape, are often white, and have a papery texture. Generally, 5 scales will attach to the end of a fruit, each with a bristle coming out of its other end.

**Scapose** – describes a leafless flower stalk that arises from near the base of the plant.

**Stamen Columns** – 5 fused stamens form a column rising from the ovary. Inside, a pistil grows and emerges after the stamens are finished dispensing pollen, to receive pollen from other plants.



**Waif** – Individual plants, unlikely to permanently naturalize in the wild.

**Wiry** – smooth, stiff and slender – the look of a Wirelettuce stem.

# Notes on This Key

This key is designed to be used on your phone or tablet. Once downloaded, you won't need an internet connection to use it. You can pull it out of your pocket whenever you have a dandelion ID opportunity.

From your Apple phone or tablet:

- Open the book at <https://classic.PlantID.net/LinkArticles/SFPenDandelions.pdf>
- Click the  share icon.
- Scroll through options to click the  Books icon.
- You'll be able to find it among your books after that.

Or, from your Android phone or tablet:

- Install Adobe Acrobat Reader on your Android device
- Open the book at <https://classic.PlantID.net/LinkArticles/SFPenDandelions.pdf>
- Click Download
- If prompted, ask to use Acrobat to view the book.
- You can then access the book any time from the Acrobat icon on the homepage.

Thanks to the [many artists and photographers](#) that have contributed images to this key. Cover paintings and pictures are by John Muir Laws, Keir Morse, Wilde Legard and Zoya Akulova-Barlow.

Nature almost never completely cooperates with the lines we draw in keys. My first criteria – bare stems vs. leafy – runs into trouble with Silver Puffs, *Uropappus lindleyi*, which sometimes shows leaves on the stem and sometimes doesn't. I put it in both sections.

I also put Common Sow Thistle in both the spiny leaves and not-spiny leaves section, since it sometimes has short spines at the tip of margin teeth.

If you see any stem leaves at all, even just scales, or there are stem branches, look for your plant in the Leafy/Branched stem section.

A couple of esoteric details – Dianne Lake reports that recent changes in keys make it likely that *Agoseris apargioides* var. *apargioides* is not found in the East Bay, and historic observations credited to this species are actually *Agoseris hirsuta*. Also, although Calflora shows *Crepis capillaris* occurring in the East Bay, I've dropped it from this list. The Calflora observations are from 1906 and

before and iNaturalist does not show any research grade observations for the species here.

The ID characters I present are easily observed and the most useful I've found for distinguishing between similar plants. If you know of a good character I've left out, please write me at [bruce@plantid.net](mailto:bruce@plantid.net). I'll republish the key with your improvement.

Although an internet connection is not required, if you're lucky enough to have one, you can learn much more about each plant by linking to its [PlantID.net](http://PlantID.net) page.

Have fun with this! Please let me know how it works for you.