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ANNOTATED CHECKLIST  
*of the*  
VASCULAR PLANTS *of*  
SANTA CRUZ COUNTY,  
CALIFORNIA

SECOND EDITION

Dylan Neubauer



*Artwork by Tim Hyland  
& Maps by Ben Pease*

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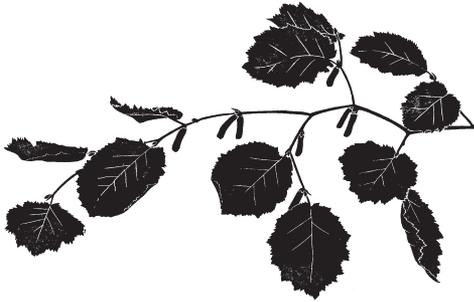
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For Tim Forsell,  
who appreciates the tiny ones ...



*Nobody sees a flower, really –  
it is so small –  
we haven't time,  
and to see takes time,  
like to have a friend takes time.*

– GEORGIA O'KEEFE

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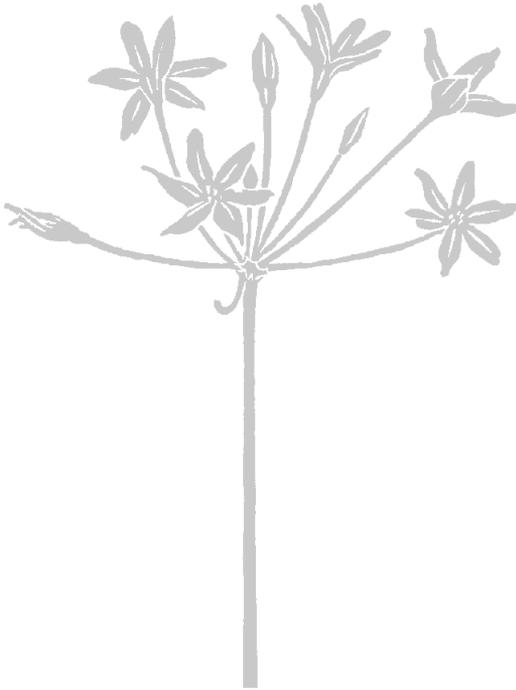
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*"True science teaches, above all, to doubt and be ignorant."*  
—MIGUEL DE UNAMUNO



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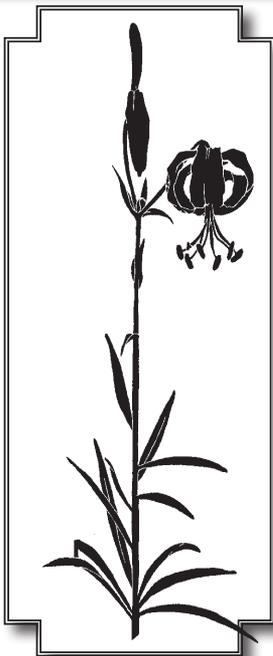
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# Santa Cruz County, CA

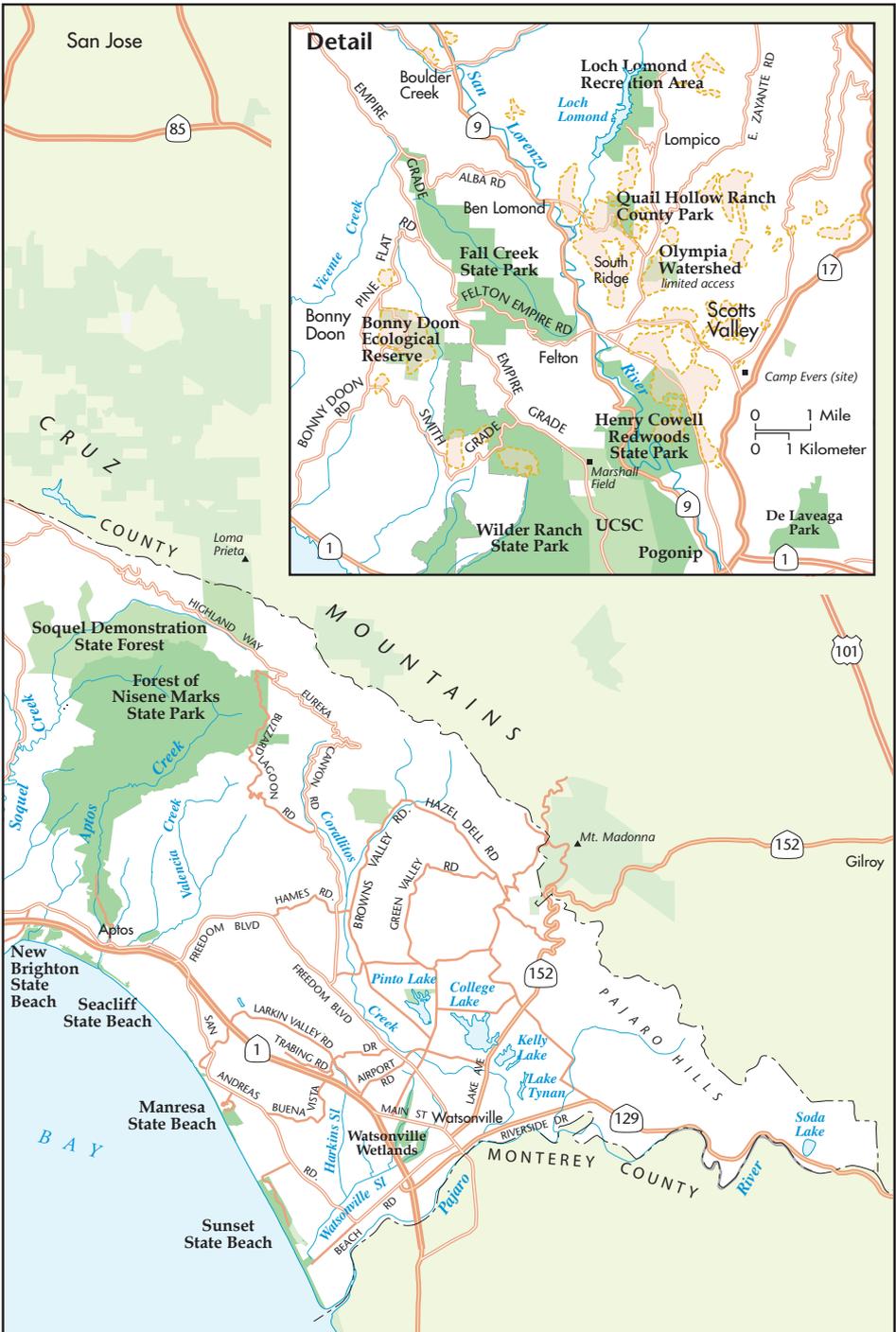


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- Parks
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MONTEREY



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## INTRODUCTION

*"There are no fixtures in nature. The universe is fluid and volatile."* —RALPH WALDO EMERSON

FOR THOSE WHO GRUMBLE AND GROAN about the recent changes in botanical nomenclature, it is good to be reminded that this has been an ongoing trend. Indeed, a quick perusal of naturalist Dr. Charles Lewis Anderson's 1892 "Catalogue of Flowering Plants and Ferns of Santa Cruz County" and "List and Notes of Native and Other Grasses Found Growing Wild in Santa Cruz County" yields many strange names for familiar plants. Those lists constitute the very first inventory of our local flora. The second major treatment was John Hunter Thomas's *Flora of the Santa Cruz Mountains of California*, published in 1961. His work—which includes San Francisco, San Mateo, and western Santa Clara counties, as well as Santa Cruz County—has remained the principal botanical reference for the area.

The first edition of this *Checklist* was published in 2005 by the Santa Cruz County Chapter of the California Native Plant Society (CNPS)—the result of six years of data-gathering by an ad hoc Flora Committee headed by Randall Morgan. The main impetus for the creation of this new edition was the 2012 publication of *The Jepson Manual: Vascular Plants of California, Second Edition (TJM2)*—a massive revision of the information presented in *The Jepson Manual: Higher Plants of California (TJM1)*, published in 1993. With some exceptions, this *Checklist* follows the nomenclature of *TJM2* (and of its online, periodically updated version, the Jepson eFlora) and is to be used in tandem with the *Manual*, along with the Jepson Online Interchange for California Floristics.

The *Checklist* is targeted toward an audience already familiar with botanical concepts and terminology. Its purpose is to provide the current nomenclature, distribution, and rarity information for all taxa (= species, subspecies, and varieties) known to occur in Santa Cruz County, including those that have been more recently documented and those that still remain unpublished. It includes the most up-to-date summary of data available from a variety of sources, many of which were not available for the first edition. These include qualified botanists; the Jepson Flora Project (including *TJM1/TJM2* [and Supplement I, July 2013], the Jepson eFlora, and the Jepson Interchange); the Consortium for California Herbaria (CCH); the Online CNPS Inventory of Rare and Endangered Plants; Calflora; the California Natural Diversity Database (CNDDB); the *Flora of North America North of Mexico (FNANM)*; Calphotos; and the California Invasive Plant Council (Cal-IPC).

Like any attempt to catalog biodiversity, particularly at today's explosive rate of change, this work can be little more than a snapshot of one moment in time. Nor can any such inventory pretend to achieve anything approaching completeness—no doubt it will be outdated the moment it is published. Given that, we hope to post periodic updates on the CNPS Santa Cruz County Chapter's website containing the latest information—including, perhaps, your own discoveries—about our fascinating local flora.

### BOTANICAL HISTORY

In his 1961 *Flora*, J. H. Thomas lists the major botanists working in our area up until the early 20th century. Later, during the 1940s and 50s, extensive collections made by Vesta F. Hesse of Boulder Creek provided much of the local information for Thomas's *Flora*. A revival of interest in our local flora took place in the mid-1970s when the Santa Cruz County Chapter of CNPS was founded.

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One of the principal contributors since the 1970s has been James A. West of Swanton—a mentor to many notable botanists—who continues to document the amazingly rich and diverse flora of the Scott Creek watershed and environs. During the 1980s, Mr. West (along with Dr. Roy Buck and others) collected approximately 600 vouchered specimens from this region of the County. (Housed at the UC/Jepson Herbaria, they can be accessed through the CCH.) His 2000+ seed collections from the area are housed at the University of California Santa Cruz (UCSC) Arboretum for the purpose of academic research. More recently, Mr. West has summarized his decades of knowledge about this botanical hotspot in a remarkable essay entitled “Traversing Swanton Road,” which includes many topics inviting further study. Information regarding Mr. West’s many discoveries and botanical insights and observations can be found in the Notes (*Appendix 8*).

Over the past four decades, CNPS Fellow Randall Morgan has been the other major contributor to the advancement of knowledge about our local flora. His botanical achievements include the discovery (co-discovery and re-discovery) of several taxa and the addition of approximately 4000 vouchered specimens of County taxa to the collections of the UCSC Herbarium at the Museum of Natural History. (These specimens have been mounted and databased by a dedicated team of CNPS volunteers and UCSC students and can be accessed through the CCH.) For this *Checklist*, Mr. Morgan has contributed invaluable editorial assistance and, though not credited individually, the majority of the Notes that discuss taxonomic issues/problems and unrecognized/undescribed taxa. In short, this publication would not have been possible without his participation.

Another local collector, and one of California’s most eminent field botanists, is Dr. Dean W. Taylor—a long-time resident of Aptos. His County collections number approximately 300.

During the 1990s, Ken Kellman, a Field Associate at the California Academy of Sciences and noted bryologist, created checklists for Henry Cowell Redwoods State Park and Quail Hollow Ranch County Park.

From 2007–2011, Dr. Andrew Sanders, Curator of the UC Riverside Herbarium, collected approximately 250 County specimens while visiting the area.

Al Keuter continues to document the flora of Quail Hollow Ranch, collect County specimens, study California red and black oaks (he contributed all of the *Quercus* notes), and volunteer at the UCSC Herbarium. He has also created several County-wide keys for various genera that may be published in a long-awaited “Flora” of Santa Cruz County someday. With his unflinching positive attitude and generous spirit, he was a tremendous help during the creation of this *Checklist*.

## BIOGEOGRAPHY AND FLORISTIC DIVERSITY

*“Perhaps no one county in California has a greater variety of flora than Santa Cruz, in proportion to its size.”* —Dr. C. L. ANDERSON, 1892

If Anderson exaggerated, it cannot be by much. Its location on the Central Coast, along with its extraordinary topographic, geological, and edaphic diversity, combine to give the County its great floristic diversity, even without any serpentine, a vernal pool worth mentioning, or a mountain peak much over 3000 ft. — and despite the fact that most of the land is covered by relatively monotonous redwood and mixed-evergreen forest.

The forests and woodlands constitute a major element of our flora, but the many different kinds of open, non-wooded habitats are the source of most of our

floristic diversity. These are home to the great majority of our endemic, as well as rare, plant species and showy annual wildflowers. Historically, they are also the most reduced and degraded habitats, quite unlike the relatively undiminished forest environments. Among the more significant of these are the following:

**Sandhills (*Bonny Doon and Zayante*)**— Our principal center of plant and insect endemism, including several still-unnamed species. Once an anomalous and expansive, desert-dunelike landscape surrounded by dense forest. The great majority of this unique environment (on a substrate called Santa Margarita Sandstone) has been quarried away, including most of the largest deposits. The highest dunes are now gigantic pits, and the fragments that remain are vulnerable to suburban sprawl; invasive, non-native species; fire suppression; and other threats.

**Scotts Valley grasslands**— Our other major “biological island” and center of endemism. Located at the north end of Scotts Valley quite near the Sandhills but with a substrate of mudstone rather than sandstone, the area harbors a flora and fauna of exceptional diversity, including four endemic plants (all of which were only recently discovered, and only two described so far). Now restricted to three pockets, all of them much reduced in size and separated by roads, housing tracts, and a high school. These remnants are increasingly threatened by shrub encroachment and invasive, non-native species.

**Soda Lake**— Our only alkaline wetland/grassland, located in the dramatic and picturesque San Andreas fault zone at the County’s southeastern corner. Even though the lake itself has been filled in by quarry refuse, the adjacent valley still contains over 20 native plant taxa absent elsewhere in the County, including several very uncommon ones. A recent plan to deposit more quarry fill in the valley has been abandoned, at least for the time being.

**South County maritime chaparral (*Buena Vista area*)**— Restricted locally to an area north of Watsonville on a substrate called the Aromas Red Sands. The northernmost outpost of a type of maritime chaparral more common farther south along Monterey Bay, it supports a dozen or so endemic shrubs and herbs. Now highly reduced and degraded by development and invasive, non-native species.

**Sunset Beach State Park**— Located at the northern end of Monterey Bay, this is our most extensive and complex coastal dune community. A number of endemic species reach their northern range limit here and are found nowhere else in the County. Plant life here is unusually diverse because three, distinct habitats are represented: a low foredune, a high back-dune, and an extensive freshwater marsh dividing the two.

**Mountain meadows (*San Lorenzo Valley*)**— A very special environment, limited to several spots in the upper San Lorenzo Valley. These isolated meadows—surrounded by redwood forest and watered by seasonal seeps and streamlets—occur on gentle sandstone slopes (ancient slides?) with very shallow soils. They contain our best remaining displays of annual wildflowers, including many rare taxa. One of these, “Lucille’s Court Meadow,” is our finest surviving “flower field.”

**Coastal prairie**— the mid-County coastal plain, extending from Soquel to Santa Cruz, was our largest and no doubt richest expanse of coastal prairie. It was almost totally converted to agriculture and urbanized before its flora was even studied. Most of the remaining fragments are on second or higher terraces, and the few that have escaped development are badly degraded by the encroachment of trees and non-native grasses due to the cessation of fire and grazing. The Marshall Field complex on Ben Lomond Mtn. is our richest and also highest (1120 ft.) surviving

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“coastal” prairie. There are also a few patches to the south, most notably at Watsonville Airport.

**Ancient wetlands**—These include the now-defunct Camp Evers marsh complex in what is now downtown Scotts Valley (a former treasure-trove of rare, disjunct, and locally rare plants, many of which occurred nowhere else in the County and have consequently been extirpated); the Pajaro Valley slough complex and lakes; White’s Lagoon in the Forest of Nisene Marks State Park (a spring-fed, swampy area surrounded by dense forest, containing several uncommon and rare aquatic plants); the Last Chance Lagoon/Beaver Flat wetlands in Swanton; and many others. Most of our remaining wetlands are now biologically impoverished.

**Ridgetop chaparral**—Chaparral communities above the fog belt (ca. 2000 ft.) are quite different from those at lower elevations. The latter are generally classified as “maritime chaparral,” known for their relatively high proportion of endemic plants but overall low species-diversity. The former fit the definition of “northern mixed chaparral,” with few endemics but considerably higher overall diversity, including many species not present at lower elevations. Our principal examples of this community type are along the county line at Loma Prieta (Sierra Azul Ridge) and Castle Rock Ridge, and near the summit of Ben Lomond Mtn. at Eagle Rock (2488 ft.)—each in its own right a botanical “hotspot.”

**Lockheed “Chalks”**—The Chalks is comprised of several ridges of pale, decomposed mudstone extending coastward from Eagle Rock, in the Scott Creek watershed. This area is home to our richest assemblage of manzanitas—six species in all, plus every possible hybrid combination. Two manzanitas are endemic here: *Arctostaphylos glutinosa* and *A. ohloneana*. Little other vegetation is present except for stunted live oaks and knobcone pines.

**North Coast bluffs and dunes**—Among our richest habitats for rare and locally rare taxa. Consisting of several microenvironments occupying the narrow zone between beach and coastal scrub and covered with annual and perennial herbs and shrubs in varying mixtures. Most of this zone has been converted to agriculture, and much of the rest is usurped by iceplant. The best and most extensive remnants lie between Scott and Waddell creeks, in particular a series of steep, northwest-facing slopes just inland from Greyhound Rock—amazingly rich “hanging gardens” in a seemingly harsh environment.

### Total Taxa

1594 vascular plant taxa (1038 native and 556 non-native, naturalized) documented from Santa Cruz County are included in this *Checklist* (= 1531 species). Currently unrecognized/undescribed taxa are not included in this tally, and taxa native to CA but not to County are treated as non-natives. (Non-natives comprise 35% of the total number of taxa, slightly more than one-third.)

### Extirpations

Especially for taxa that grow in heavily forested, mountainous areas, extirpation is difficult to ascertain. Therefore, extirpation data (see *Appendix 3*) in the *Checklist* is conservative. Locale, habitat, visibility, threats, and the amount of botanical attention an area has received were considered in this treatment. Records show that many native taxa have not been seen since the publication of J. H. Thomas’s *Flora* in 1961 (50+ years), and a fair number have not been observed even over the last 20 years (since 1993). Our largest “mass” extirpation, however, resulted when the ancient marsh complex at Camp Evers in Scotts Valley was filled in the 1960s.

## Invasives

Invasive, non-native species are among the most serious threats to the County's native-plant diversity (*see Appendix 6*). In addition to these introduced weeds, however, a number of native species have become weedy since former controls like fire and grazing have largely ceased. California blackberry and poison oak fill the woodland understory; Douglas-fir has taken over oak woodland and meadows on Ben Lomond Mtn.; and the last remnants of maritime chaparral and coastal grasslands are being usurped by live oaks and coyote brush.

It is our good fortune that Santa Cruz County is home to a cadre of dedicated "weed warriors," including Ken Moore and the Wildlands Restoration Team; Tim Hyland and the State Parks Weed Crew; and Linda Brodman and the CNPS Habitat Restoration Team. We encourage everyone to join them in their efforts and start tackling invasives in your own backyards and neighborhoods.

### MUCH REMAINS TO BE KNOWN

Although our County is tiny – the second smallest in California after San Francisco – and heavily populated, it should never be assumed that our flora is truly "known." In fact, we can almost guarantee that an hour or so of botanizing in virtually any random location will yield discoveries worthy of inclusion in this *Checklist* – discoveries that might include finding a new species for the County, documenting a new location for a species already on the list, or relocating a population that hasn't been seen for many years. And, for those who are taxonomically inclined, a tantalizing array of issues/problems await further investigation. We invite you to join CNPS in these efforts.

– Randall Morgan & Dylan Neubauer

## CHECKLIST CONVENTIONS

*See also "Checklist Format," "Checklist Symbols," & "Region Codes" (p. 13); "Rarity Codes" (inside back cover); and "Codes, Symbols, & Terms" used in Notes (p. 86).*

This *Checklist* is designed to be used in tandem with *The Jepson Manual, Second Edition (TJM2)* and the Jepson eFlora and follows many of the same conventions.

### ORGANIZATION

The list follows *TJM2* in its organization of taxa into eight major monophyletic vascular plant groups: Lycophytes, Ferns (including *Equisetum*), Gymnosperms, and the five clades of flowering plants (Nymphaeales, Magnoliids, Ceratophyllales, Eudicots, and Monocots). Within the groups, entries are organized alphabetically by family, genus, species, and infraspecific taxon (subspecies or variety).

### INCLUSION

#### Native and Non-native Taxa

Both native and non-native, naturalized vascular-plant taxa known to occur – or have occurred – in Santa Cruz County are included in this list (*see "Documentation," p. 10*). "Native" here means native to California – though not necessarily endemic – and occurring naturally without human intervention. "Naturalized" refers to non-native taxa that are reproducing on their own and persisting in non-cultivated areas [these taxa are preceded by an asterisk "\*\*"].

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The concept of nativity is not as straightforward as one might think. A taxon may be native to California, but not to Santa Cruz County [these taxa are preceded by an asterisk in braces “[\*]”]. Occasionally, certain forms or races of a species are native locally, while another form is introduced. Often, opportunistic taxa that prefer ruderal habitats are quite untraceable as to local nativity, and some taxa once thought to be native to California are now considered to be introduced and vice versa. For the purposes of this *Checklist*, nativity designations follow those in *TJM2*, while significant exceptions and borderline cases are explained in the Notes.

*Waifs, etc.* Waifs and agricultural/horticultural/urban weeds that do not persist are not intentionally included in the list. However, 25 of the non-native entries [denoted by a “W”] are taxa that *TJM2* has assigned to these categories. They are included here because, though not naturalizing statewide, they *do* appear to be reproducing on their own in Santa Cruz County. Descriptions of these taxa are not included in *TJM2* but are available on the Jepson eFlora (in blue type).

### Taxa Not in *TJM2*/Jepson eFlora

With the exception of the newly published segregates of the genus *Mimulus*, 21 taxa in the list that are not included currently in *TJM2*/Jepson eFlora are followed by the symbol “¶”. The majority of these taxa are non-natives, and more information about them can be found online at USDA PLANTS and elsewhere.

*Taxa not currently recognized.* Several taxa with official rarity status (see Appendix 1) are not recognized by *TJM2*. In the list, the superseded name appears in brackets under the current name, along with the “¶” symbol and rarity code.

Additional (mostly pre-*TJM1*) taxa not currently recognized represent distinctive forms that still appear to deserve taxonomic recognition. Summarized in Appendix 4, each taxon is discussed in the Notes under its current name.

*Newly described taxa.* Since *TJM2*, the genus *Mimulus* has been split into several genera. The new treatment – included here – will be published on the Jepson eFlora and in an upcoming volume of the *FNANM*. (See Barker et al. 2012.)

*Undescribed taxa.* Summarized in Appendix 5 and discussed in the Notes, these are distinctive forms that may deserve taxonomic recognition.

### Questionable Taxa

A “?” following the name is used to denote that a taxon’s ID or presence in the County is in question – e.g., if it has been recorded just over the County line.

### Rejected Taxa

Taxa excluded from the list are summarized in Appendix 7. These have been rejected for a variety of reasons – e.g., taxonomic revision, misidentification, erroneous report, or waif status.

## NOMENCLATURE

### Scientific Names

Scientific names are shown in *italics* – or **bold italics** for rare (listed & locally rare) taxa (see “Rarity,” p. 10). For the list and Note entries, nomenclature primarily follows *TJM2* – or the Jepson eFlora for more-recent name changes. (See also “Taxa Not in *TJM2*/Jepson eFlora,” above).

### Common Names

Common names are noted in roman type following the scientific name. These names have been obtained from a variety of sources, but primarily from *TJM2*.

## Superseded Names

Superseded names from *TJM1* (synonyms, misapplied names, orthographic variants, etc.) are provided in [brackets] below the scientific name. For names that have changed since *TJM2*, the *TJM2* name is shown in [brackets]. *Note:* In the case of infra-specific taxa being “lumped,” only the superseded names that pertain to County taxa are provided. To find pre-*TJM1* synonyms, see the Jepson Interchange.

**What if you only know the *TJM1* name?** If you are only familiar with the *TJM1* (or, in some cases, *TJM2*) name of a County family/genus—and that name has changed—find the old name in the Index and the associated reference to the current name for that family/genus. Go to the list and scan the superseded names in [brackets] under the new name to locate the *TJM1* (or *TJM2*) name you are seeking.

## DOCUMENTATION

**Records.** Without proper documentation (i.e., an herbarium voucher), the identification of a taxon remains in doubt. Though it was hoped that all County taxa would have a corresponding voucher by the date of publication, this goal was not achieved [each of the 83 outstanding vouchers is denoted by a “▼”]. We intend to rectify these omissions over time, either by making new collections or by accessing additional County records from other herbaria (especially the California Academy of Sciences) as they are periodically uploaded to the Consortium for California Herbaria (CCH). Vouchered specimens are referred to as “records” in the Notes.

**Reports.** In some cases, observations by qualified botanists were relied upon as a source of documentation. These observations are referred to as “reports.”

**Old records/reports.** In the Notes, an “old” record / report refers to a vouchered specimen/observation made before 1961, the publication date of J. H. Thomas’s *Flora*—i.e., more than 50 years ago.

## RARITY

### Listed Taxa

82 taxa in **bold italics** [with a “★” and Rarity Code] are native taxa of special concern—i.e., they are officially listed as rare, threatened, or endangered under the Federal/State Endangered Species Acts (FESA/CESA); considered “Sensitive” by the Bureau of Land Management; or have a California Rare Plant Rank (CRPR) (= CNPS List) of 1A through 4, which is designated by the CNPS Rare Plant Program. *Note:* Listing status subject to change. (See “Rarity Codes,” inside back cover.)

### Locally Rare Taxa

Ca. 400 taxa in **bold italics** [without a “★”] are formally recognized, native taxa that are rare, threatened, or endangered locally—though they may be more common elsewhere (listed taxa are not included). Often occupying special habitats or occurring at the limit of their natural ranges, these are among the most vulnerable taxa in the County—sufficiently so as to qualify for CEQA standing here.

The primary criterion for the locally rare (LR) designation is that the taxon is present in the County in five or fewer extant populations—unless:

- 1) populations are large and appear viable given current trends; or
- 2) it has ruderal or opportunistic tendencies and is apt to appear unpredictably in suitable habitat (this is true of many wetland taxa in particular).

However, a taxon with more than five populations may *still* be locally rare if it appears to be particularly vulnerable if current trends persist.

**Locally rare in part.** A “~” following an entry in *bold italics* denotes that the taxon is locally rare *in part* (14 total). This occurs when a taxon would have qualified for locally rare status according to the above criteria, but is no longer recognized by *TJM2* and has been “lumped” with a taxon that does not qualify. *Note:* Locality information for these entries pertains *only* to the locally rare entity.

Designation as locally rare is provisional though based on extensive fieldwork and many years of deliberation. (*See Notes for more information.*)

### THE MOST INVASIVE NON-NATIVES

Selected by local weed experts, these (terrestrial) invasives [denoted by a “⊗”] are treated in Appendix 6. The California Department of Food and Agriculture (CDFA) and Cal-IPC have their own rating systems for invasives, but these ratings were not included here.

### DISTRIBUTION

#### Floristic Regions

To simplify the presentation of locality data, the County has been divided into 17 Floristic Regions – four of which have been added since the first edition. The *Checklist* only provides locality data for rare taxa and cites only the region(s) within which a taxon has been documented. (*See Floristic Regions map, pp. 12 & 166.*)

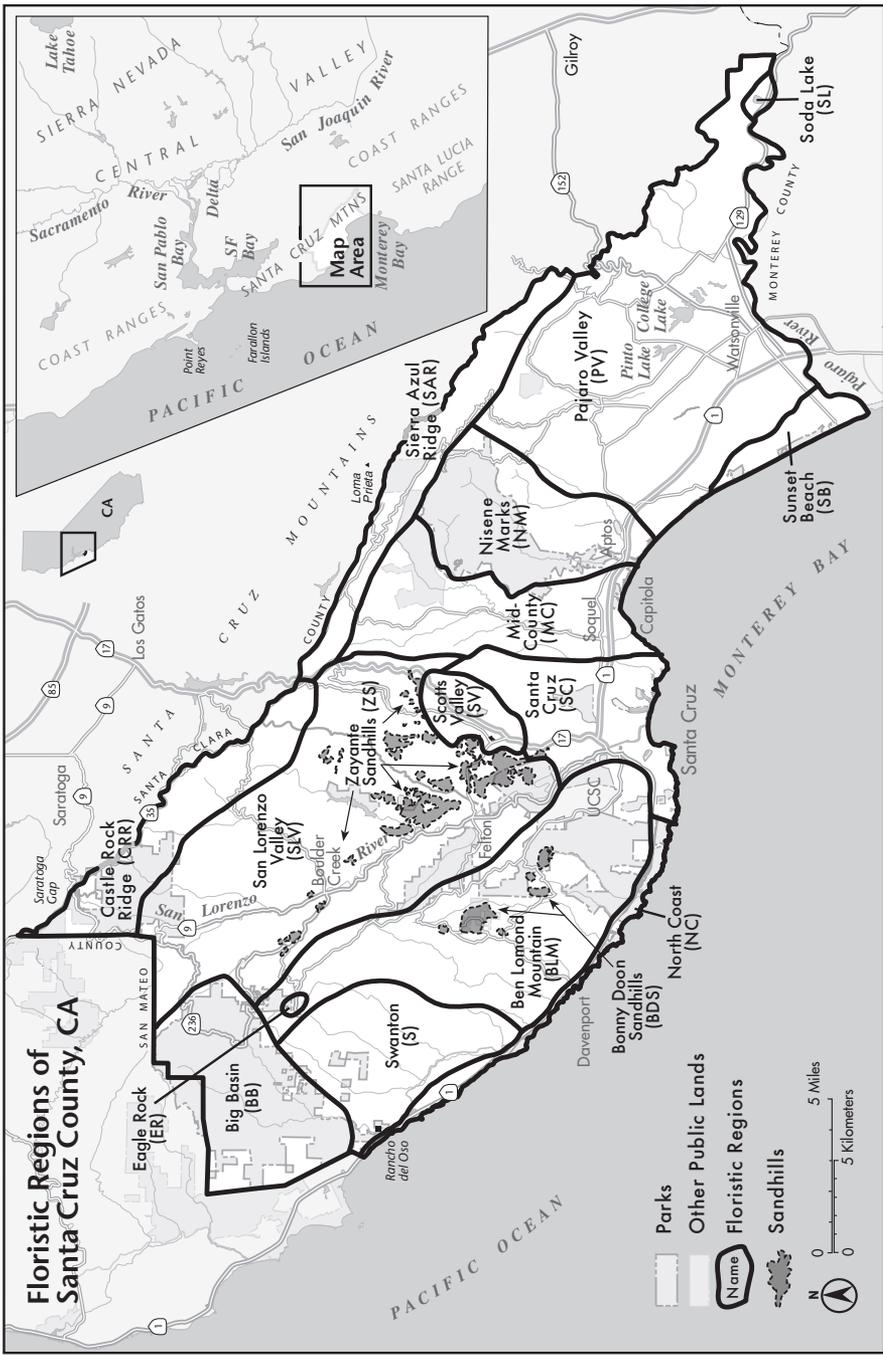
These regions – which fall within the CCo and SnFrB Geographic Subregions used in *TJM2* – vary in size, yet are roughly comparable in physiographic and floristic distinctness from each other. The Pajaro Valley (PV) and Sunset Beach (SB) regions are geologically/ecologically the northern end of what could be called the “Monterey Bay floristic region,” and their maritime chaparral and coastal dunes have distinctly southern affinities. The regions comprising the remainder of the County are part of the heavily forested Santa Cruz Mountains region, and as such have strongly northern floristic affinities – far more northern taxa reach their southern limit in the County than vice versa.

#### Locality Data Conventions

- UPPER CASE [e.g., SAR] used when taxon documented in Floristic Region during the last 20 years – i.e., 1993 or later
- lower case [e.g., sar] used when taxon only documented in region pre-1993;
- “sc” & “scm” used for old “Santa Cruz” or “Santa Cruz Mtns.” records, with no more specific location provided (“scm” records may not be from County)
- slash [e.g., NM/SAR] used when taxon documented near regional boundary;
- “?” [e.g., sar?] used to denote taxon’s questionable presence in region along County line (may fall outside), or that ID of taxon in region is in question
- “-x” [e.g., sar-x] used when taxon is definitely (or presumably) extirpated in region
- separate sets of parentheses used for localities of different forms of taxon

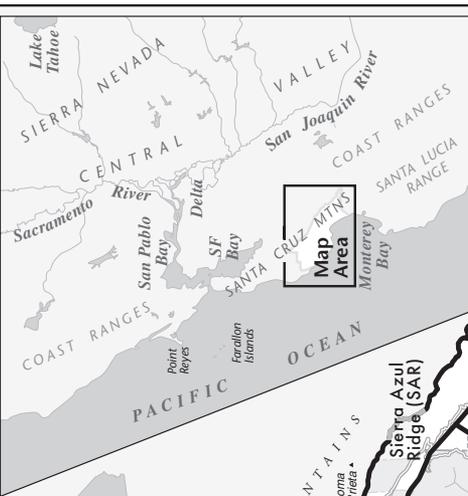
#### NOTES

Additional information is supplied in the Notes, including the discussion of taxonomic issues/problems and key characters to aid in the identification of confusing taxa. Most characters provided here are those used in *TJM2*. For conventions used in their presentation, and for definitions of botanical terms, see *TJM2*. Be aware that key characters are not intended to act as a substitute for keying a plant in the *Manual*. Happy botanizing! ❖



**Floristic Regions of Santa Cruz County, CA**

- Parks
- Other Public Lands
- Floristic Regions
- Sandhills



## CHECKLIST FORMAT

See also "Checklist Conventions" (p. 8)

- **MAJOR VASCULAR PLANT GROUP**
- **FAMILY NAME – Family Common Name**
- *Scientific name* (subsp. = subspecies, var. = variety)  
~Rare (listed & locally rare) taxa in ***bold italics***
- common name
- [*Superseded name*] from *The Jepson Manual* (1993) (TJM1) & *The Jepson Manual, Second Edition* (2012) (TJM2)
- (FLORISTIC REGIONS) – see map (opposite & p. 166) & "Region Codes" (below & inside back cover); see also "Locality Data Conventions" (p. 11 & inside back cover)

## CHECKLIST SYMBOLS

- \* Non-native taxon
- {\*} Taxon native to CA, but not to County
- × Hybrid
- + Note provided – see Appendix 8 ("Notes")
- ★ Listed taxon – see also Appendix 1
- ~ Locally rare (LR) in part (locality data pertains only to LR entity) – see Notes
- ? ID/presence in County/Floristic Region in question – see Notes
- W Waif or agricultural/horticultural/urban weed in TJM2 – see *Jepson eFlora*
- || Not in TJM2/Jepson eFlora
- ⊗ Among the most invasive, non-native taxa in County – see also Appendix 6
- X Extirpated in County (see also Appendix 3); "-x" = extirpated in Floristic Region
- ▼ Not vouchered

## REGION CODES

<b>BB</b>	Big Basin
<b>BDS</b>	Bonny Doon Sandhills/Smith Grade Sands
<b>BLM</b>	Ben Lomond Mtn.
<b>CRR</b>	Castle Rock Ridge
<b>ER</b>	Eagle Rock
<b>MC</b>	Mid-County
<b>NC</b>	North Coast
<b>NM</b>	Nisene Marks
<b>PV</b>	Pajaro Valley
<b>S</b>	Swanton/Scott Creek watershed
<b>SAR</b>	Sierra Azul Ridge
<b>SB</b>	Sunset Beach
<b>SC</b>	Santa Cruz
<b>SL</b>	Soda Lake
<b>SLV</b>	San Lorenzo Valley
<b>SV</b>	Scotts Valley
<b>ZS</b>	Zayante Sandhills



## LYCOPHYTES

### \* ISOETACEAE – Quillwort Family

*Isoetes nuttallii* +  
(BLM, NM, sc, SLV)

Nuttall's quillwort

*Isoetes orcuttii* +  
(BLM, slv)

Orcutt's quillwort

## F E R N S



### \* AZOLLACEAE – Mosquito Fern Family

*Azolla filiculoides*

Pacific mosquito fern

*Azolla microphylla* + x  
[*A. mexicana*] (sv-x) ★4.2

Mexican mosquito fern

### \* BLECHNACEAE – Deer Fern Family

*Blechnum spicant* +  
(> 5 regions)

deer fern

*Woodwardia fimbriata*

giant chain fern

### \* DENNSTAEDTIACEAE – Bracken Family

*Pteridium aquilinum* var. *pubescens*

bracken fern

### \* DRYOPTERIDACEAE – Wood Fern Family

*Dryopteris arguta*

coastal wood fern

*Polystichum californicum* +

California sword fern

*Polystichum dudleyi* +

Dudley's sword fern

*Polystichum imbricans* subsp. *curtum* +  
(bb, cr, slv)

imbricate sword fern

*Polystichum imbricans* subsp. *i.* + x  
("sc")

imbricate sword fern

*Polystichum munitum*

western sword fern

### \* EQUISETACEAE – Horsetail Family

*Equisetum arvense* +

common horsetail

*Equisetum × ferrissii* +

Ferriss's horsetail

*Equisetum hyemale* subsp. *affine* +

common scouring rush

*Equisetum laevigatum* +

smooth scouring rush

*Equisetum telmateia* subsp. *braunii* +

giant horsetail

\* **MARSILEACEAE – Marsilea Family**

*Pilularia americana* + American pillwort  
(BLM)

\* **OPHIOGLOSSACEAE – Adder’s-tongue Family**

*Sceptridium multifidum* + leather grape-fern  
[*Botrychium m.*] (BLM, SLV, sv-x)

\* **POLYPODIACEAE – Polypody Family**

*Polypodium californicum* + California polypody  
*Polypodium calirhiza* + nested polypody  
*Polypodium glycyrrhiza* + licorice fern  
*Polypodium scolieri* + leather-leaf fern  
(PV, s)

\* **PTERIDACEAE – Brake Family**

*Adiantum aleuticum* five-finger fern  
*Adiantum jordanii* California maidenhair  
*Aspidotis californica* + California lace fern  
(BLM, S, SLV)  
*Cheilanthes cooperae* + Cooper’s lip fern  
(SLV)  
*Pellaea andromedifolia* + coffee fern  
*Pellaea mucronata* var. *m.* + bird’s-foot fern  
*Pentagramma triangularis* subsp. *t.* goldback fern  
\**Pteris cretica* Cretan brake

\* **WOODSIACEAE – Cliff Fern Family**

*Athyrium filix-femina* var. *cyclosorum* western lady fern  
*Cystopteris fragilis* + fragile fern  
(bb, BLM, S, SLV)

**GYMNOSPERMS**\* **CUPRESSACEAE – Cypress Family**

*Hesperocyparis abramsiana* var. *a.* + Santa Cruz cypress  
[*Cupressus a.*] (BDS, ER, SLV) ★FE/CE/1B.2  
{\*}*Hesperocyparis macrocarpa* + Monterey cypress  
[*Cupressus m.*]  
*Sequoia sempervirens* + redwood

\* **PINACEAE – Pine Family**

<i>Pinus attenuata</i> +	knobcone pine
{*} <i>Pinus coulteri</i> +	Coulter pine
* <i>Pinus pinea</i> + ■ ▼	Italian stone pine
<i>Pinus ponderosa</i> var. <i>pacifica</i> + [ <i>P. ponderosa</i> ]	Pacific ponderosa pine
<i>Pinus radiata</i> + (BB, NC, S) ★1B.1	Monterey pine
<i>Pinus sabiniana</i> + (SAR)	gray pine, foothill pine
{*} <i>Pinus torreyana</i> subsp. <i>t.</i> + [ <i>P. t.</i> ]	Torrey pine
<i>Pseudotsuga menziesii</i> var. <i>m.</i> +	Douglas-fir

\* **TAXACEAE – Yew Family**

<i>Torreya californica</i> +	California nutmeg
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**N Y M P H A E A L E S**\* **NYMPHAEACEAE – Waterlily Family**

<i>Nuphar polysepala</i> + x [ <i>N. lutea</i> subsp. <i>polysepalum</i> ] (bb-x, pv-x)	yellow pond-lily
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**M A G N O L I I D S**\* **ARISTOLOCHIACEAE – Pipevine Family**

<i>Asarum caudatum</i>	wild ginger
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\* **LAURACEAE – Laurel Family**

<i>Umbellularia californica</i>	California bay
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**C E R A T O P H Y L L A L E S**\* **CERATOPHYLLACEAE – Hornwort Family**

<i>Ceratophyllum demersum</i>	hornwort
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**E U D I C O T S**\* **ADOXACEAE – Muskroot Family**

<i>Sambucus nigra</i> subsp. <i>caerulea</i> + [ <i>S. mexicana</i> , misappl.]	blue elderberry
<i>Sambucus racemosa</i> var. <i>r.</i> +	red elderberry

### \* AIZOACEAE – Fig-marigold Family

- \* *Carpobrotus chilensis* + sea fig  
 \* *Carpobrotus edulis* + ☉ highway iceplant  
 \* *Conicosia pugioniformis* narrowleaf iceplant  
 \* *Cypselea humifusa* panal  
 \* *Drosanthemum floribundum* showy dewflower  
 \* *Tetragonia tetragonioides* New Zealand spinach

### \* AMARANTHACEAE – Amaranth Family

- \* *Amaranthus albus* tumbleweed  
*Amaranthus blitoides* + procumbent pigweed  
 \* *Amaranthus deflexus* low amaranth  
 \* *Amaranthus hybridus* green amaranth  
*Amaranthus powellii* Powell's amaranth  
 \* *Amaranthus retroflexus* redroot pigweed

### \* ANACARDIACEAE – Sumac Family

- {\*} *Malosma laurina* + ▼ laurel sumac  
 {\*} *Rhus integrifolia* + lemonade berry  
*Toxicodendron diversilobum* poison oak

### \* APIACEAE – Carrot Family

- Angelica tomentosa* + woolly angelica  
 (blm, CRR, MC, PV, S)  
 \* *Anthriscus caucalis* bur-chervil  
*Apiastrum angustifolium* + wild celery  
 (nc, S, sb)  
 \* *Apium graveolens* celery  
*Berula erecta* + ✕ cutleaf water-parsnip  
 (sv-x)  
*Bowlesia incana* + hoary bowlesia  
 (NC, S)  
 \* *Bupleurum lancifolium* || lance-leaf thorrow-wax  
*Cicuta douglasii* + Douglas's water-hemlock  
*Cicuta maculata* var. *bolanderi* + ▼ Bolander's water-hemlock  
 (nc, SB) ★ 2B.1  
 \* *Conium maculatum* ☉ poison hemlock  
 \* *Coriandrum sativum* coriander, cilantro  
 \* *Cyclospermum leptophyllum* marsh parsley  
 [*Ciclospermum l.*, orth. var.]  
 \* *Daucus carota* carrot, Queen Anne's lace  
*Daucus pusillus* rattlesnake carrot  
*Eryngium armatum* coast coyote thistle

## APIACEAE (cont'd.)

- \**Foeniculum vulgare* ☉  
*Heracleum maximum*  
 [H. lanatum]
- Ligusticum apiifolium* +  
 (S)
- Lomatium caruifolium* var. c. +  
 (BLM, S, SV)
- Lomatium dasycarpum* subsp. d. +
- Lomatium parvifolium* +  
 (PV) ★4.2
- Lomatium utriculatum* +  
 (crr?, SV)
- Oenanthe sarmentosa*
- Osmorhiza berteroi* +  
 [O. chilensis]
- Osmorhiza brachypoda* +  
 (crr, nm)
- \**Pastinaca sativa*
- Perideridia gairdneri* subsp. g. +  
 (> 5 regions) ★4.2
- Perideridia kelloggii* +
- Sanicula arctopoides*
- Sanicula bipinnatifida* +
- Sanicula crassicaulis* +
- Sanicula hoffmannii* +  
 (PV, S) ★4.3
- Sanicula laciniata* +  
 (BLM, PV)
- \**Scandix pecten-venensis*
- Tauschia hartwegii* +  
 (CRR, PV)
- \**Torilis arvensis* +
- \**Torilis nodosa* + ▼
- Yabea microcarpa* +  
 (S)

## \* APIACEAE – Dogbane Family

- Apocynum androsaemifolium* +  
 (BLM, mc, sc)
- Apocynum cannabinum* +  
 (MC, PV, SB, slv)
- Asclepias fascicularis* +  
 (NM, PV, SLV)
- \**Vinca major* ☉

- fennel
- cow parsnip
- celery-leaved licorice-root
- caraway-leaved lomatium
- woolly fruited lomatium
- small-leaved lomatium
- spring-gold lomatium
- Pacific oenanthe
- mountain sweet-cicely
- California sweet-cicely
- parsnip
- Gairdner's yampah
- Kellogg's yampah
- footsteps-of-spring
- purple sanicle
- Pacific sanicle, gambleweed
- Hoffmann's sanicle
- coast sanicle
- Venus's needle
- Hartweg's tauschia
- tall sock-destroyer
- short sock-destroyer
- California hedge-parsley
- bitter dogbane
- Indian hemp
- narrow-leaf milkweed
- periwinkle

\* **AQUIFOLIACEAE – Holly Family**\* *Ilex aquifolium*

English holly

\* **ARALIACEAE – Ginseng Family***Aralia californica*

elk clover

\* *Hedera canariensis* + ⊕

Canary Islands ivy

\* *Hedera helix* + ⊕

English ivy

*Hydrocotyle ranunculoides* +

floating marsh pennywort

*Hydrocotyle verticillata* +

whorled pennywort

\* **ASTERACEAE – Sunflower Family***Achillea millefolium* +

yarrow

*Achyraea mollis*

blow-wives

*Adenocaulon bicolor*

trail plant

\* *Ageratina adenophora* + ⊕

eupatorium, crofton weed

*Agoseris apargioides* var. *a.* +  
(mc-x, NC, pv-x)

seaside agoseris

*Agoseris grandiflora* var. *g.*  
[*A. g.*]

large-flowered agoseris

*Agoseris heterophylla* var. *cryptopleura* +  
[*A. h.*] (crr, slv, sv)

annual agoseris

*Agoseris heterophylla* var. *h.* +  
[*A. h.*] (er, S, slv)

annual agoseris

*Agoseris hirsuta* +  
(blm, mc, slv, sv)

Coast Range agoseris

*Ambrosia chamissonis*

beach bur-sage

*Ambrosia confertiflora* +

weak-leaved bur-sage

*Ambrosia psilostachya*

western ragweed

*Anaphalis margaritacea* +

pearly everlasting

*Anisocarpus madioides*  
[*Madia m.*]

woodland tarweed

\* *Anthemis cotula*

mayweed

\* *Arctium minus*

lesser burdock

\* *Arctotheca calendula* +

capeweed

\* *Arctotheca prostrata* +  
[*A. calendula*, in part, misappl.]

prostrate capeweed

*Arnica discoidea*

rayless arnica

\* *Artemisia biennis*

biennial wormwood

*Artemisia californica*

California sagebrush

*Artemisia douglasiana*

mugwort

*Artemisia dracunculul*

tarragon

*Artemisia pycnocephala* +

coastal sagewort

## ASTERACEAE (cont'd.)

<i>Baccharis glutinosa</i> [ <i>B. douglasii</i> ]	marsh baccharis
<i>Baccharis pilularis</i> subsp. <i>consanguinea</i> +	coyote brush
<i>Baccharis pilularis</i> subsp. <i>p.</i> +	prostrate coyote brush
<b><i>Baccharis salicifolia</i> subsp. <i>s.</i> +</b> [ <i>B. s.</i> ] (pv, slv)	mule fat
* <i>Bellis perennis</i>	English daisy
<b><i>Bidens frondosa</i> +</b> (SC, SLV)	sticktight
<i>Bidens laevis</i> +	bur-marigold
* <i>Bidens pilosa</i> + [ <i>B. p.</i> var. <i>p.</i> ]	common beggar-ticks
<b><i>Blepharizonia laxa</i> + x</b> [ <i>B. plumosa</i> subsp. <i>viscida</i> ] (pv-x)	big tarweed
* <i>Calendula arvensis</i>	field-marigold
* <i>Calendula officinalis</i>	pot-marigold
* <i>Carduus pycnocephalus</i> subsp. <i>p.</i> + ☉ [ <i>C. p.</i> ]	Italian thistle
* <i>Carduus tenuiflorus</i> +	slender-flowered thistle
* <i>Centaurea benedicta</i> [ <i>Cnicus benedictus</i> ]	blessed thistle
* <i>Centaurea calcitrapa</i>	purple star-thistle
* <i>Centaurea cineraria</i>	dusty miller
* <i>Centaurea cyanus</i>	bachelor's button
* <i>Centaurea melitensis</i>	tocalote
* <i>Centaurea solstitialis</i>	yellow star-thistle
* <i>Centaurea sulphurea</i> ▼	Sicilian star-thistle
<b><i>Centromadia fitchii</i> +</b> [ <i>Hemizonia f.</i> ] (MC, nm)	Fitch's spikeweed
<b><i>Centromadia parryi</i> subsp. <i>congdonii</i> +</b> [ <i>Hemizonia p.</i> subsp. <i>c.</i> ] (PV) ★1B.1/Sen	Congdon's tarplant
<b><i>Centromadia pungens</i> subsp. <i>p.</i> +</b> [ <i>Hemizonia p.</i> subspp. <i>maritima/p.</i> ] (PV?, SL, SLV?)	common spikeweed
* <i>Cichorium intybus</i>	chicory
* <i>Cirsium arvense</i> ▼	Canada thistle
<i>Cirsium brevistylum</i>	Indian thistle
<b><i>Cirsium douglasii</i> var. <i>d.</i> +</b> (blm-x, pv-x, S, slv-x, sv-x)	swamp thistle
<b><i>Cirsium occidentale</i> var. <i>o.</i> +</b> (s?, sb)	cobwebby thistle
<i>Cirsium occidentale</i> var. <i>venustum</i> +	Venus thistle
<b><i>Cirsium quercetorum</i> +</b> (NC, S)	brownie thistle

**ASTERACEAE (cont'd.)**

- \* *Cirsium vulgare* bull thistle
- \* *Coreopsis lanceolata* garden coreopsis
- \* *Coreopsis tinctoria* calliopsis
- Corethrogyne filaginifolia* ~ +  
    [*Lessingia* f. vars. *californica*/f.] (SL) California-aster
- \* *Cotula australis* Australian cotula
- \* *Cotula coronopifolia* brass-buttons
- \* *Crepis capillaris* + smooth hawksbeard
- \* *Crepis setosa* + bristly hawksbeard
- \* *Crepis vesicaria* subsp. *taraxacifolia* + weedy hawksbeard
- Deinandra corymbosa*  
    [*Hemizonia* c. subsp. c.] coastal tarplant
- Deinandra kelloggii* + ▼  
    [*Hemizonia* k.] (pv) Kellogg's tarplant
- \* *Delairea odorata* ⊗  
    [*Senecio mikanioides*] Cape ivy
- \* *Dimorphotheca sinuata* Namaqualand daisy
- \* *Dittrichia graveolens* + ⊗ stinkwort
- Ericameria arborescens* + golden-fleece
- Ericameria ericoides* + mock heather
- \* *Erigeron bonariensis* +  
    [*Conyza* b.] flax-leaved horseweed
- Erigeron canadensis* +  
    [*Conyza* c.] horseweed
- Erigeron foliosus* var. *franciscensis* + leafy fleabane
- Erigeron glaucus* seaside daisy
- \* *Erigeron karovinskianus* Santa Barbara daisy
- Erigeron petrophilus* var. *p.* +  
    (CRR, ER) rock-loving fleabane
- Erigeron philadelphicus* var. *p.* +  
    [E. p.] (PV, SAR) Philadelphia fleabane
- \* *Erigeron sumatrensis* + tropical horseweed  
    [*Conyza bilbaoana*, misappl. (= *C. bilboana*); *C. floribunda*]
- Eriophyllum confertiflorum* var. *c.* + golden-yarrow
- Eriophyllum lanatum* var. *achilleoides* + ▼  
    [E. l. var. *achillaeoides*, orth. var.] (SAR) woolly sunflower
- Eriophyllum staechadifolium* + lizard-tail
- Eurybia radulina*  
    [*Aster radulinus*] broad-leaved aster
- Euthamia occidentalis* western goldenrod
- \* *Galinsoga parviflora* var. *p.* small-flowered galinsoga
- \* *Gamochaeta calvoiceps* + silky cudweed

## ASTERACEAE (cont'd.)

<i>Gamochaeta ustulata</i> + [ <i>Gnaphalium purpureum</i> , misappl.]	purple cudweed
* <i>Glebionis coronaria</i> [ <i>Chrysanthemum coronarium</i> ]	garland daisy
<i>Gnaphalium palustre</i> +	lowland cudweed
<i>Grindelia camporum</i> ? + [G. c. var. c.]	Great Valley gumplant
<i>Grindelia hirsutula</i> + [G. h. vars. h./maritima]	hirsute gumplant
<i>Grindelia stricta</i> var. <i>angustifolia</i> + ▼	marsh gumplant
<i>Grindelia stricta</i> var. <i>platyphylla</i> +	Pacific gumplant
* <i>Hedypnois cretica</i>	Crete weed
<i>Helenium puberulum</i>	sneezeweed rosilla
<i>Helianthus bolanderi</i> +	Bolander's sunflower
* <i>Helminthotheca echioides</i> [ <i>Picris</i> e.]	bristly ox-tongue
<i>Hemizonia congesta</i> subsp. <i>luzulifolia</i> +	white hayfield tarweed
<i>Hesperevax acaulis</i> var. <i>ambusticola</i> + (BLM)	fire evax
<i>H. sparsiflora</i> var. <i>brevifolia</i> ? + (slv) ★1B.2/Sen	short-leaved evax
<i>Hesperevax sparsiflora</i> var. <i>s.</i> + (NM, slv)	erect evax
<i>Heterotheca grandiflora</i> +	telegraph weed
<i>H. sessiliflora</i> subsp. <i>bolanderi</i> + (S)	Bolander's golden aster
<i>Heterotheca sessiliflora</i> subsp. <i>echioides</i> +	bristly golden aster
<i>Hieracium albiflorum</i> +	white hawkweed
<i>Holocarpha macradenia</i> + (MC, nm-x, PV, SC) ★FT/CE/1B.1	Santa Cruz tarplant
<i>Holocarpha virgata</i> subsp. <i>v.</i> + (PV)	virgate tarplant
* <i>Hypochaeris glabra</i> + ☉	smooth cat's-ear
* <i>Hypochaeris radicata</i> +	rough cat's-ear
<i>Iva axillaris</i> + [ <i>I. a.</i> subsp. <i>robustior</i> ] (nc, SL)	poverty weed
<i>Jaumea carnosa</i>	salt-marsh jaumea
* <i>Lactuca saligna</i> +	willow lettuce
* <i>Lactuca serriola</i> +	prickly lettuce
* <i>Lactuca virosa</i>	wild lettuce
<i>Laennecia coulteri</i> + [ <i>Conyza</i> c.] (PV, "sc")	Coulter's horseweed

## ASTERACEAE (cont'd.)

- Lagophylla ramosissima*  
[*L. r.* subsp. *r.*] common hareleaf
- \**Lapsana communis* nipplewort
- Lasthenia californica* subsp. *c.* ? +  
[*L. c.*] California goldfields
- Lasthenia glaberrima* +  
(s, SC) smooth goldfields
- Lasthenia glabrata* subsp. *g.* + x  
(pv-x) yellow-ray goldfields
- Lasthenia gracilis* +  
(> 5 regions) common goldfields
- Lasthenia minor* +  
(mc-x, NC, pv-x, sb-x) coastal goldfields
- Layia chrysanthemoides* + x  
("sc") smooth layia
- Layia gaillardoides* +  
(crr, S, SLV) woodland layia
- Layia hieracioides* + tall layia
- Layia platyglossa* ~ +  
(sb-x) tidy-tips
- \**Leontodon saxatilis* subsp. *longirostris* +  
[*L. taraxacoides* subsp. *l.*] hairy hawkbit
- \**Leontodon saxatilis* subsp. *s.* +  
[*L. taraxacoides*, illeg.] hairy hawkbit
- \**Leucanthemum lacustre* Portuguese daisy
- \**Leucanthemum maximum* Shasta daisy
- \**Leucanthemum vulgare* ox-eye daisy
- Logfia filaginoides* +  
[*Filago californica*] California cottonrose
- \**Logfia gallica* +  
[*Filago g.*] daggerleaf cottonrose
- Madia elegans* +  
[*M. e.* subspp. *densifolia/vernalis*] common madia
- Madia exigua* + threadstem madia
- Madia gracilis* + slender madia
- Madia sativa* + coast madia
- Malacothrix clevelandii* +  
(crr, slv) Cleveland's malacothrix
- Malacothrix floccifera* +  
(S, sar?, ZS) woolly malacothrix
- \**Matricaria discoidea*  
[*Chamomilla suaveolens*] pineapple weed
- \**Mauranthemum paludosum* w mini-marguerite
- Micropus amphibolus* +  
(BLM, NC, S, SC, SV) ★3.2 Mt. Diablo cottonweed

## ASTERACEAE (cont'd.)

<i>Micropus californicus</i> var. <i>c.</i> +	slender cottonweed
<i>Micropus californicus</i> var. <i>subvestitus</i> + (S)	green cottonweed
<i>Microseris acuminata</i> + (PV)	Sierra Foothills microseris
<i>Microseris bigelovii</i> + (BLM, NC, S, sb-x, sc-x, SV)	Bigelow's microseris
<i>Microseris douglasii</i> subsp. <i>tenella</i> + (PV)	Douglas's microseris
<i>Microseris paludosa</i> + (BLM, S, sc-x) ★1B.2	marsh microseris
<i>Monolopia gracilens</i> + (crr?, pv, SAR, SLV) ★1B.2	woodland woolly threads
<i>Pentachaeta alsinoides</i> + (blm, NM, s)	tiny pentachaeta
<i>Pentachaeta bellidiflora</i> + X (er-x, nc/sc-x s-x, slv-x) ★FE/CE/1B.1	white-rayed pentachaeta
<i>Pentachaeta exilis</i> subsp. <i>e.</i> + ▼ (BLM, pv)	meager pentachaeta
<i>Petasites frigidus</i> var. <i>palmatus</i>	western coltsfoot
<i>Pseudognaphalium beneolens</i> + [ <i>Gnaphalium canescens</i> subsp. <i>b.</i> ]	fragrant everlasting
<i>Pseudognaphalium biolettii</i> + [ <i>Gnaphalium bicolor</i> , illeg.]	Bioletti's cudweed
<i>Pseudognaphalium californicum</i> + [ <i>Gnaphalium c.</i> ]	California cudweed
* <i>Pseudognaphalium luteoalbum</i> + [ <i>Gnaphalium l.</i> ; <i>G. luteo-album</i> , orth. var.]	weedy cudweed
<i>Pseudognaphalium microcephalum</i> + [ <i>Gnaphalium canescens</i> subsp. <i>m.</i> ] (BLM, nm, pv)	white everlasting
<i>Pseudognaphalium ramosissimum</i> + [ <i>Gnaphalium r.</i> ]	pink everlasting
<i>Pseudognaphalium stramineum</i> + [ <i>Gnaphalium s.</i> ]	cotton-batting plant
<i>Psilocarphus chilensis</i> + [ <i>P. tenellus</i> var. <i>globiferus</i> ] (BLM)	round woolly marbles
<i>Psilocarphus tenellus</i> + [ <i>P. t.</i> var. <i>t.</i> ]	slender woolly marbles
<i>Rafinesquia californica</i>	California chicory
<i>Senecio aronicoides</i> + (crr, sar?, SLV, ZS)	rayless ragwort
* <i>Senecio elegans</i>	red-purple ragwort
* <i>Senecio glomeratus</i> + [ <i>Erechtites glomerata</i> ]	cut-leaved fireweed

ASTERACEAE (cont'd.)

<i>Senecio hydrophilus</i> + (s)	alkali-marsh ragwort
* <i>Senecio jacobaea</i>	tansy ragwort
* <i>Senecio minimus</i> + [ <i>Erechtites minima</i> ]	toothed fireweed
* <i>Senecio sylvaticus</i> +	woodland ragwort
* <i>Senecio vulgaris</i> +	common groundsel
* <i>Silybum marianum</i>	milk thistle
<i>Solidago elongata</i> [ <i>S. canadensis</i> subsp. <i>e.</i> ]	Canada goldenrod
<i>Solidago spathulata</i> + [ <i>S. s.</i> subsp. <i>s.</i> ] (BLM)	coast goldenrod
<i>Solidago velutina</i> subsp. <i>californica</i> [ <i>S. californica</i> ]	California goldenrod
* <i>Soliva sessilis</i>	common soliva
* <i>Sonchus asper</i> subsp. <i>a.</i> +	prickly sow thistle
* <i>Sonchus oleraceus</i> +	common sow thistle
<i>Stebbinsoseris decipiens</i> + (BLM, NC, S) ★1B.2	Santa Cruz microseris
<i>Stebbinsoseris heterocarpa</i> + (SLV, SV)	grassland silverpuffs
<i>Stephanomeria elata</i> +	Santa Barbara wire lettuce
<i>Stephanomeria exigua</i> subsp. <i>coronaria</i> +	small stephanomeria
<i>Stephanomeria virgata</i> subsp. <i>pleurocarpa</i> +	virgate stephanomeria
<i>Stylocline gnaphaloides</i> + (BDS, ZS)	everlasting neststraw
<i>Symphotrichum chilense</i> + [ <i>Aster chilensis</i> ]	California aster
<i>Symphotrichum subspicatum</i> + [ <i>Aster subspicatus</i> ]	Douglas's aster
<i>Symphotrichum subulatum</i> var. <i>parviflorum</i> + [ <i>Aster subulatus</i> var. <i>ligulatus</i> , not in CA] (PV, sl)	annual saltmarsh aster
<i>Tanacetum bipinnatum</i> + [ <i>T. camphoratum</i> ] (NC)	dune tansy
* <i>Tanacetum parthenium</i>	feverfew
* <i>Taraxacum officinale</i>	common dandelion
* <i>Tragopogon dubius</i>	yellow salsify
* <i>Tragopogon porrifolius</i>	purple salsify
<i>Uropappus lindleyi</i> +	silverpuffs
<i>Wyethia angustifolia</i> + (BLM, MC, NC, PV)	narrow-leaved mule's-ears
<i>Wyethia glabra</i> + (BLM, CRR, S-x, slv)	Coast Range mule's-ears

**ASTERACEAE (cont'd.)**

- Wyethia helenioides* + gray mule's-ears  
(SV, slv)
- \* *Xanthium spinosum* + spiny cocklebur  
*Xanthium strumarium* + cocklebur

**\* BALSAMINACEAE — Touch-me-not or Balsam Family**

- \* *Impatiens balfourii* Kashmir balsam

**\* BERBERIDACEAE — Barberry Family**

- {\*} *Berberis aquifolium* var. *a.* + Oregon grape  
*Berberis nervosa* + Cascades barberry  
(BB, BLM, s, slv)
- Berberis pinnata* subsp. *p.* + coast barberry  
(BLM, NC, S, sar, slv)
- Vancouveria hexandra* ? + northern inside-out flower  
*Vancouveria planipetala* + redwood ivy

**\* BETULACEAE — Birch Family**

- Alnus rhombifolia* + white alder  
*Alnus rubra* + red alder  
*Corylus cornuta* subsp. *californica* California hazelnut  
[*C. cornuta* var. *californica*]

**\* BORAGINACEAE — Borage or Waterleaf Family**

- Amsinckia intermedia* + common fiddleneck  
[*A. menziesii* var. *i.*]
- Amsinckia lunaris* + bent-flowered fiddleneck  
(NC, S) ★1B.2/Sen
- Amsinckia lycopsoides* ? + bugloss-flwd fiddleneck  
*Amsinckia menziesii* + small-flowered fiddleneck  
[*A. m.* var. *m.*]
- Amsinckia spectabilis* var. *s.* seaside fiddleneck
- \* *Borago officinalis* borage  
*Cryptantha clevelandii* var. *florosa* + coastal cryptantha  
[*C. c.*]
- Cryptantha flaccida* + nievitas  
(er, S, sar?, slv)
- Cryptantha leiocarpa* + beach cryptantha  
(SB)
- Cryptantha micromeres* + minute-flowered cryptantha

## BORAGINACEAE (cont'd.)

<i>Cryptantha microstachys</i> + (er, mc, slv, sv)	Tejon cryptantha
<i>Cryptantha muricata</i> var. <i>jonesii</i> + [C. m.] (bb, blm, sar?, slv)	Jones's cryptantha
<i>Cryptantha torreyana</i> var. <i>pumila</i> + [C. t.] (blm, crr, S, slv)	dwarf cryptantha
<i>Cynoglossum grande</i>	Pacific hound's-tongue
* <i>Echium candicans</i>	pride-of-Madeira
* <i>Echium pininana</i>	tower-of-jewels
<i>Emmenanthe penduliflora</i> var. <i>p.</i> +	whispering bells
<i>Eriodictyon californicum</i> +	California yerba santa
<i>Heliotropium curassavicum</i> var. <i>oculatum</i> [H. c.]	alkali or seaside heliotrope
* <i>Myosotis discolor</i>	changing forget-me-not
* <i>Myosotis latifolia</i> ☉	common forget-me-not
* <i>Myosotis micrantha</i> ▼	small-fl'd forget-me-not
<i>Nemophila heterophylla</i> + (slv)	variable-leaved nemophila
<i>Nemophila menziesii</i> var. <i>atomaria</i> +	white baby blue-eyes
<i>Nemophila menziesii</i> var. <i>m.</i> + (crr, pv, s, slv, sv)	baby blue-eyes
<i>Nemophila parviflora</i> var. <i>p.</i>	small-flowered nemophila
<i>Nemophila pedunculata</i> + (nc, zs) & (PV, S, sc, SLV, sv)	meadow nemophila
<i>Nemophila pulchella</i> var. <i>fremontii</i> ? + (S)	Fremont's nemophila
<i>Pectocarya penicillata</i> +	northern pectocarya
<i>Phacelia californica</i> +	California phacelia
<i>Phacelia ciliata</i> + x (bb-x, s-x)	Great Valley phacelia
<i>Phacelia distans</i> +	common phacelia
<i>Phacelia douglasii</i> + (SB, ZS)	Douglas's phacelia
<i>Phacelia imbricata</i> var. <i>i.</i> + [TJM2 = <i>P. i.</i> subsp. <i>i.</i> , sensu TJM2, in part]	imbricate phacelia
<i>Phacelia malvifolia</i> var. <i>m.</i> + [TJM2 = <i>P. m.</i> , sensu TJM2, in part]	stinging phacelia
<i>Phacelia nemoralis</i> var. <i>n.</i> + [TJM2 = <i>P. n.</i> subsp. <i>n.</i> ]	shade phacelia
<i>Phacelia ramosissima</i> + [ <i>P. r.</i> vars. <i>montereyensis/r.</i> ] (SB) & (ZS)	branching phacelia
<i>Phacelia rattanii</i> + (blm, SLV, ZS)	Rattan's phacelia

**BORAGINACEAE (cont'd.)**

<i>Phacelia suaveolens</i> + [P. s. var. s.] (BDS, BLM, er, S, sar?)	sweet-scented phacelia
<i>Pholisma arenarium</i> + ▼ (NC)	dune food
<i>Pholistoma auritum</i> var. <i>a.</i> + (PV/SL)	fiesta flower
<i>Plagiobothrys bracteatus</i> + (BLM, PV, S)	bracted popcornflower
<i>Plagiobothrys canescens</i> var. <i>c.</i> + [P. c.] (mc, PV, SB, zs)	valley popcornflower
<i>Plagiobothrys chorisianus</i> var. <i>c.</i> + (> 5 regions) ★1B.2	Choris's popcornflower
<i>P. chorisianus</i> var. <i>hickmanii</i> + (> 5 regions) ★4.2	Hickman's popcornflower
<i>P. collinus</i> var. <i>californicus</i> + (ER, MC, PV)	California popcornflower
<i>Plagiobothrys diffusus</i> + (BLM, MC, S, SC, SV) ★CE/1B.1	San Francisco p-flower
<i>Plagiobothrys hispidulus</i> ? +	harsh popcornflower
<i>Plagiobothrys nothofulvus</i> +	rusty popcornflower
<i>Plagiobothrys tenellus</i> +	Pacific popcornflower
<i>Plagiobothrys undulatus</i> + (MC/SC, slv)	wavy-stemmed p-flower
<i>Romanzoffia californica</i> + (bb)	California mistmaiden
* <i>Symphytum officinale</i> w	comfrey

**\*BRASSICACEAE—Mustard Family**

<i>Arabis blepharophylla</i> + (BB, er, slv) ★4.3	coast rockcress
<i>Athysanus pusillus</i> + (crr, S, slv)	dwarf athysanus
<i>Barbarea orthoceras</i> +	American winter cress
* <i>Barbarea verna</i> +	early winter cress
* <i>Brassica nigra</i> +	black mustard
* <i>Brassica rapa</i> +	field mustard
* <i>Cakile edentula</i> +	California sea rocket
* <i>Cakile maritima</i> +	European sea rocket
* <i>Capsella bursa-pastoris</i>	shepherd's purse
<i>Cardamine californica</i> ~ + [C. c. vars <i>c./cuneata/integrifolia</i> ] (S, SV)	California milk-maids
* <i>Cardamine flexuosa</i> + ▮	flexuous popweed
<i>Cardamine oligosperma</i> +	popweed

## BRASSICACEAE (cont'd.)

- Caulanthus lasiophyllus* ~ + California mustard  
[*Guillenia lasiophylla*] (S)
- \**Descurainia sophia* tansy mustard
- \**Diplotaxis tenuifolia* wall rocket
- Erysimum ammophilum* + sand-loving wallflower  
(SB) ★1B.2/Sen
- Erysimum capitatum* var. *c.* + western wallflower  
[*E. c.* subsp. *c.*] (crr, sar?, slv)
- Erysimum franciscanum* + San Francisco wallflower  
(NC) ★4.2
- Erysimum teretifolium* + Santa Cruz wallflower  
(BDS, ZS) ★FE/CE/1B.1
- \**Hesperis matronalis* ▼ dame's rocket
- \**Hirschfeldia incana* + summer mustard
- \**Lepidium campestre* field pepperweed
- \**Lepidium chalepense* lens-podded hoary cress  
[*Cardaria chalepensis*]
- \**Lepidium didymum* + lesser swine cress  
[*Coronopus didymus*]
- \**Lepidium draba* heart-podded hoary cress  
[*Cardaria d.*]
- \**Lepidium latifolium* perennial pepperweed
- Lepidium nitidum* + shining peppergrass  
[*L. n.* var. *n.*]
- Lepidium oblongum* oblong peppergrass  
[*L. o.* var. *o.*]
- Lepidium oxycarpum* + sharp-fruited peppergrass  
(SL)
- \**Lepidium pinnatifidum* feather-leaf peppergrass
- Lepidium strictum* + wayside peppergrass
- Lepidium virginicum* subsp. *menziesii* + Virginia peppergrass  
[*L. v.* var. *pubescens*]
- \**Lobularia maritima* sweet alyssum
- \**Lunaria annua* money plant
- \**Matthiola incana* stock
- Nasturtium officinale* + watercress  
[*Rorippa nasturtium-aquaticum*]
- \**Raphanus raphanistrum* + jointed charlock
- \**Raphanus sativus* + radish
- Rorippa curvisiliqua* + western yellow cress
- Rorippa palustris* subsp. *p.* + bog yellow cress  
[*R. p.* var. *occidentalis*]
- \**Sinapis arvensis* charlock

**BRASSICACEAE (cont'd.)**

- \**Sisymbrium altissimum* tumble mustard  
 \**Sisymbrium irio* London rocket  
 \**Sisymbrium officinale* hedge mustard  
 \**Sisymbrium orientale* ▼ Oriental hedge mustard  
 \**Strigosella africana* strigosella  
 [*Malcomia a.*]  
*Thysanocarpus curvipes* subsp. *c.* + hairy fringedpod  
 [TJM2 = *T. c.*, sensu TJM2, in part]  
*Thysanocarpus laciniatus* + narrow-leaved fringedpod  
 [TJM2 = *T. l.* var. *l.*; TJM1 = *T. l.*] (S)  
*Tropidocarpum gracile* + **x** lacepod  
 (mc-x, s-x)  
*Turritis glabra* tower mustard  
 [*Arabis g.* vars. *furcatipilis/g.*]

**\* CACTACEAE – Cactus Family**

- \**Opuntia ficus-indica* Indian fig

**\* CAMPANULACEAE – Bellflower Family**

- Asyneuma prenanthoides* California harebell  
 [*Campanula p.*]  
*Campanula angustiflora* + Eastwood's bellflower  
 (BDS, blm, slv, zs)  
*Campanula californica* + **x** swamp harebell  
 (sv-x) ★1B.2/Sen  
*Githopsis diffusa* subsp. *robusta* + southern bluecup  
 (er, slv)  
*Githopsis specularioides* + common bluecup  
*Heterocodon rariflorum* + few-flowered heterocodon  
*Triodanis biflora* + Venus's looking-glass

**\* CAPRIFOLIACEAE – Honeysuckle Family**

- Lonicera hispidula* hairy honeysuckle  
 [*L. h.* var. *vacillans*]  
*Lonicera involucrata* var. *ledebourii* + twinberry  
 (BLM, MC, pv)  
*Symphoricarpos albus* var. *laevigatus* + snowberry  
*Symphoricarpos mollis* + creeping snowberry

**\* CARYOPHYLLACEAE – Pink Family**

- Arenaria paludicola* + **x** marsh sandwort  
 (sv-x) ★FE/CE/1B.1

## CARYOPHYLLACEAE (cont'd.)

<i>Cardionema ramosissimum</i>	sandmat
<i>Cerastium arvense</i> subsp. <i>strictum</i> + ▼ [C. a.]	field mouse-ear chickweed
* <i>Cerastium fontanum</i> subsp. <i>vulgare</i> +	common m-ear chickweed
* <i>Cerastium glomeratum</i> +	sticky m-ear chickweed
* <i>Herniaria hirsuta</i> var. <i>cinerea</i> [H. h. subsp. c.]	gray herniaria
<i>Loeflingia squarrosa</i> + [L. s. var. s.] (zs)	spreading pygmyleaf
* <i>Lychnis coronaria</i>	rose campion
<i>Minuartia californica</i> + (SV) & (SLV, ZS)	California sandwort
<i>Minuartia douglasii</i> +	Douglas's sandwort
* <i>Petrorhagia dubia</i> ▼	childing pink
<i>Polycarpon depressum</i> + (nm, PV, SB)	California polycarp
* <i>Polycarpon tetraphyllum</i> var. <i>t.</i> + [P. t.]	four-leaved allseed
* <i>Sagina apetala</i> +	dwarf pearlwort
<i>Sagina decumbens</i> subsp. <i>occidentalis</i> +	western pearlwort
<i>Sagina maxima</i> subsp. <i>crassicaulis</i> + (mc, NC, sc)	thick-stemmed pearlwort
* <i>Sagina procumbens</i> + ▼	matted pearlwort
<i>Silene antirrhina</i>	sleepy catchfly
* <i>Silene coniflora</i> ▼ [ <i>S. multinervia</i> ?]	multinerved catchfly
* <i>Silene gallica</i>	windmill pink
<i>Silene lemmonii</i> + (slv)	Lemmon's catchfly
<i>Silene verecunda</i> + [ <i>S. v.</i> subspp. <i>platyota/v.</i> ] [ <i>S. v.</i> subsp. <i>v.</i>    ★1B.2 (NC, S)]	San Francisco campion
* <i>Spergula arvensis</i> + [ <i>S. a.</i> subsp. <i>a.</i> ]	stickwort
* <i>Spergularia bocconi</i> + [ <i>S. bocconii</i> , orth. var.]	Boccone's sand-spurrey
<i>Spergularia macrotheca</i> var. <i>leucantha</i> + (SL)	white-fl'd sticky sand-sp.
<i>Spergularia macrotheca</i> var. <i>m.</i> +	sticky sand-spurrey
<i>Spergularia marina</i> + (SL)	saltmarsh sand-spurrey
* <i>Spergularia rubra</i> +	red sand-spurrey
* <i>Spergularia villosa</i>	hairy sand-spurrey
* <i>Stellaria media</i>	common chickweed
<i>Stellaria nitens</i>	shining chickweed

✿ **CELASTRACEAE – Staff-tree Family**

*Euonymus occidentalis* var. *o.* western burning bush

✿ **CHENOPODIACEAE – Goosefoot Family**

- Atriplex lentiformis* + big saltbush  
 [*A. l.* subsp. *l.*] (PV)
- Atriplex leucophylla* + beach saltbush  
 (BLM, NC, NM)
- Atriplex patula* + spear orach  
 [*A. p.* var. *p.*] (SB, sc-x)
- \* *Atriplex prostrata* + fat-hen  
 [*A. triangularis*]
- \* *Atriplex semibaccata* + ▼ Australian saltbush
- Atriplex serenana* var. *s.* + bractscale  
 (pv)
- \* *Chenopodium album* lamb's quarters
- Chenopodium berlandieri* var(s). + pitseed goosefoot  
 [*C. b.*]
- Chenopodium californicum* California goosefoot
- \* *Chenopodium macrospermum* large-seed goosefoot  
 [*C. m.* var. *halophilum*]
- \* *Chenopodium murale* nettle-leaved goosefoot
- Chenopodium rubrum* var. *humile* + coast-blite goosefoot  
 [*C. r.*]
- \* *Chenopodium strictum* var. *glaucophyllum* upright goosefoot
- \* *Dysphania ambrosioides* Mexican tea  
 [*Chenopodium a.*]
- \* *Dysphania anthelmintica* wormseed
- \* *Dysphania chilensis* Chilean wormseed
- \* *Dysphania pumilio* Tasmanian goosefoot  
 [*Chenopodium p.*]
- Extriplex californica* + California orach  
 [T]M2 = *Atriplex c.* (NC, SB, sc-x)
- Monolepis nuttalliana* + Nuttall's poverty weed  
 (SL)
- Salicornia pacifica* + saltmarsh pickleweed  
 [*S. virginica*, misappl.]
- \* *Salsola tragus* Russian thistle, tumbleweed
- Suaeda calceoliformis* + horned seablite  
 (SL)

✿ **CISTACEAE – Rock-rose Family**

- \* *Cistus incanus* ▼ rock-rose  
 [*C. creticus*]

**CISTACEAE (cont'd.)**

- Crocanthemum scoparium* var. *vulgare* + rush-rose  
 [T]M2 = *Helianthemum* s., sensu T]M2, in part]

**\* CONVOLVULACEAE – Morning-glory Family**

- Calystegia purpurata* subsp. *p.* + western morning-glory  
*Calystegia sepium* subsp. *limnophila* + hedge bindweed  
 (MC)  
*Calystegia soldanella* beach morning-glory  
*Calystegia subacaulis* subsp. *s.* + hill morning-glory  
 (NC, nm)  
 \**Convolvulus arvensis* field bindweed  
*Cressa truxillensis* + alkali weed  
 (SL)  
*Cuscuta campestris* + field dodder  
 [C. *pentagona*, not in CA] (PV)  
*Cuscuta occidentalis* common dodder  
 [C. *californica* var. *breviflora*]  
*Cuscuta pacifica* var. *p.* salt marsh dodder  
 [C. *salina* var. *major*]  
*Cuscuta subinclusa* + canyon dodder  
*Dichondra donelliana* + dichondra  
 (mc, S)  
 \**Dichondra micrantha* + Asian pony's-foot  
 \**Ipomoea cairica* W Cairo morning-glory  
 \**Ipomoea hederacea* W ivy morning-glory  
 [CA pls previously misid. as *I. nil*]  
 \**Ipomoea indica* W ocean-blue morning-glory  
 [*I. acuminata*; *I. mutabilis*]  
 \**Ipomoea lacunosa* II whitestar  
 \**Ipomoea purpurea* W common morning-glory

**\* CORNACEAE – Dogwood Family**

- Cornus nuttallii* + mountain dogwood  
 (crr/sar)  
*Cornus sericea* subsp. *occidentalis* + western dogwood  
*Cornus sericea* subsp. *s.* + American dogwood

**\* CRASSULACEAE – Stonecrop Family**

- Crassula aquatica* + water pygmy-weed  
 (blm, PV, s)  
*Crassula connata* + sand pygmy-weed

**CRASSULACEAE (cont'd.)**

- \**Crassula tillaea* + moss pygmy-weed  
*Dudleya caespitosa* + sea lettuce  
*Dudleya cymosa* subsp. c. + canyon liveforever  
 (ER, SAR, slv)  
*Dudleya lanceolata/palmeri* + lance-leaved dudleya  
 \**Sedum praealtum* green cockscomb  
*Sedum radiatum* + Coast Range stonecrop  
 (SLV)  
*Sedum spathulifolium* broadleaf stonecrop

**\*CUCURBITACEAE – Gourd Family**

- Marah fabacea* + California man-root  
 [*M. fabaceus*, orth. var.]  
*Marah oregana* + coast man-root  
 [*M. oreganus*, orth. var.] (crr, nm, slv)

**\*DATISACEAE – Datisca Family**

- Datisca glomerata* Durango root

**\*DIPSACACEAE – Teasel Family**

- \**Dipsacus fullonum* + wild teasel  
 \**Dipsacus sativus* + fuller's teasel  
 \**Scabiosa atropurpurea* pincushion flower

**\*ELATINACEAE – Waterwort Family**

- Elatine brachysperma* + short-seeded waterwort  
 (er, NM, pv)

**\*ERICACEAE – Heath Family**

- Arbutus menziesii* Pacific madrone, madroño  
*Arctostaphylos andersonii* + Anderson's manzanita  
 (> 5 regions) ★1B.2  
*Arctostaphylos canescens* subsp. c. + hoary manzanita  
 (SAR)  
*Arctostaphylos crustacea* subsp. *crinita* + crinite manzanita  
 [*A. tomentosa* subsp. *crinita*]  
*Arctostaphylos crustacea* subsp. c. + brittle-leaved manzanita  
 [*A. tomentosa* subsp. *crustacea*]  
*Arctostaphylos glutinosa* + Schreiber's manzanita  
 (S) ★1B.2

## ERICACEAE (cont'd.)

<i>Arctostaphylos hookeri</i> subsp. <i>h.</i> + (PV) ★1B.2/Sen	Hooker's manzanita
<i>Arctostaphylos ohloneana</i> + (S) ★1B.1	Ohlone manzanita
<i>Arctostaphylos pajaroensis</i> ? + <b>x</b> (pv-x) ★1B.1/Sen	Pajaro manzanita
<i>Arctostaphylos sensitiva</i> + [ <i>A. nummularia</i> ]	sensitive manzanita
<i>Arctostaphylos silvicola</i> + (BDS, ZS) ★1B.2	Bonny Doon manzanita
* <i>Erica lusitanica</i>	Spanish heather
<i>Gaultheria shallon</i>	salal
<i>Hemitomes congestum</i> + (bb, SLV)	gnome plant
<i>Pleuricospora fimbriolata</i> + (bb, s?, slv)	fringed pinesap
<i>Pyrola picta</i> + (BB, blm, CRR, SLV)	white-veined wintergreen
<i>Rhododendron columbianum</i> + [ <i>Ledum glandulosum</i> ] (BDS, slv)	western Labrador tea
<i>Rhododendron macrophyllum</i> + (BB/S, BDS, s, sv)	California rose-bay
<i>Rhododendron occidentale</i> +	California azalea
<i>Vaccinium ovatum</i> +	California huckleberry
<i>Vaccinium parvifolium</i> + (bb)	red huckleberry

## \*EUPHORBIACEAE – Spurge Family

<i>Croton setiger</i> [TJM2 = <i>C. setigerus</i> ; TJM1 = <i>Eremocarpus setigerus</i> ]	turkey-mullein, dove-weed
<i>Euphorbia crenulata</i> +	Chinese caps
* <i>Euphorbia helioscopia</i> +	wartweed
* <i>Euphorbia lathyris</i> +	caper spurge, gopher plant
* <i>Euphorbia maculata</i> + [TJM2 = <i>Chamaesyce m.</i> ]	spotted spurge
* <i>Euphorbia oblongata</i> + ☉	oblong spurge
* <i>Euphorbia peplus</i> +	petty spurge
* <i>Euphorbia prostrata</i> + [TJM2 = <i>Chamaesyce p.</i> ]	prostrate spurge
* <i>Euphorbia serpens</i> + [TJM2 = <i>Chamaesyce s.</i> ]	serpent spurge
<i>Euphorbia serpyllifolia</i> subsp. <i>s.</i> + [TJM2 = <i>Chamaesyce s.</i> subsp. <i>s.</i> ]	thyme-leaved spurge

## EUPHORBIACEAE (cont'd.)

- Euphorbia spathulata* + saw-toothed spurge  
 \**Mercurialis annua* mercury  
 \**Ricinus communis* ▼ castor bean

## \* FABACEAE — Legume Family

- \**Acacia baileyana* Cootamundra wattle  
 \**Acacia dealbata* + ☉ silver wattle  
 \**Acacia longifolia* Sydney golden wattle  
 \**Acacia mearnsii* w black wattle  
 \**Acacia melanoxylon* blackwood acacia  
 \**Acacia paradoxa* w kangaroo thorn  
 \**Acacia retinodes* w everblooming wattle  
*Acmispon americanus* var. *a.* + Spanish trefoil  
 [*Lotus purshianus* var. *p.*]  
*Acmispon brachycarpus* + short-podded trefoil  
 [*Lotus humistratus*]  
*Acmispon cytisoides* + Bentham's trefoil  
 [*Lotus benthamii*] (nc)  
*Acmispon glaber* var. *g.* + deerweed  
 [*Lotus scoparius* var. *s.*]  
*Acmispon heermannii* var. *orbicularis* + woolly trefoil  
 [*Lotus h.* var. *o.*]  
*Acmispon junceus* var. *biolettii* + Bioletti's trefoil  
 [*Lotus j.* var. *b.*]  
*Acmispon junceus* var. *j.* + rush trefoil  
 [*Lotus j.* var. *j.*]  
*Acmispon maritimus* var. *m.* + coastal trefoil  
 [*Lotus salsuginosus* var. *s.*] (NC, pv-x, "sc")  
*Acmispon parviflorus* + small-flowered trefoil  
 [*Lotus micranthus*]  
*Acmispon strigosus* + strigose trefoil  
 [*Lotus s.*]  
*Acmispon wrangelianus* + Chilean trefoil  
 [*Lotus w.*]  
 \**Albizia lophantha* plume acacia  
*Astragalus gambelianus* + Gambel's milkvetch  
 (cr, ER, S, slv)  
 \**Cytisus scoparius* + Scotch broom  
 \**Cytisus striatus* + ☉ Portuguese broom  
 \**Genista maderensis* w Madeira broom  
 \**Genista monspessulana* ☉ French broom

## FABACEAE (cont'd.)

<i>Glycyrrhiza lepidota</i> + ▼ (pv)	wild licorice
<i>Hoita macrostachya</i> +	California hemp
<i>Hoita orbicularis</i> + (BLM, er, NM, SB)	round-leaved hoita
<i>Hoita strobilina</i> ? + x (sar?) ★1B.1	Loma Prieta hoita
<i>Hosackia crassifolia</i> var. c. + [ <i>Lotus crassifolius</i> var. c.] (ER, crr)	broad-leaved trefoil
<i>Hosackia gracilis</i> + [ <i>Lotus formosissimus</i> ] (> 5 regions) ★4.2	harlequin lotus
<i>Hosackia oblongifolia</i> var. o. + [ <i>Lotus oblongifolius</i> var. o.] (BLM, s, slv/zs)	marsh trefoil
<i>Hosackia pinnata</i> + x [ <i>Lotus pinnatus</i> ] ("sc")	bog trefoil
<i>Hosackia stipularis</i> var. s. + [ <i>Lotus s.</i> var. s.]	stipulate trefoil
* <i>Lathyrus angulatus</i>	angled pea
* <i>Lathyrus cicera</i>	red pea
* <i>Lathyrus hirsutus</i>	caley pea
* <i>Lathyrus latifolius</i>	perennial sweet pea
<i>Lathyrus littoralis</i> + (SB, NC)	beach pea
* <i>Lathyrus odoratus</i>	sweet pea
* <i>Lathyrus tingitanus</i>	Tangier pea
<i>Lathyrus torreyi</i>	redwood pea
<i>Lathyrus vestitus</i> var. v. ~ + (CRR, NM)	Pacific pea
* <i>Lotus corniculatus</i>	bird's-foot trefoil
<i>Lupinus affinis</i> + (mc)	fleshy lupine
<i>Lupinus albifrons</i> var. a. +	silver bush lupine
<i>Lupinus arboreus</i> +	yellow bush lupine
<i>Lupinus bicolor</i> +	miniature lupine
<i>Lupinus chamissonis</i> +	blue beach lupine
<i>Lupinus formosus</i> var. f. + (mc, S, SC, slv, sv)	summer lupine
<i>Lupinus hirsutissimus</i>	stinging lupine
<i>Lupinus latifolius</i> var. dudleyi + (er, s, slv)	Dudley's broad-leaved l.
<i>Lupinus latifolius</i> var. l. +	broad-leaved lupine
<i>Lupinus microcarpus</i> var. m. + (pv-x, SL)	chick lupine

## FABACEAE (cont'd.)

<i>Lupinus nanus</i> +	sky lupine
<b><i>Lupinus polyphyllus</i> var. <i>p.</i></b> + (BLM, SLV, sv-x)	large-leaved lupine
<i>Lupinus succulentus</i>	arroyo lupine
<i>Lupinus truncatus</i>	Nuttall's annual lupine
<i>Lupinus variicolor</i> +	Lindley's varied lupine
* <i>Medicago arabica</i> +	spotted burclover
* <i>Medicago lupulina</i> +	black medick
* <i>Medicago minima</i> +	burclover
* <i>Medicago polymorpha</i> +	California burclover
* <i>Medicago sativa</i>	alfalfa
* <i>Melilotus albus</i> + [ <i>M. alba</i> , orth. var.]	white sweetclover
* <i>Melilotus indicus</i> + [ <i>M. indica</i> , orth. var.]	sourclover
* <i>Ornithopus pinnatus</i> +	yellow birdsfoot
* <i>Ornithopus sativus</i> +	common birdsfoot
<i>Pickeringia montana</i> var. <i>m.</i> +	chaparral pea
* <i>Pisum sativum</i> ▼	garden pea
* <i>Robinia pseudoacacia</i>	black locust
<i>Rupertia physodes</i> +	California tea
* <i>Spartium junceum</i> ⊕	Spanish broom
<i>Thermopsis californica</i> var. <i>c.</i> + [ <i>T. macrophylla</i> var. <i>m.</i> , Southern CA endemic]	false lupine
<i>Trifolium albopurpureum</i> + [ <i>T. a.</i> var. <i>a.</i> ]	rancheria clover
* <i>Trifolium angustifolium</i> + ⊕	prickly clover
<i>Trifolium barbigerum</i> + [ <i>T. b.</i> var. <i>b.</i> ]	bearded clover
<i>Trifolium bifidum</i> var. <i>b.</i> +	notch-leaved clover
<i>Trifolium bifidum</i> var. <i>decipiens</i> +	pinole clover
<b><i>Trifolium buckwestiorum</i></b> + (> 5 regions) ★1B.1/Sen	Santa Cruz clover
* <i>Trifolium campestre</i> +	hop clover
* <i>Trifolium cernuum</i> +	nodding clover
<i>Trifolium ciliolatum</i> +	foothill clover
<b><i>Trifolium depauperatum</i> var. <i>amplectens</i></b> + (BLM)	pale sack clover
<i>Trifolium depauperatum</i> var. <i>d.</i> +	dwarf sack clover
<i>Trifolium depauperatum</i> var. <i>truncatum</i> +	truncate sack clover
* <i>Trifolium dubium</i> +	little hop clover, shamrock
* <i>Trifolium fragiferum</i> +	strawberry clover

## FABACEAE (cont'd.)

- Trifolium fucatum* +  
(NC, sc-x) & (SL) & (SLV) bull clover
- \**Trifolium glanduliferum* + ▮ ▼ gland clover
- \**Trifolium glomeratum* + clustered clover
- Trifolium gracilentum* +  
[T. g. var. g.] pinpoint clover
- Trifolium grayi* + Gray's clover  
[T. *barbigerum* var. *andrewsii*]  
(SV) & (BB, S, SLV) & (NC, S)
- \**Trifolium hirtum* + rose clover
- \**Trifolium hybridum* + alsike clover
- Trifolium hydrophilum* + ▼ saline clover  
[T. *depauperatum* var. *h.*] (SL) ★1B.2
- \**Trifolium incarnatum* + crimson clover
- Trifolium macraei* + Macrae's clover
- \**Trifolium michelianum* var. *m.* + ▮ big-flowered clover
- Trifolium microcephalum* + small-headed clover
- Trifolium microdon* + thimble clover
- Trifolium obtusiflorum* + clammy clover  
(BLM, CRR, S, SLV)
- Trifolium oliganthum* + few-flowered clover
- Trifolium polyodon* + Pacific Grove clover  
[T. *variegatum*, phase 4] (BLM, SLV) &  
[T. *variegatum*, phase 1 or 2] (SLV, SV)  
★CR/1B.1/Sen
- \**Trifolium pratense* + red clover
- \**Trifolium repens* + white clover
- \**Trifolium resupinatum* + W reversed clover
- \**Trifolium striatum* + knotted clover
- \**Trifolium subterraneum* + ☉ subterranean clover
- Trifolium variegatum* vars. ~ + variegated clover  
[T. *variegatum*, phase 2 (& occ. phases 1 & 3)] (BLM)
- \**Trifolium vesiculosum* + arrowleaf clover
- Trifolium willdenovii* + tomcat clover
- Trifolium wormskioldii* + cow clover  
(blm, s, sc-x, sv-x)
- \**Ulex europaeus* + gorse  
[U. *europaea*, orth. var.]
- Vicia americana* subsp. *a.* + American vetch  
[V. *a.* var. *a.*]
- \**Vicia benghalensis* + purple vetch
- \**Vicia disperma* + W two-seeded vetch
- Vicia gigantea* + giant vetch

**FABACEAE (cont'd.)**

<i>Vicia hassei</i> + (S, slv)	slender vetch
* <i>Vicia hirsuta</i>	tiny vetch
* <i>Vicia lutea</i> +	yellow vetch
* <i>Vicia sativa</i> subsp. <i>nigra</i> +	narrow-leaved vetch
* <i>Vicia sativa</i> subsp. <i>s.</i> +	spring vetch
* <i>Vicia tetrasperma</i>	sparrow vetch
* <i>Vicia villosa</i> subsp. <i>varia</i> +	winter vetch
* <i>Vicia villosa</i> subsp. <i>v.</i> +	hairy vetch

**\* FAGACEAE – Oak Family**

<i>Chrysolepis chrysophylla</i> var. <i>minor</i> +	golden chinquapin
<i>Notholithocarpus densiflorus</i> var. <i>d.</i> [ <i>Lithocarpus d.</i> var. <i>d.</i> ]	tan oak
<i>Quercus agrifolia</i> var. <i>a.</i> +	coast live oak, encina
<i>Quercus berberidifolia</i> + ▼	scrub oak
<i>Quercus chrysolepis</i> +	canyon live oak, maul oak
<i>Quercus garryana</i> var. <i>g.</i> + ▼ (CRR, mc)	Oregon oak
<i>Quercus kelloggii</i> +	California black oak
<i>Quercus lobata</i> +	valley oak, roble
<i>Quercus parvula</i> var. <i>shrevei</i> +	Shreve oak
<i>Quercus wislizeni</i> var. <i>frutescens</i> + [ <i>Q. wislizenii</i> var. <i>f.</i> , orth. var.]	chaparral live oak
<i>Quercus wislizeni</i> var. <i>w.</i> ? + [ <i>Q. wislizenii</i> var. <i>w.</i> , orth. var.]	interior live oak

**\* FRANKENIACEAE – Frankenia Family**

<i>Frankenia salina</i>	alkali heath
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**\* GARRYACEAE – Silk Tassel Family**

<i>Garrya elliptica</i> +	silk tassel
<i>Garrya flavescens</i> + (sar)	ashy silk tassel
<i>Garrya fremontii</i> + (NM/SAR, SAR)	bear brush

**\* GENTIANACEAE – Gentian Family**

* <i>Centaurium tenuiflorum</i> +	slender centaury
<i>Cicendia quadrangularis</i>	timwort

**GENTIANACEAE (cont'd.)**

<i>Zeltnera davayi</i> + [ <i>Centaurium d.</i> ]	Davy's centaury
<i>Zeltnera muehlenbergii</i> ? + [ <i>Centaurium m.</i> ]	Monterey centaury
<i>Zeltnera trichantha</i> + ▼ [ <i>Centaurium trichanthum</i> ] (slv)	alkali centaury

**\* GERANIACEAE – Geranium Family**

* <i>Erodium botrys</i> +	long-beaked filaree
* <i>Erodium brachycarpum</i> +	southern European filaree
* <i>Erodium cicutarium</i> +	red-stemmed filaree
* <i>Erodium moschatum</i> +	white-stemmed filaree
<i>Geranium bicknellii</i> ? +	Bicknell's geranium
<i>Geranium carolinianum</i>	Carolina geranium
* <i>Geranium core-core</i> [ <i>G. retrorsum</i> , misid.]	New Zealand geranium
* <i>Geranium dissectum</i> +	common cranesbill
* <i>Geranium molle</i> +	soft cranesbill
* <i>Geranium palmatum</i> w [ <i>G. anemonifolium</i> , illeg.]	Canary Island geranium
* <i>Geranium potentilloides</i>	Australian cranesbill
* <i>Geranium purpureum</i>	little robin
* <i>Geranium pusillum</i>	small-flowered geranium
* <i>Geranium robertianum</i>	herb robert
* <i>Geranium rotundifolium</i>	round-leaved geranium
* <i>Pelargonium grossularioides</i> ▼	gooseberry geranium

**\* GROSSULARIACEAE – Gooseberry Family**

<i>Ribes californicum</i> var. <i>c.</i> + (PV)	hillside gooseberry
<i>Ribes divaricatum</i> var. <i>pubiflorum</i> +	straggly gooseberry
<i>Ribes malvaceum</i> var. <i>m.</i> +	chaparral currant
<i>Ribes menziesii</i> var. <i>m.</i> + [ <i>R. m.</i> ]	canyon gooseberry
<i>Ribes sanguineum</i> var. <i>glutiniosum</i> +	pink-flowering currant

**\* HALORAGACEAE – Water-milfoil Family**

* <i>Myriophyllum aquaticum</i>	parrot's feather
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**\* HYDRANGEACEAE – Hydrangea Family**

<i>Whipplea modesta</i>	modesty
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## \* HYPERICACEAE – St. John’s Wort Family

<i>Hypericum anagalloides</i>	tinker’s penny
* <i>Hypericum androsaemum</i> w	tutsan
* <i>Hypericum calycinum</i>	Aaron’s beard
* <i>Hypericum canariense</i> ☉	Canary Island St. Johnswort
* <i>Hypericum perforatum</i> subsp. <i>p.</i> [ <i>H. p.</i> ]	Klamathweed
<i>Hypericum scouleri</i> ? + x [ <i>H. formosum</i> var. <i>s.</i> ] (sar?)	Scouler’s hypericum

## \* JUGLANDACEAE – Walnut Family

{*} <i>Juglans hindsii</i> + [ <i>J. californica</i> var. <i>h.</i> ]	Northern CA black walnut
* <i>Juglans nigra</i> +	eastern black walnut
* <i>Juglans regia</i> + w	Persian or English walnut

## \* LAMIACEAE – Mint Family

* <i>Cedronella canariensis</i>	canary balm
<i>Clinopodium douglasii</i> [ <i>Satureja d.</i> ]	yerba buena
* <i>Glechoma hederacea</i> ▼ [ <i>Glechoma h.</i> , orth. var.]	ground ivy
* <i>Lamiastrum galeobdolon</i> w	yellow archangel
* <i>Lamium amplexicaule</i> +	henbit
* <i>Lamium purpureum</i> +	dead nettle
* <i>Lavandula stoechas</i>	Spanish lavender
<i>Lepechinia calycina</i>	pitcher sage
* <i>Marrubium vulgare</i>	horehound
* <i>Melissa officinalis</i>	lemon balm
* <i>Mentha aquatica</i>	water mint
* <i>Mentha arvensis</i>	field mint
<i>Mentha canadensis</i> + [ <i>M. arvensis</i> ]	American corn mint
* <i>Mentha</i> × <i>piperita</i>	peppermint
* <i>Mentha pulegium</i>	pennyroyal
* <i>Mentha spicata</i> [ <i>M. s.</i> var. <i>s.</i> ]	spearmint
* <i>Mentha suaveolens</i>	pineapple mint
<i>Monardella sinuata</i> subsp. <i>nigrescens</i> + [ <i>M. undulata</i> , misappl.] (BDS, ZS) ★4.2	northern curly-lvd m-della
<i>Monardella villosa</i> subsp. <i>franciscana</i> +	Franciscan coyote mint

**LAMIACEAE (cont'd.)**

- Monardella villosa* subsp. *v.* + coyote mint
- \**Origanum vulgare* subsp. *hirtum* oregano  
[*O. v.*]
- Pogogyne serpylloides* ~ + ▼ thymeleaf beardstyle  
(blm-x)
- Prunella vulgaris* var. *lanceolata* + lance-leaved self-heal
- \**Prunella vulgaris* var. *v.* + European self-heal
- Salvia columbariae* chia
- Salvia mellifera* black sage
- \**Salvia microphylla* ▮ baby sage
- Scutellaria tuberosa* Dannie's skullcap
- Stachys ajugoides* + bugle hedge nettle  
[*S. a.* var. *a.*]
- \**Stachys arvensis* ▮ staggerweed
- Stachys bullata* + California hedge nettle
- Stachys chamissonis* + swamp stachys  
(MC, NC, S)
- Stachys pycnantha* + short-spiked hedge nettle  
(CRR, nm, SAR, slv)
- Stachys rigida* var. *quercetorum* + rigid hedge nettle  
[*S. ajugoides* var. *r.*, in part]
- Trichostema lanceolatum* vinegar weed

**\* LIMNANTHACEAE – Meadowfoam Family**

- Limnanthes douglasii* subsp. *nivea* + Douglas's meadowfoam  
(blm-x, SLV)

**\* LINACEAE – Flax Family**

- \**Linum bienne* narrow-leaved flax
- \**Linum usitatissimum* common flax

**\* LOASACEAE – Loasa Family**

- Mentzelia micrantha* + small-flowered stickleaf  
(crr, sar?, slv)

**\* LYTHRACEAE – Loosestrife Family**

- Ammannia coccinea* + long-leaved ammannia  
(mc, SLV)
- \**Lythrum hyssopifolia* + hyssop loosestrife  
[*L. hyssopifolium*, orth. var.]
- \**Lythrum salicaria* + ▼ purple loosestrife

\* **MALVACEAE – Mallow Family**

- \* *Abutilon theophrasti* velvet-leaf  
*Fremontodendron californicum* + California flannelbush  
 [F. c. subsp. c.] (BB, nm/sar, SAR, SLV)  
*Malacothamnus fasciculatus* var. *nuttallii* + arcuate bush-mallow  
 [M. f.] (bb, SAR) [M. arcuatus || ★1B.2]  
 \* *Malva arborea* + tree mallow  
 [Lavatera a.]  
 \* *Malva nicaeensis* + bull mallow  
 \* *Malva parviflora* + cheeseweed  
 \* *Malva pseudolavatera* + Cretan mallow  
 [Lavatera cretica]  
 \* *Malva verticillata* var. *crispa* w crisped mallow  
*Malvella leprosa* + alkali mallow  
 (SL)  
 \* *Modiola caroliniana* modiola  
*Sidalcea malachroides* + maple-lvd checkerbloom  
 (NM) ★4.2  
*Sidalcea malviflora* subsp. *laciniata* + geranium-lvd checkerbloom  
 [S. malvaeflora subsp., orth. var.]  
*Sidalcea malviflora* subsp. *m.* + checkerbloom

\* **MARTYNIACEAE – Unicorn-plant Family**

- \* *Proboscidea louisianica* subsp. *l.* unicorn plant

\* **MONTIACEAE – Miner's Lettuce Family**

- Calandrinia breweri* + Brewer's calandrinia  
 (> 5 regions) ★4.2  
*Calandrinia ciliata* red-maids  
*Calyptridium monandrum* + sandcress pussypaws  
 (PV)  
*Calyptridium monospermum* + one-seeded pussypaws  
 (BDS, ZS)  
*Calyptridium parryi* var. *hesseae* + SC Mtns. pussypaws  
 (blm/er, pv, sar?, zs) ★1B.1/Sen  
*Claytonia exigua* subsp. *e.* + little spring beauty  
 (crr, er, S, sar)  
*Claytonia parviflora* subsp. *p.* + small-flowered claytonia  
*Claytonia parviflora* subsp. *viridis* + green spring beauty  
*Claytonia perfoliata* subsp. *mexicana* + clasp-lvd miner's lettuce  
*Claytonia perfoliata* subsp. *p.* + miner's lettuce  
*Claytonia rubra* subsp. *depressa* + red miner's lettuce  
 (SV)

**MONTIACEAE (cont'd.)**

- Claytonia rubra* subsp. *r.* + red miner's lettuce  
(CRR, slv, zs)
- Claytonia sibirica* + candy flower  
(PV, S, slv, SV)
- Montia fontana* + blinks
- Montia parvifolia* + small-leaved montia

**\*MYRICACEAE – Wax Myrtle Family**

- Morella californica* wax myrtle  
[*Myrica* c.]

**\*MYRSINACEAE – Myrsine Family**

- \**Anagallis arvensis* + scarlet pimpernel
- Anagallis minima* + chaffweed  
[*Centunculus minimus*]
- Trientalis latifolia* Pacific starflower

**\*MYRTACEAE – Myrtle Family**

- \**Eucalyptus camaldulensis* + red gum
- \**Eucalyptus globulus* + ☉ Tasmanian blue gum
- \**Eucalyptus viminalis* + manna gum
- \**Leptospermum laevigatum* ▼ Australian tea tree

**\*NYCTAGINACEAE – Four o'Clock Family**

- Abronia latifolia* + yellow sand-verbena  
(NC, SB)
- Abronia umbellata* var. *u.* + pink sand-verbena  
[*A. u.* subsp. *u.*] (NC, SB, SC)
- \**Mirabilis jalapa* var. *j.* common four o'clock

**\*OLEACEAE – Olive Family**

- \**Ligustrum vulgare* ■ European privet

**\*ONAGRACEAE – Evening-primrose Family**

- Camissonia campestris* subsp. *c.* ? + x Mojave sun cup  
("scm")
- Camissonia contorta* + contorted primrose
- Camissonia strigulosa* + hairy primrose
- Camissoniopsis cheiranthifolia* subsp. *c.* + beach evening-primrose  
[*Camissonia* c. subsp. *c.*]

## ONAGRACEAE (cont'd.)

<i>Camissoniopsis hirtella</i> + [ <i>Camissonia h.</i> ]	small-haired primrose
<b><i>Camissoniopsis intermedia</i></b> + [ <i>Camissonia i.</i> ] (sar)	intermediate primrose
<i>Camissoniopsis micrantha</i> [ <i>Camissonia m.</i> ]	small-flowered primrose
<b><i>Circaea alpina</i> subsp. <i>pacifica</i></b> + (SLV)	enchanter's nightshade
<b><i>Clarkia breweri</i> ? + x</b> (sar?, "scm") ★4.2	Brewer's clarkia
<b><i>Clarkia concinna</i> subsp. <i>automixa</i></b> + x (crr-x, sar?, "scm") ★4.3	Santa Clara red ribbons
<b><i>Clarkia davyi</i> ? +</b> (BLM, NC, S) & (NC, S)	Davy's clarkia
<b><i>Clarkia purpurea</i> subsp. <i>p.</i></b> + (NC, S)	godetia
<i>Clarkia purpurea</i> subsp. <i>quadrivulnera</i> +	four-spotted godetia
<i>Clarkia purpurea</i> subsp. <i>viminea</i> +	large godetia
<b><i>Clarkia rhomboidea</i></b> + (mc, "sc")	rhomboid clarkia
<i>Clarkia rubicunda</i> +	farewell-to-spring
<i>Clarkia unguiculata</i> +	elegant clarkia
<i>Epilobium brachycarpum</i> +	panicled willow herb
<i>Epilobium canum</i> subsp. <i>c.</i>	CA Fuchsia, zauschneria
<i>Epilobium ciliatum</i> subsp. <i>c.</i> +	common willow herb
<i>Epilobium ciliatum</i> subsp. <i>watsonii</i> +	Watson's willow herb
<i>Epilobium densiflorum</i>	dense-flowered willow herb
<i>Epilobium foliosum</i>	foliose willow herb
<b><i>Epilobium hallianum</i></b> + [ <i>E. halleanum</i> , orth. var.] (nm, S, sv-x)	Hall's willow herb
<i>Epilobium minutum</i>	minute willow herb
<i>Epilobium torreyi</i>	narrow-leaved willow herb
<b><i>Ludwigia palustris</i></b> + (BLM, nm, SV)	Pacific marsh purslane
* <i>Ludwigia peploides</i> subsp. <i>p.</i> +	yellow water primrose
* <i>Oenothera biennis</i> ▼	common evening-primrose
<i>Oenothera elata</i> subsp. <i>hirsutissima</i> +	hairy evening-primrose
<i>Oenothera elata</i> subsp. <i>hookeri</i> +	Hooker's evening-primrose
* <i>Oenothera glazioviana</i> ▼	red-sepaled evening-p-rose
* <i>Oenothera sinuosa</i> [ <i>Gaura sinuata</i> ]	wavy-leaved gaura

## ONAGRACEAE (cont'd.)

- \**Oenothera speciosa* showy evening-primrose  
 \**Oenothera stricta* subsp. s. w Chilean evening-primrose  
 \**Oenothera xenogaura* Drummond's gaura  
 [*Gaura drummondii*]  
*Taraxia ovata* + sun cup  
 [*Camissonia o.*]

## \*OROBANCHACEAE – Broomrape Family

- \**Bellardia trixago* + Mediterranean linseed  
*Castilleja affinis* subsp. a. + Indian paintbrush  
*Castilleja ambigua* subsp. a. + Johnny-nip  
 (BLM) ★4.2  
*Castilleja attenuata* + Valley tassels  
 (BDS, PV, S, slv)  
*Castilleja densiflora* subsp. d. ~ + owl's-clover  
 (NC, S, sc-x)  
*Castilleja exserta* subsp. e. + escobita  
*Castilleja exserta* subsp. *latifolia* + banded owl's-clover  
 (NC, SB?)  
*Castilleja foliolosa* + woolly paintbrush  
*Castilleja latifolia* + Monterey coast paintbrush  
 (SB) ★4.3  
*Castilleja minor* subsp. *spiralis* + x marsh paintbrush  
 (pv-x)  
*C. rubicundula* subsp. *lithospermoides* + x cream sacs  
 (pv-x, "sc")  
*Castilleja subinclusa* subsp. *franciscana* + Franciscan paintbrush  
 (s)  
*Castilleja wightii* + Wight's paintbrush  
*Cordylanthus rigidus* subsp. r. stiff bird's-beak  
*Kopsiopsis strobilacea* + California ground-cone  
 [*Boschniakia s.*] (> 5 regions)  
*Orobanche bulbosa* + chaparral broomrape  
 (bb/s, er, sar?, slv)  
*Orobanche californica* subsp. c. + ▼ California broomrape  
 (nc)  
*Orobanche californica* subsp. *jepsonii* + Jepson's broomrape  
 ("sc")  
*Orobanche fasciculata* + clustered broomrape  
*Orobanche pinorum* + oceanspray broomrape  
 (slv)

## OROBANCHACEAE (cont'd.)

<i>Orobanche uniflora</i> + (bb, BDS, er)	naked broomrape
* <i>Parentucellia viscosa</i> + ▼ <i>Pedicularis densiflora</i>	yellow parentucellia Indian warrior
<i>Pedicularis dudleyi</i> + X (nm-x, slv-x) ★CR/1B.2	Dudley's lousewort
<i>Triphysaria eriantha</i> subsp. <i>e.</i> + (PV)	butter-and-eggs
<i>Triphysaria eriantha</i> subsp. <i>rosea</i> +	pelican flower
<i>Triphysaria micrantha</i> + (s)	purple-beaked owl's clover
<i>Triphysaria pusilla</i> +	dwarf owl's clover
<i>Triphysaria versicolor</i> subsp. <i>v.</i> +	smooth owl's clover

## \* OXALIDACEAE – Oxalis Family

* <i>Oxalis corniculata</i> +	hairy wood-sorrel
* <i>Oxalis incarnata</i>	crimson wood-sorrel
* <i>Oxalis latifolia</i> II	broad-leaved oxalis
<i>Oxalis oregana</i>	redwood sorrel
* <i>Oxalis pes-caprae</i> +	Bermuda buttercup
<i>Oxalis pilosa</i> + [ <i>O. albicans</i> subsp. <i>p.</i> ]	hairy wood-sorrel
* <i>Oxalis purpurea</i> W	purple wood-sorrel

## \* PAPAVERACEAE – Poppy Family

<i>Dendromecon rigida</i>	bush poppy
<i>Dicentra formosa</i>	Pacific bleeding heart
<i>Ehrendorferia chrysantha</i> + [ <i>Dicentra c.</i> ] (crr, sar?, slv)	golden eardrops
<i>Eschscholzia californica</i> +	California poppy
* <i>Fumaria capreolata</i>	white ramping fumitory
* <i>Fumaria officinalis</i>	common fumitory
* <i>Fumaria parviflora</i>	small-flowered fumitory
<i>Hesperomecon linearis</i> + [ <i>Meconella l.</i> ] (ZS)	narrow-leaved meconella
<i>Meconella californica</i> + (bb, SLV)	California meconella
<i>Platystemon californicus</i> +	cream cups

## \* PARNASSIACEAE – Grass-of-Parnassus Family

<i>Parnassia palustris</i> + X [ <i>P. californica</i> ] (sar?, slv-x)	marsh grass-of-Parnassus
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\* **PHRYMACEAE – Lopseed Family**

- Diplacus aurantiacus* + sticky monkeyflower  
[TJM2 = *Mimulus a.* var. *a.*; TJM1 = *M. a.*]
- Diplacus congdonii* + Congdon's monkeyflower  
[TJM2 = *Mimulus c.*] (slv)
- Diplacus douglasii* + purple mouse-ears  
[TJM2 = *Mimulus d.*] (SLV)
- Diplacus rattanii* + SC County monkeyflower  
[TJM2 = *Mimulus r.*] (BDS, SAR, ZS)  
[*M. r.* subsp. *decurtatus* || ★4.2]
- Erythranthe androsacea* + androsace monkeyflower  
[TJM2 = *Mimulus androsaceus*] (ZS)
- Erythranthe arvensis* ~ + blunt-calyxed m-flower  
[TJM2 = *Mimulus guttatus*]
- Erythranthe cardinalis* scarlet monkeyflower  
[TJM2 = *Mimulus c.*]
- Erythranthe floribunda* + floriferous monkeyflower  
[TJM2 = *Mimulus floribundus*]
- Erythranthe grandis* + coast monkeyflower  
[TJM2 = *Mimulus guttatus*]
- Erythranthe guttata* ? + common monkeyflower  
[TJM2 = *Mimulus guttatus*]
- Erythranthe moschata* + musk monkeyflower  
[TJM2 = *Mimulus moschatus*]
- Erythranthe nasuta* + snout-nosed monkeyflower  
[TJM2 = *Mimulus guttatus*]
- Mimetanthe pilosa* + downy monkeyflower  
[TJM2 = *Mimulus pilosus*] (blm, er, s, slv)

\* **PHYTOLACCACEAE – Pokeweed Family**

- \* *Phytolacca americana* var. *a.* pokeweed

\* **PLANTAGINACEAE – Plantain Family**

- Antirrhinum kelloggii* twining snapdragon
- Antirrhinum multiflorum* sticky snapdragon
- \* *Antirrhinum orontium* W corn snapdragon
- Antirrhinum vexillocalyculatum* subsp. *v.* + wiry snapdragon  
[*A. v.-c.* subsp. *v.-c.*, orth. var.] (b, crr, sar?, slv)
- Callitriche heterophylla* var. *bolanderi* + Bolander's water-starwort
- Callitriche marginata* + California water-starwort
- Callitriche palustris* + vernal water-starwort  
[*C. verna*]
- Collinsia bartsiiifolia* var. *b.* + white Chinese houses  
(ZS)

## PLANTAGINACEAE (cont'd.)

<i>Collinsia heterophylla</i> var. <i>h.</i> + [ <i>C. h.</i> ]	Chinese houses
<i>Collinsia multicolor</i> + (NC, S) ★1B.2	San Francisco collinsia
* <i>Cymbalaria muralis</i> ▼	kenilworth ivy
* <i>Digitalis purpurea</i>	foxglove
<i>Gratiola ebracteata</i> + ▼ (nm/sar)	bractless hedge-hyssop
<i>Hippuris vulgaris</i> + (S)	mare's-tail
<i>Keckiella corymbosa</i> + (ER, SAR)	redwood penstemon
* <i>Kickxia elatine</i> +	sharp-leaved fluellin
* <i>Kickxia spuria</i> +	round-leaved fluellin
* <i>Linaria dalmatica</i> subsp. <i>d.</i> ▼ [ <i>L. genistifolia</i> subsp. <i>d.</i> ]	Dalmatian toadflax
* <i>Linaria maroccana</i>	Moroccan toadflax
* <i>Linaria pinifolia</i>	pine-needle toadflax
* <i>Linaria purpurea</i> w	purple toadflax
<i>Lindernia dubia</i> + [ <i>L. d.</i> var. <i>anagallidea</i> ] (pv)	false pimpernel
<i>Nuttallanthus texanus</i> [ <i>Linaria canadensis</i> , in part, misappl.]	blue toadflax
<i>Penstemon rattanii</i> var. <i>kleei</i> + (BLM, er, NM, s, sar?) ★1B.2	SC Mtns. Beardtongue
* <i>Plantago arenaria</i> [ <i>P. indica</i> , nom. superfl.]	sand plantain
* <i>Plantago coronopus</i> ☉	cut-leaved plantain
<i>Plantago elongata</i> + (BLM, pv) & (NC)	California coast plantain
<i>Plantago erecta</i> +	California plantain
* <i>Plantago lanceolata</i>	English plantain
* <i>Plantago major</i> +	common plantain
<i>Plantago maritima</i>	common seaside plantain
<i>Plantago subnuda</i> +	Mexican plantain
<i>Tonella tenella</i> + (crr)	small-flowered tonella
<i>Veronica americana</i> +	American brooklime
* <i>Veronica anagallis-aquatica</i> +	water speedwell
* <i>Veronica arvensis</i> +	common speedwell
* <i>Veronica catenata</i> +	chain speedwell
* <i>Veronica filiformis</i> ▮	thread-stalked speedwell
* <i>Veronica hederifolia</i> ▮	ivy-leaved speedwell

**PLANTAGINACEAE (cont'd.)**

- Veronica peregrina* subsp. *xalapensis* + purslane speedwell  
 \* *Veronica persica* + Persian speedwell  
*Veronica serpyllifolia* subsp. *humifusa* + bright-blue speedwell  
 \* *Veronica serpyllifolia* subsp. *s.* Ⅱ bright-blue speedwell

**\* PLATANACEAE – Plane-tree or Sycamore Family**

- Platanus racemosa* + western sycamore, aliso

**\* PLUMBAGINACEAE – Leadwort Family**

- Armeria maritima* subsp. *californica* + sea pink  
 \* *Limonium sinuatum* sea lavender

**\* POLEMONIACEAE – Phlox Family**

- Allophyllum divaricatum* + straggling gilia  
 (> 5 regions)  
*Allophyllum gilioides* subsp. *g.* + blue false gilia  
 (sar)  
*Allophyllum gilioides* subsp. *violaceum* + violet false gilia  
 (CRR)  
*Collomia grandiflora* + large-flowered collomia  
 (CRR, MC, slv)  
*Collomia heterophylla* variable-leaf collomia  
*Gilia achilleifolia* subsp. *a.* + California gilia  
*Gilia achilleifolia* subsp. *multicaulis* + many-stemmed gilia  
 (NC, S, SLV)  
*Gilia angelensis* + x chaparral gilia  
 (“sc”)  
*Gilia capitata* subsp. *c.* + globe gilia  
 (slv)  
*Gilia capitata* subsp. *staminea* + range gilia  
 (NM, PV, slv, ZS)  
*Gilia clivorum* + grassland gilia  
 (crr, pv, S, slv, SV)  
*Gilia tenuiflora* subsp. *arenaria* + Monterey gilia  
 (SB) ★FE/CT/1B.2  
*Gilia tenuiflora* subsp. *t.* + slender-flowered gilia  
 (BDS, ZS)  
*Leptosiphon ambiguus* + x serpentine leptosiphon  
 [*Linanthus a.*] (slv-x) ★4.2  
*Leptosiphon androsaceus* + common leptosiphon  
 [*Linanthus a.*]  
*Leptosiphon bicolor* + x bicolored leptosiphon  
 [*Linanthus b.*] (bb-x, crr-x s-x, slv-x)

## POLEMONIACEAE (cont'd.)

<i>Leptosiphon ciliatus</i> + x [ <i>Linanthus</i> c.] (crr-x)	whisker brush
<i>Leptosiphon grandiflorus</i> + ★4.2 [ <i>Linanthus</i> g.] (BLM, mc-x, nm-x)	large-flowered leptosiphon
<i>Leptosiphon parviflorus</i> + [ <i>Linanthus</i> p.] (> 5 regions)	small-flowered leptosiphon
<i>Leptosiphon pygmaeus</i> subsp. <i>continentalis</i> + [ <i>Linanthus</i> p. subsp. c.] (blm, ER, MC)	pygmy leptosiphon
<i>Linanthus dichotomus</i> subsp. <i>d.</i> + x [ <i>L. d.</i> ] (slv-x)	evening snow
<i>Microsteris gracilis</i> + [ <i>Phlox</i> g.] (blm, CRR)	slender phlox
<i>Navarretia atractyloides</i> +	holly-leaved navarretia
<i>Navarretia hamata</i> subsp. <i>parviloba</i> + (BDS, PV, ZS)	sandhill navarretia
<i>Navarretia mellita</i> +	honey-scented navarretia
<i>Navarretia squarrosa</i> +	skunkweed
<i>Navarretia viscidula</i> + ▼ (NM)	sticky navarretia

## ✿ POLYGALACEAE – Milkwort Family

<i>Polygala californica</i>	California milkwort
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## ✿ POLYGONACEAE – Buckwheat Family

<i>Chorizanthe cuspidata</i> var. <i>c.</i> ? + x [ <i>C. c.</i> ] (sb-x) ★1B.2	San Francisco Bay s-flower
<i>Chorizanthe diffusa</i> +	diffuse spineflower
<i>Chorizanthe douglasii</i> ? + x ("scm") ★4.3	Douglas's spineflower
<i>Chorizanthe membranacea</i> + x (crr-x)	pink spineflower
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i> + [ <i>C. p.</i> ] (> 5 regions) ★FE/1B.1	Ben Lomond spineflower
<i>Chorizanthe pungens</i> var. <i>p.</i> + [ <i>C. p.</i> ] (PV, SB) ★FT/1B.2	Monterey spineflower
<i>Chorizanthe robusta</i> var. <i>hartwegii</i> + [ <i>C. r.</i> ] (SV) ★FE/1B.1	Scotts Valley spineflower
<i>Chorizanthe robusta</i> var. <i>r.</i> + [ <i>C. r.</i> ] (> 5 regions) ★FE/1B.1	robust spineflower

{*} <i>Eriogonum arborescens</i> +	Santa Cruz Island b-wheat
<i>Eriogonum fasciculatum</i> var. <i>f.</i> + (PV)	coastal CA buckwheat

{*} <i>Eriogonum fasciculatum</i> var. <i>foliolosum</i> +	leafy California buckwheat
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## POLYGONACEAE (cont'd.)

- Eriogonum gracile* var. *g.* + slender buckwheat  
(cr, pv, ZS)
- Eriogonum hirtiflorum* + hairy-flowered buckwheat  
(blm, er?)
- Eriogonum latifolium* + coast buckwheat
- Eriogonum luteolum* var. *l.* + golden-carpent buckwheat  
(SAR)
- Eriogonum nudum* var. *auriculatum* + naked-stemmed buckwheat
- Eriogonum nudum* var. *decurrens* + Ben Lomond buckwheat  
(BDS, ZS) ★1B.1
- \**Fallopia convolvulus* black bindweed  
[*Polygonum c.*]
- \**Fallopia japonica* Japanese knotweed  
[*Polygonum cuspidatum*]
- \**Fallopia sachalinensis* giant knotweed  
[*Polygonum sachalinense*]
- Lastarriaea coriacea* + leather spineflower  
(PV, "sc")
- \**Muehlenbeckia complexa* maidenhair vine
- Persicaria amphibia* + water smartweed  
[*Polygonum amphibium* var. *emersum*]
- Persicaria hydropiperoides* + false waterpepper  
[*Polygonum h.*]
- Persicaria lapathifolia* + willow weed  
[*Polygonum lapathifolium*]
- \**Persicaria maculosa* + lady's thumb  
[*Polygonum persicaria*]
- \**Persicaria pensylvanica* + ▼ pinkweed  
[*Polygonum pensylvanicum*]
- Persicaria punctata* + water knotweed  
[*Polygonum punctatum*]
- \**Persicaria wallichii* Himalayan knotweed  
[*Polygonum polystachyum*]
- \**Polygonum aviculare* subsp. *depressum* common knotweed  
[*P. arenastrum*]
- Polygonum hickmanii* + Scotts Valley polygonum  
(SV) ★FE/CE/1B.1
- Polygonum paronychia* + x dune knotweed  
(sb-x)
- Pterostegia drymarioides* woodland threadstem
- \**Rumex acetosella* + sheep sorrel
- Rumex californicus* + ▼ California dock  
[*R. salicifolius* var. *denticulatus*] (S)

**POLYGONACEAE (cont'd.)**

- \**Rumex conglomeratus* + whorled dock  
*Rumex crassus* + leatherleaf dock  
 [*R. salicifolius* var. *c.*]
- \**Rumex crispus* + curly dock
- \**Rumex dentatus* + toothed dock
- Rumex fueginus* +** golden dock  
 [*R. maritimus*, misappl.] (nm, PV, SB)
- \**Rumex obtusifolius* + bitter dock
- Rumex occidentalis* +** western dock  
 (NC, S, SB)
- \**Rumex pulcher* + fiddle dock
- Rumex salicifolius* + willow-leaved dock  
 [*R. s.* var. *s.*]
- Rumex transitorius* +** willow dock  
 [*R. salicifolius* var. *t.*] (nm, PV)

**\* PORTULACACEAE – Purslane Family**

- \**Portulaca oleracea* purslane

**\* PRIMULACEAE – Primrose Family**

- Primula clevelandii* var. *gracilis* + Padre's shooting star  
 [TJM2 = *Dodecatheon c.* subsp. *sanctarum*]
- Primula hendersonii* + mosquito bills  
 [TJM2 = *Dodecatheon h.*]

**\* PROTEACEAE – Protea Family**

- \**Grevillea* spp. ▼ grevillea

**\* RANUNCULACEAE – Buttercup Family**

- Actaea rubra* baneberry
- Anemone grayi* + windflower  
 [*A. oregana*, misappl. to our pls]
- Aquilegia formosa* crimson columbine
- Clematis lasiantha* +** pipestems, chaparral clem.  
 (NM, S, SAR)
- Clematis ligusticifolia* +** western virgin's bower  
 (PV, SLV)
- \**Clematis vitalba* || old-man's beard
- \**Consolida ajacis* doubtful knights-spur  
 [*C. ambigua*, misappl.]
- Delphinium californicum* subsp. *c.* +** California larkspur  
 (NC, PV, S)

## RANUNCULACEAE (cont'd.)

<i>Delphinium decorum</i> subsp. <i>d.</i> + (blm, NC)	coast larkspur
<i>Delphinium hesperium</i> subsp. <i>h.</i> + (> 5 regions)	western larkspur
<i>Delphinium nudicaule</i>	red larkspur
<i>Delphinium parryi</i> subsp. <i>p.</i> + (ZS)	Parry's larkspur
<i>Delphinium patens</i> subsp. <i>p.</i> +	woodland larkspur
<i>Enemion occidentale</i> + [ <i>Isopyrum</i> o.] (bb)	western rue-anemone
<i>Myosurus minimus</i> + (s)	
<i>Ranunculus aquatilis</i> var. <i>a.</i> + ▼ [ <i>R. aquatilis</i> var. <i>hispidulus</i> ] (BLM, PV)	water buttercup
<i>Ranunculus aquatilis</i> var. <i>diffusus</i> + [ <i>R. aquatilis</i> var. <i>capillaceus</i> ]	water buttercup
* <i>Ranunculus arvensis</i>	corn buttercup
<i>Ranunculus californicus</i> var. <i>c.</i> +	California buttercup
<i>Ranunculus californicus</i> var. <i>cuneatus</i> + [ <i>R. c.</i> ] (nc)	coastal buttercup
<i>Ranunculus hebecarpus</i>	downy buttercup
<i>Ranunculus lobbii</i> + <i>x</i> (slv-x) ★4.2	Lobb's aquatic buttercup
* <i>Ranunculus muricatus</i>	prickle-fruited buttercup
<i>Ranunculus occidentalis</i> var. <i>o.</i> + ▼ [ <i>R. o.</i> ] (MC)	western buttercup
* <i>Ranunculus parviflorus</i>	few-flowered buttercup
<i>Ranunculus pusillus</i> + (MC/SC, PV)	low buttercup
* <i>Ranunculus repens</i>	crowfoot
* <i>Ranunculus sceleratus</i> var. <i>s.</i>	valley buttercup
<i>Ranunculus uncinatus</i> + (nm, S)	barbed buttercup
<i>Thalictrum fendleri</i> var. <i>polycarpum</i>	meadow rue

## \* RHAMNACEAE – Buckthorn Family

<i>Ceanothus cuneatus</i> var. <i>c.</i> +	buck brush
<i>Ceanothus cuneatus</i> var. <i>ramulosus</i> +	coast ceanothus
<i>Ceanothus dentatus</i> + (pv)	crop-leaf ceanothus
<i>Ceanothus foliosus</i> var. <i>f.</i> + (SAR)	wavy-leaf ceanothus
<i>Ceanothus incanus</i> +	coast whitethorn

## RHAMNACEAE (cont'd.)

<i>Ceanothus integerrimus</i> var. <i>i.</i> + [C. <i>i.</i> ] (BLM, slv)	deer brush
<i>Ceanothus oliganthus</i> var. <i>sorediatus</i> + (bb, crr?, sar, slv)	Jim brush
<i>Ceanothus papillosus</i> + [C. <i>p.</i> vars. <i>p./roweanus</i> ]	warty-leaf ceanothus
<i>Ceanothus rigidus</i> + <b>x</b> [C. <i>cuneatus</i> var. <i>r.</i> ] (pv-x) ★4.2	Monterey ceanothus
<i>Ceanothus thyrsiflorus</i> var. <i>t.</i> + [C. <i>t.</i> ]	blue blossom
<i>Ceanothus velutinus</i> ? + [C. <i>v.</i> var. <i>hookeri</i> , illeg.] (s)	tobacco brush
<i>Frangula californica</i> subsp. <i>c.</i> + [ <i>Rhamnus c.</i> subsp. <i>c.</i> ]	California coffeeberry
<i>Frangula californica</i> subsp. <i>tomentella</i> ? + [ <i>Rhamnus t.</i> subsp. <i>t.</i> ]	hoary coffeeberry

## \* ROSACEAE—Rose Family

* <i>Acaena novae-zelandiae</i>	biddy-biddy
<i>Acaena pinnatifida</i> var. <i>californica</i>	California acaena
<i>Adenostoma fasciculatum</i> var. <i>f.</i> [A. <i>f.</i> ]	chamise
<i>Amelanchier utahensis</i> + (NC, slv)	Utah service-berry
<i>Aphanes occidentalis</i>	western lady's-mantle
<i>Cercocarpus betuloides</i> var. <i>b.</i> + (bb, er, sar?)	birch-lvd mtn. mahogany
* <i>Cotoneaster franchetii</i>	Franchet's cotoneaster
* <i>Cotoneaster integrifolius</i>	entire-leaved cotoneaster
* <i>Cotoneaster lacteus</i>	late cotoneaster
* <i>Cotoneaster pannosus</i> [C. <i>pannosa</i> , orth. var.]	silverleaf cotoneaster
* <i>Crataegus monogyna</i>	one-seeded hawthorn
<i>Drymocalis glandulosa</i> var. <i>wrangelliana</i> + [ <i>Potentilla g.</i> ]	sticky cinquefoil
* <i>Duchesnea indica</i> var. <i>i.</i>	mock strawberry
<i>Fragaria chiloensis</i> +	beach strawberry
<i>Fragaria vesca</i> +	wood strawberry
<i>Heteromeles arbutifolia</i>	toyon
<i>Holodiscus discolor</i> var. <i>d.</i>	oceanspray
<i>Horkelia californica</i> var. <i>c.</i> + [H. <i>c.</i> subsp. <i>c.</i> ]	California horkelia
<i>Horkelia californica</i> var. <i>frondosa</i> + ▼ [H. <i>c.</i> subsp. <i>f.</i> ] (sv)	California horkelia

**ROSACEAE (cont'd.)**

- Horkelia cuneata* var. *c.* + wedge-leaved horkelia  
[*H. c.* subsp. *c.*]
- Horkelia cuneata* var. *sericea* ? + Kellogg's horkelia  
[*H. c.* subsp. *s.*] (NC, PV, zs) ★1B.1
- Horkelia marinensis* + Point Reyes horkelia  
(BDS, BLM, nc, S) ★1B.2
- Oemleria cerasiformis* + oso berry
- Physocarpus capitatus* + ninebark  
(SC, slv)
- Potentilla anserina* subsp. *pacifica* + Pacific silverweed
- Potentilla rivalis* + river cinquefoil  
(pv)
- \**Poterium sanguisorba* garden burnet  
[*Sanguisorba minor* subsp. *muricata*]
- \**Prunus cerasifera* + cherry plum
- Prunus emarginata* + bitter cherry  
(crr?, PV, S, sar?, SLV)
- Prunus ilicifolia* subsp. *i.* + holly-leaved cherry  
(crr, sar?, sl)
- Prunus virginiana* var. *demissa* + western choke cherry
- \**Pyracantha angustifolia* ▼ slender firethorn
- Rosa californica* + California rose
- \**Rosa canina* ▼ dog rose
- Rosa gymnocarpa* var. *g.* + wood rose  
[*R. g.*]
- Rosa pinetorum* ? + pine rose  
(bb/s, zs) ★1B.2
- Rosa spithamea* + coast ground rose
- \**Rubus armeniacus* + ☉ Himalayan blackberry  
[*R. discolor*, misappl.]
- Rubus leucodermis* + whitebark raspberry
- Rubus parviflorus* thimbleberry
- Rubus spectabilis* + salmonberry  
(BLM, S)
- \**Rubus ulmifolius* var. *anoplothyrus* + ☉ ▼ thornless blackberry  
[*R. u.* var. *inermis*]
- Rubus ursinus* + California blackberry

**\* RUBIACEAE – Madder Family**

- Galium aparine* + goose grass
- Galium californicum* subsp. *c.* + California bedstraw
- \**Galium divaricatum* + Lamarck's bedstraw
- \**Galium murale* + ▼ tiny bedstraw

**RUBIACEAE (cont'd.)**

- \**Galium parisiense* + wall bedstraw  
*Galium porrigens* var. *p.* + climbing bedstraw  
*Galium tricornerutum* + rough corn bedstraw  
*Galium trifidum* subsp. *columbianum* + trifold bedstraw  
 [G. t. var. *pacificum*] (NM, pv, S, sv-x)  
*Galium triflorum* + sweet-scented bedstraw  
 \**Sherardia arvensis* + field madder

**\* RUTACEAE – Rue Family**

- \**Ruta chalepensis* fringed rue  
 \**Ruta graveolens* || ▼ common rue

**\* SALICACEAE – Willow Family**

- Populus fremontii* subsp. *f.* + Fremont cottonwood  
 (pv, sl)  
*Populus trichocarpa* + black cottonwood  
 [P. *balsamifera* subsp. *t.*]  
*Salix exigua* var. *hindsiana* + Hinds's willow  
 [S. e.] (PV, SB, SC, SLV)  
*Salix laevigata* + red willow  
*Salix lasiandra* var. *l.* + Pacific or shining willow  
 [S. *lucida* subsp. *lasiandra*]  
*Salix lasiolepis* + arroyo willow  
*Salix scouleriana* + Scouler's willow  
*Salix sitchensis* + Sitka willow

**\* SAPINDACEAE – Soapberry Family**

- Acer macrophyllum* + big-leaf maple  
*Acer negundo* + box elder  
 [A. n. var. *californicum*]  
*Aesculus californica* California buckeye

**\* SAXIFRAGACEAE – Saxifrage Family**

- Boykinia occidentalis* + brook foam  
*Heuchera micrantha* + small-flowered alum-root  
*Heuchera pilosissima* ? + shaggy alum-root  
 (slv)  
*Lithophragma affine* + woodland star  
*Lithophragma heterophyllum* + hill star  
*Micranthes californica* California saxifrage  
 [Saxifraga c.]

**SAXIFRAGACEAE (cont'd.)**

- Tellima grandiflora* + fringe cups  
*Tiarella trifoliata* var. *unifoliata* + sugar-scoop  
*Tolmiea diplomenziesii* + pig-a-back plant  
 [*T. menziesii*, occurs from OR north] (slv)

**\* SCROPHULARIACEAE – Figwort Family**

- \**Myoporum laetum* ▼ ngaio tree  
*Scrophularia californica* + California figwort  
 [*S. c.* subsp. *c./floribunda*]  
 \**Verbascum blattaria* + moth mullein  
 \**Verbascum speciosum* + showy mullein  
 \**Verbascum thapsus* + woolly mullein  
 \**Verbascum virgatum* + wand mullein

**\* SIMAROUBACEAE – Quassia or Simarouba Family**

- \**Ailanthus altissima* + tree-of-heaven

**\* SOLANACEAE – Nightshade Family**

- \**Cestrum elegans* w crimson cestrum  
 [*C. fasciculatum*, misappl.]  
 \**Datura stramonium* + Jimson weed  
*Datura wrightii* + ▼ sacred thorn-apple  
 (pv)  
 \**Lycopersicon esculentum* tomato  
 \**Nicotiana acuminata* var. *multiflora* many-flowered tobacco  
 \**Nicotiana glauca* tree tobacco  
*Petunia parviflora* + wild petunia  
 (mc, PV, sl)  
 \**Physalis philadelphica* tomatillo  
 \**Physalis pubescens* var. *integrifolia* hairy ground-cherry  
 \**Salpichroa organifolia* huevito de gallo  
*Solanum americanum* + small-flowered nightshade  
 \**Solanum aviculare* New Zealand nightshade  
*Solanum douglasii* + Douglas's nightshade  
 \**Solanum elaeagnifolium* ▼ white horse-nettle  
 \**Solanum furcatum* forked nightshade  
 \**Solanum marginatum* white-margined nightshade  
 \**Solanum nigrum* + black nightshade  
 \**Solanum physalifolium* var. *nitidibaccatum* hairy nightshade  
 [*S. sarrachoides*, misappl.]  
 \**Solanum rostratum* buffalo berry

**SOLANACEAE (cont'd.)**

- Solanum umbelliferum* + blue witch  
*Solanum xanti* ? + x chaparral nightshade  
 ("sc")

**\* TAMARICACEAE – Tamarisk Family**

- \**Tamarix ramosissima* saltcedar

**\* TROPAEOLACEAE – Nasturtium Family**

- \**Tropaeolum majus* garden nasturtium

**\* URTICACEAE – Nettle Family**

- Hesperocnide tenella* + western nettle  
*Parietaria hespera* var. *h.* + western pellitory  
 (BLM, NC)  
 \**Parietaria judaica* asthma-weed pellitory  
 \**Soleirolia soleirolia* baby's tears  
*Urtica dioica* subsp. *gracilis* + American stinging nettle  
*Urtica dioica* subsp. *holosericea* + hoary nettle  
 \**Urtica urens* dwarf nettle

**\* VALERIANACEAE – Valerian Family**

- \**Centranthus ruber* red valerian  
*Plectritis ciliosa* + ▼ long-spurred plectritis  
 [*P. c.* subsp. *insignis*] (S)  
*Plectritis congesta* subsp. *brachystemon* +  
 [*P. brachystemon*] pale plectritis  
*Plectritis congesta* subsp. *c.* +  
 [*P. c.*] sea blush

**\* VERBENACEAE – Vervain Family**

- Phyla nodiflora* + garden lippia  
 \**Verbena bonariensis* purple-top vervain  
*Verbena lasiostachys* var. *l.* California vervain  
*Verbena lasiostachys* var. *scabrida* ? + x robust vervain  
 (sl-x)  
 \**Verbena litoralis* seashore vervain

**\* VIOLACEAE – Violet Family**

- Viola adunca* subsp. *a.* + western dog violet  
 [*V. a.*] (blm, slv)

**VIOLACEAE (cont'd.)**

- Viola glabella* + stream violet  
*Viola ocellata* + two-eyed violet  
 \**Viola odorata* English violet  
*Viola pedunculata* + Johnny-jump-up  
*Viola purpurea* subsp. *quercetorum* + mountain violet  
 (blm, sar, zs)  
*Viola sempervirens* + redwood violet

**\* VISCACEAE – Mistletoe Family**

- Arceuthobium campylopodum* + western dwarf mistletoe  
 (BLM, sar)  
*Phoradendron leucarpum* subsp. *tomentosum* + American mistletoe  
 [TJM2 = *P. serotinum* subsp. *t.*; TJM1 = *P. villosum*]

**\* VITACEAE – Grape Family**

- \**Parthenocissus inserta* + woodbine  
 [*P. vitacea*]  
*Vitis californica* ? + California grape  
 \**Vitis vinifera* wine grape

**\* ZINGIBERACEAE – Ginger Family**

- \**Hedychium flavescens* w yellow ginger

**\* ZYGOPHYLLACEAE – Caltrop Family**

- \**Tribulus terrestris* puncture vine

**MONOCOTS****\* AGAVACEAE – Century Plant Family**

- Chlorogalum pomeridianum* var. *divaricatum* + divaricate soap plant  
*Chlorogalum pomeridianum* var. *p.* + soap plant

**\* ALISMATACEAE – Water-plantain Family**

- Alisma triviale* water-plantain  
 [*A. plantago-aquatica*, misappl.]  
*Sagittaria cuneata* + ▼ arrowhead  
 (pv)  
*Sagittaria latifolia* + wapato  
 (pv, sc)

\* **ALLIACEAE – Onion or Garlic Family**\* *Allium neapolitanum*

Neapolitan onion

\* *Allium paniculatum* var. *p.*

panicked onion

\* *Allium triquetrum*

three-angled onion

*Allium unifolium*

one-leaved onion

\* *Allium vineale*

wild garlic

\* **AMARYLLIDACEAE – Amaryllis Family**\* *Amaryllis belladonna* ▼

naked ladies

\* *Leucojum aestivum* W

snowflake

\* *Narcissus pseudonarcissus*

daffodil

\* *Narcissus tazetta* ▼

paper white

\* **ARACEAE – Arum Family**\* *Arum italicum*

cuckoo pint

*Landoltia punctata* + ▼

dotted duckmeat

[*Spirodela p.*] (NM, pv)*Lemna gibba* +

gibbous duckweed

(PV, s)

*Lemna minor*

smaller duckweed

*Lemna minuta*

least duckweed

[*L. minuscula*]*Lemna turionifera* +

perennial duckweed

(sc)

*Lemna valdiviana* +

pale duckweed

(pv, sv-x)

*Lysichiton americanus* +

yellow skunk-cabbage

[*L. americanum*, orth. var.] (BLM, SLV)*Spirodela polyrhiza* +

duckmeat

[*S. polyrrhiza*, orth. var.] (pv, SLV)*Wolffiella lingulata* ? +

mud-midget

(NM, pv)

\* *Zantedeschia aethiopica*

calla lily

\* **ASPARAGACEAE – Asparagus Family**\* *Asparagus asparagoides* ▼

bridal creeper

\* **ASPHODELACEAE – Asphodel Family**\* *Kniphofia uvaria*

red-hot poker

\* **COMMELINACEAE – Spiderwort Family**\* *Tradescantia fluminensis*

spiderwort

## \* CYPERACEAE – Sedge Family

<i>Bolboschoenus fluviatilis</i> + [ <i>Scirpus f.</i> ] (pv)	river bulrush
<i>B. maritimus</i> subsp. <i>paludosus</i> + [ <i>Scirpus m.</i> ] (sb, sc, pv)	saltmarsh bulrush
<i>Bolboschoenus robustus</i> + [ <i>Scirpus r.</i> ]	seacoast bulrush
<i>Carex amplifolia</i> +	big-leaf sedge
<i>Carex aquatilis</i> var. <i>dives</i> + (slv)	Sitka sedge
<i>Carex barbarae</i> +	Santa Barbara sedge
<i>Carex bolanderi</i> +	Bolander's sedge
<i>Carex brevicaulis</i> +	short-stemmed sedge
<i>Carex comosa</i> + (NM) ★2B.1	bristly sedge
<i>Carex cusickii</i> + (NM/PV, slv, sv-x)	Cusick's sedge
<i>Carex densa</i> +	dense sedge
* <i>Carex divulsa</i> subsp. <i>d.</i> +	gray or Berkeley sedge
<i>Carex echinata</i> subsp. <i>phyllomanica</i> + x (sv-x)	coastal star sedge
<i>Carex exsiccata</i> + [ <i>C. vesicaria</i> var. <i>major</i> ] (bb, nm, s, SLV, sv-x)	western inflated sedge
<i>Carex globosa</i> +	round-fruited sedge
<i>Carex gracilior</i> + (pv, s, sv-x)	slender sedge
<i>Carex gynodynama</i> +	Wonder Woman sedge
<i>Carex harfordii</i> +	Harford's sedge
<i>Carex hassei</i> + x (sv-x)	Hasse's sedge
<i>Carex hendersonii</i> + (PV, slv)	Henderson's sedge
<i>Carex leptopoda</i> + [ <i>C. deweyana</i> subsp. <i>l.</i> ] (bb, SLV)	slender-footed sedge
<i>Carex luzulina</i> + [ <i>C. l.</i> var. <i>l.</i> ] (slv)	woodrush sedge
<i>Carex nudata</i> +	torrent sedge
<i>Carex obnupta</i> +	slough sedge
<i>Carex pachystachya</i> ? + (slv)	starry broomsedge
<i>Carex pellita</i> + [ <i>C. lanuginosa</i> , misappl.] (slv)	woolly sedge
<i>Carex praegracilis</i> + (SB, SLV, sv-x)	black creeper sedge

## CYPERACEAE (cont'd.)

<i>Carex saliniformis</i> + (BLM, sv-x) ★1B.2	deceiving sedge
<i>Carex schottii</i> + (pv)	Schott's sedge
<i>Carex serratodens</i> + (BDS, NM)	saw-toothed sedge
<i>Carex simulata</i> + (SLV, sv-x)	short-beaked sedge
<i>Carex spissa</i> + ▼ (SLV)	San Diego sedge
<i>Carex subbracteata</i> +	small-bracted sedge
<i>Carex subfusca</i> +	rusty sedge
<i>Carex tumulicola</i> +	foothill sedge
<i>Carex utriculata</i> + ✕ (sv-x)	southern beaked sedge
* <i>Cyperus difformis</i> +	variable flat sedge
<i>Cyperus eragrostis</i> +	umbrella sedge
<i>Cyperus erythrorhizos</i> +	red-rooted cyperus
<i>Cyperus esculentus</i> var. <i>leptostachyus</i> +	chufa
* <i>Cyperus involucratus</i> +	umbrella plant
<i>Cyperus laevigatus</i> + ✕ (sl-x)	smooth cyperus
<i>Cyperus niger</i> + (PV, SLV, sv-x)	brown cyperus
<i>Cyperus squarrosus</i> + (PV, "sc")	squarrose nutsedge
<i>Cyperus strigosus</i> + (NC, slv)	false nutsedge
<i>Eleocharis acicularis</i> var. <i>a.</i> +	needle spikerush
<i>Eleocharis engelmannii</i> var. <i>e.</i> + [ <i>E. obtusa</i> var. <i>e.</i> ] (pv)	Engelmann's spikerush
<i>Eleocharis macrostachya</i> +	common spikerush
<i>Eleocharis montevidensis</i> + (blm, PV)	Dombey's spikerush
<i>Eleocharis ovata</i> + (pv)	blunt spikerush
<i>Eleocharis parishii</i> + (pv)	Parish's spikerush
<i>Eleocharis radicans</i> + (pv)	rooted spikerush
<i>Eleocharis rostellata</i> + (pv, sv-x)	walking sedge
<i>Isolepis carinata</i> + [ <i>Scirpus koilolepis</i> ] (BLM, MC/SC, S, slv)	dwarf club rush

**CYPERACEAE (cont'd.)**

- Isolepis cernua* ~ + low club rush  
[*Scirpus cernuus*] (BLM, S)
- \**Kyllinga brevifolia* kyllinga
- Rhynchospora californica* ? + x ▼ California beaked rush  
(blm-x) ★1B.1/Sen
- Schoenoplectus acutus* var. *occidentalis* + common tule  
[*Scirpus a.* var. *o.*]
- Schoenoplectus americanus* ~ + Olney's three-square  
[*Scirpus a.*] (SL)
- Schoenoplectus californicus* + southern bulrush  
[*Scirpus c.*]
- Schoenoplectus pungens* var. *longispicatus* + common three-square  
[*Scirpus p.*, in part]
- Scirpus microcarpus* + panicked bulrush

**\* HYDROCHARITACEAE – Waterweed Family**

- \**Egeria densa* Brazilian waterweed
- Elodea canadensis* common waterweed
- \**Limnobium spongia* ▼ American frogbit
- Najas guadalupensis* subsp. *g.* + common water-nymph  
[*N. g.*] (PV)
- Najas marina* + holly-leaved water-nymph  
(pv)

**\* IRIDACEAE – Iris Family**

- \**Chasmanthe floribunda* ▼ South African cornflag
- \**Crocasmia* × *crocosmiiflora* montbretia
- Iris douglasiana* + Douglas's iris
- Iris fernaldii* + Fernald's iris
- \**Iris foetidissima* coral iris
- \**Iris germanica* ▼ German iris
- Iris longipetala* + coast iris  
(sv) ★4.2
- \**Iris pseudacorus* ▼ yellow iris
- \**Iris spuria* || ▼ Dutch iris
- \**Moraea collina* + || moraea
- \**Romulea rosea* var. *australis* rosy sand crocus
- Sisyrinchium bellum* + blue-eyed grass
- Sisyrinchium californicum* + golden-eyed grass  
(BLM, sv-x)
- \**Watsonia meriana* ▼ watsonia  
[*W. bulbifera*]

\* **JUNCACEAE – Juncus Family**

<i>Juncus acuminatus</i> + (s)	sharp-fruited rush
<i>Juncus balticus</i> subsp. <i>ater</i> + [ <i>J. b.</i> ]	Baltic rush
<i>Juncus bufonius</i> var. <i>b.</i> +	toad rush
* <i>Juncus bufonius</i> var. <i>congestus</i> +	clustered toad rush
* <i>Juncus capitatus</i> +	dwarf rush
<i>Juncus effusus</i> subsp. <i>pacificus</i> + [ <i>J. e.</i> var. <i>p.</i> ]	Pacific rush
<i>Juncus falcatus</i> subsp. <i>f.</i> + [ <i>J. f.</i> var. <i>f.</i> ]	sickle-leaved rush
<i>Juncus hesperius</i> + [ <i>J. effusus</i> var. <i>brunneus</i> ]	bog rush
<i>Juncus kelloggii</i> + (BLM, sc, slv)	Kellogg's rush
<i>Juncus lescurii</i> + [ <i>J. lesueurii</i> , orth. var.]	San Francisco rush
<i>Juncus mexicanus</i> +	Mexican rush
<i>Juncus occidentalis</i> +	western rush
<i>Juncus patens</i> +	common rush
<i>Juncus phaeocephalus</i> var. <i>paniculatus</i> +	brown-headed rush
<i>Juncus phaeocephalus</i> var. <i>phaeocephalus</i> +	brown-headed rush
<i>Juncus xiphioides</i> +	iris-leaved rush
<i>Luzula comosa</i> var. <i>c.</i> + [ <i>L. c.</i> ]	common wood rush
<i>Luzula subsessilis</i> + (NC/S)	short-stalked wood rush

\* **JUNCAGINACEAE – Arrow-grass Family**

<i>Triglochin scilloides</i> [ <i>Lilaea</i> s.]	flowering quillwort
<i>Triglochin striata</i> + (nm, "sc")	three-ribbed arrow-grass

\* **LILIACEAE – Lily Family**

<i>Calochortus albus</i> +	fairy lantern
<i>Calochortus luteus</i> +	yellow mariposa lily
<i>Calochortus tolmiei</i>	pussy ears
<i>Calochortus uniflorus</i> + (BLM, MC, SC) ★4.2	large-flowered mariposa lily
<i>Calochortus venustus</i> + x (slv/zs-x)	butterfly mariposa lily
<i>Clintonia andrewsiana</i>	red clintonia

**LILIACEAE (cont'd.)**

<i>Fritillaria affinis</i> + [ <i>F. a.</i> var. <i>a.</i> ]	checker lily
<i>Fritillaria agrestis</i> + x (mc-x, "sc") ★4.2	stinkbells
<i>Lilium pardalinum</i> subsp. <i>p.</i>	leopard lily
<i>Lilium rubescens</i> ? + x ("scm") ★4.2	redwood lily
* <i>Ornithogalum umbellatum</i> ■	ornithogalum
<i>Prosartes hookeri</i> [ <i>Disporum h.</i> ]	Hooker's fairy bells
<i>Scoliopus bigelovii</i>	fetid adder's-tongue

**\* MELANTHIACEAE – False-hellebore Family**

<i>Toxicoscordion fontanum</i> + [ <i>Zigadenus micranthus</i> var. <i>fontanus</i> ] (BLM) ★4.2	marsh zigadenus
<i>Toxicoscordion fremontii</i> ~ + [ <i>Zigadenus f.</i> ] (BLM)	Fremont's star lily
<i>Trillium albidum</i> ? + ▼ (S)	white trillium
<i>Trillium chloropetalum</i> +	giant trillium
<i>Trillium ovatum</i> subsp. <i>o.</i> +	wake robin
<i>Xerophyllum tenax</i> + (bb/er, BDS, S, SAR, slv)	bear-grass

**\* ORCHIDACEAE – Orchid Family**

<i>Calypso bulbosa</i> var. <i>occidentalis</i> + [ <i>C. b.</i> ] (bb, BLM, S, sv)	calypso orchid
<i>Cephalanthera austiniae</i> + (bb)	phantom orchid
<i>Corallorhiza maculata</i> var. <i>m.</i> +	spotted coralroot
<i>Corallorhiza maculata</i> var. <i>occidentalis</i> +	(un)spotted coralroot
<i>Corallorhiza striata</i> +	striped coralroot
<i>Cypripedium fasciculatum</i> + x (sar?, slv-x) ★4.2/Sen	clustered lady's-slipper
<i>Cypripedium montanum</i> + x (sc-x) ★4.2/Sen	mountain lady's-slipper
<i>Epipactis gigantea</i> + ▼ (BLM, SC/SLV)	stream orchid
* <i>Epipactis helleborine</i>	broad-leaved helleborine
<i>Goodyera oblongifolia</i> + (BB, BLM, NM, slv)	rattlesnake plantain
<i>Piperia candida</i> + (BB, slv) ★1B.2/Sen	white-flowered rein orchid

## ORCHIDACEAE (cont'd.)

<i>Piperia elegans</i> subsp. <i>e.</i> +	coast piperia
<i>Piperia elongata</i> +	wood rein orchid
<i>Piperia michaelii</i> + (bb, BLM, NC, s) ★4.2	Michael's rein orchid
<i>Piperia transversa</i> +	transverse rein orchid
<i>Piperia unalascensis</i> + (nc, slv)	Alaska rein orchid
<i>Platanthera dilatata</i> var. <i>leucostachys</i> + x [ <i>P. leucostachys</i> ] (pv-x)	white-flowered bog orchid
<i>Spiranthes porrifolia</i> + (pv, SLV)	western lady's-tresses
<i>Spiranthes romanoffiana</i> + (> 5 regions)	hooded lady's-tresses

## \* POACEAE – Grass Family

* <i>Aegilops triuncialis</i> ▼	barbed goat grass
* <i>Agrostis avenacea</i>	Pacific bent grass
<i>Agrostis blasdalei</i> + (NC, S) ★1B.2/Sen	Blasdale's bent grass
* <i>Agrostis capillaris</i>	colonial bent grass
<i>Agrostis densiflora</i> + (NC)	California bent grass
<i>Agrostis exarata</i> ~ + (BLM, nm, PV, S)	spike bent grass
<i>Agrostis hallii</i> +	Hall's bent grass
<i>Agrostis microphylla</i> + (NC, S, slv)	small-leaf bent grass
<i>Agrostis pallens</i> +	leafy bent grass
<i>Agrostis scabra</i> + (BLM, s, slv)	rough bent grass
* <i>Agrostis stolonifera</i>	creeping bent grass
* <i>Aira caryophyllea</i>	silver hair grass
* <i>Aira praecox</i> ▼	early hair grass
* <i>Alopecurus pratensis</i>	meadow foxtail
<i>Alopecurus saccatus</i> + (NM, pv-x, sv-x)	Pacific meadow foxtail
* <i>Ammophila arenaria</i> ⊕	European beachgrass
<i>Anthoxanthum occidentale</i> [ <i>Hierochloa occidentalis</i> ]	vanilla grass
* <i>Anthoxanthum odoratum</i>	sweet vernal grass
* <i>Apera spica-venti</i> ▼	loose silkybent
<i>Aristida ternipes</i> var. <i>gentilis</i> + [ <i>A. t.</i> var. <i>hamulosa</i> , illeg.]	hook three-awn

## POACEAE (cont'd.)

- \**Arrhenatherum elatius* tall oat grass  
 \**Arundo donax* ▼ giant reed  
 \**Avena barbata* + slender wild oat  
 \**Avena fatua* + wild oat  
 \**Avena sativa* ▼ cultivated oat  
*Beckmannia syzigachne* + American slough grass  
 (zs)  
 \**Brachypodium distachyon* ☉ ▼ purple false brome  
 \**Briza maxima* ☉ rattlesnake grass  
 \**Briza minor* small quaking grass  
 \**Bromus arenarius* + Australian chess  
 \**Bromus berteroi* + Chilean chess  
 [B. *trinitii* var. *t.*]  
*Bromus carinatus* var. *c.* + California brome  
*Bromus carinatus* var. *marginatus* + mountain brome  
 \**Bromus catharticus* var. *c.* + rescue grass  
 [B. *c.*]  
 \**Bromus catharticus* var. *elatius* + Chilean brome  
 [B. *stamineus*]  
 \**Bromus commutatus* + hairy chess  
 \**Bromus diandrus* ☉ ripgut brome  
*Bromus grandis* + tall brome  
 (er, SLV)  
 \**Bromus hordeaceus* + ☉ soft chess  
 \**Bromus inermis* + ▼ Hungarian brome  
 [B. *i.* subsp. *i.*]  
 \**Bromus japonicus* + Japanese brome  
*Bromus laevipes* + Chinook brome  
 \**Bromus madritensis* subsp. *m.* + ▼ foxtail chess  
 \**Bromus madritensis* subsp. *rubens* + red brome  
*Bromus maritimus* + ▼ maritime brome  
 [B. *carinatus* var. *m.*] (NC)  
*Bromus pseudolaevipes* + woodland brome  
 \**Bromus racemosus* + smooth brome  
 \**Bromus sterilis* + poverty brome  
 \**Bromus tectorum* + cheat grass  
*Bromus vulgaris* + nodding brome  
*Calamagrostis koelerioides* + tufted pine grass  
 (bb, BLM, slv)  
*Calamagrostis nutkaensis* + Pacific reed grass  
 (NC, slv-x, sv-x)  
*Calamagrostis rubescens* + pine reed grass  
 \**Cenchrus longispinus* long-spined sandbur

## POACEAE (cont'd.)

- \**Cortaderia jubata* + ⊗  
 jubata grass
- \**Cortaderia selloana* +  
 pampas grass
- \**Crypsis schoenoides*  
 swamp prickle grass
- \**Cynodon dactylon*  
 Bermuda grass
- \**Cynosurus echinatus*  
 bristly dogtail grass
- \**Dactylis glomerata*  
 orchard grass
- Danthonia californica* +  
 [D. c. vars. *americana/c.*]  
 California oat grass
- Deschampsia cespitosa* subsp. *c.* +  
 (BLM, PV, slv)  
 tufted hair grass
- Deschampsia cespitosa* subsp. *holciformis* +  
 (NC, S)  
 California hair grass
- Deschampsia danthonioides* +  
 (BLM, pv, s, sv)  
 annual hair grass
- Deschampsia elongata*  
 slender hair grass
- \**Desmazeria rigida*  
 stiff grass
- \**Digitaria ischaemum*  
 smooth crab grass
- \**Digitaria sanguinalis*  
 hairy crab grass
- Distichlis spicata* ~ +  
 (SL)  
 salt grass
- \**Echinochloa crus-galli*  
 million-dollar grass
- \**Ehrharta calycina* +  
 perennial veldt grass
- \**Ehrharta erecta* + ⊗  
 panic veldt grass
- Elymus californicus* +  
 (BLM, MC, NM, PV, S) ★4.3  
 California bottle-brush grass
- \**Elymus caput-medusae*  
 [Taeniatherum *c.-m.*]  
 medusa head
- Elymus condensatus*  
 [Leymus *c.*] (MC, NM, PV)  
 giant wild rye
- Elymus glaucus* subsp. *g.* +  
 [*E. g.* subsp. *jepsonii*]  
 blue wild rye
- Elymus glaucus* subsp. *virescens* +  
 wild rye
- Elymus mollis* subsp. *m.* +  
 [Leymus *m.* subsp. *m.*]  
 American dune grass
- Elymus multisetus* +  
 (bb, er, SV)  
 big squirreltail
- \**Elymus repens*  
 [Elytrigia *r.*]  
 quack grass
- Elymus triticoides* +  
 [Leymus *t.*]  
 beardless wild rye
- Elymus* × *vancouverensis* +  
 [Leymus × *v.*] (MC, NC, sc)  
 Vancouver's wild rye
- \**Eragrostis cilianensis*  
 stink grass

## POACEAE (cont'd.)

- \**Eragrostis curvula* weeping love grass  
*Eragrostis hypnoides* + creeping love grass  
 (pv)
- \**Eragrostis lehmanniana* Lehmann's love grass  
*Eragrostis mexicana* subsp. *virescens* Mexican love grass  
*Eragrostis pectinacea* var. *p.* + Carolina love grass
- \**Festuca arundinacea* + tall fescue  
 \**Festuca bromoides* + six-weeks fescue  
 [*Vulpia b.*]
- Festuca californica* California fescue  
*Festuca elmeri* + Elmer's fescue  
 (> 5 regions)
- Festuca idahoensis* + Idaho fescue  
 (blm, er, NC, PV, SV)
- Festuca microstachys* + hair fescue  
 [*Vulpia m.* vars. *ciliata/confusa/m./pauciflora*]
- \**Festuca myuros* ⊗ rattail fescue  
 [*Vulpia m.* vars. *hirsuta/m.*]
- Festuca occidentalis* + western fescue  
*Festuca octoflora* + eight-flowered fescue  
 [*Vulpia o.* vars. *hirtella/o.*]
- \**Festuca perennis* + ⊗ rye grass  
 [*Lolium multiflorum*; *L. perenne*]
- \**Festuca pratensis* meadow fescue  
*Festuca rubra* + red fescue  
*Festuca subulata* + bearded fescue  
 (s, SLV)
- Festuca subuliflora* + crinkle-awn fescue  
 (BLM, NC, NM, S, SLV)
- \**Festuca temulentata* + darnel  
 [*Lolium temulentum*]
- \**Gastridium phleoides* + nit grass  
 [*G. ventricosum*, misappl.]
- \**Glyceria declinata* + low manna grass  
 \**Hainardia cylindrica* one-glumed hard grass  
 \**Holcus lanatus* ⊗ velvet grass
- Hordeum brachyantherum* subsp. *b.* + northern barley  
*Hordeum b.* subsp. *californicum* + California barley  
 (sv)
- Hordeum depressum* + low barley  
 (SL)
- Hordeum jubatum* subsp. *j.* + foxtail barley  
 [*H. j.*] (crr)

## POACEAE (cont'd.)

* <i>Hordeum marinum</i> subsp. <i>gussoneanum</i> +	Mediterranean barley
* <i>Hordeum murinum</i> subsp. <i>glaucum</i> +	smooth barley
* <i>Hordeum murinum</i> subsp. <i>leporinum</i> +	hare barley
* <i>Hordeum vulgare</i> + w	barley
<i>Koeleria macrantha</i> +	June grass
* <i>Lagurus ovatus</i> ▼	hare's-tail grass
* <i>Lamarckia aurea</i>	goldentop
<i>Leersia oryzoides</i> +	rice cutgrass
<i>Leptochloa fusca</i> subsp. <i>fascicularis</i> + [ <i>L. fascicularis</i> ]	bearded sprangletop
<i>Melica californica</i> +	California melic
<b><i>Melica geyeri</i></b> + (bb, crr)	Geyer's onion grass
<i>Melica harfordii</i> +	Harford's melic
<i>Melica imperfecta</i> +	small-flowered melic
<i>Melica subulata</i> +	Alaskan onion grass
<i>Melica torreyana</i> +	Torrey's melic
<b><i>Panicum acuminatum</i> var. <i>fasciculatum</i></b> + [ <i>P. a.</i> var. <i>a.</i> , not in CA] (BDS, BLM, nm, sc, SLV)	Pacific panic grass
<i>Panicum capillare</i> +	witch grass
* <i>Panicum dichotomiflorum</i> subsp. <i>d.</i> [ <i>P. d.</i> ]	fall panic grass
* <i>Panicum miliaceum</i> subsp. <i>m.</i> [ <i>P. m.</i> ]	broom corn millet
* <i>Parapholis incurva</i>	sickle grass
* <i>Paspalum dilatatum</i> +	dallis grass
<i>Paspalum distichum</i> +	knot grass
* <i>Pennisetum clandestinum</i> +	Kikuyu grass
* <i>Pennisetum villosum</i>	feathertop
<b><i>Phalaris angusta</i></b> + (pv, S, sc-x)	timothy canary grass
* <i>Phalaris aquatica</i> ☉	harding grass
<b><i>Phalaris arundinacea</i></b> + (PV)	reed canary grass
<i>Phalaris californica</i> +	California canary grass
* <i>Phalaris canariensis</i>	canary grass
* <i>Phalaris caroliniana</i>	Carolina canary grass
<b><i>Phalaris lemmonii</i></b> + x ("sc", sv-x)	Lemmon's canary grass
* <i>Phalaris minor</i>	little-seeded canary grass
* <i>Phalaris paradoxa</i> +	hood canary grass
* <i>Phleum pratense</i>	cultivated timothy
* <i>Poa annua</i>	annual bluegrass

## POACEAE (cont'd.)

- \**Poa bulbosa* subsp. *vivipara* ▼  
[*P. b.*] bulbous bluegrass
- \**Poa compressa* Canadian bluegrass
- Poa douglasii* +  
(NC, SB) sand-dune bluegrass
- Poa howellii* + Howell's bluegrass
- Poa kelloggii* +  
(BLM, NM, SLV) Kellogg's bluegrass
- \**Poa pratensis* subsp. *p.* Kentucky bluegrass
- Poa secunda* subsp. *s.* + one-sided bluegrass
- \**Poa trivialis* rough bluegrass
- Poa unilateralis* subsp. *u.* +  
[*P. u.*] (NC, sc-x, sv) San Francisco bluegrass
- \**Polypogon australis* + Chilean beard grass
- \**Polypogon interruptus* + ditch beard grass
- \**Polypogon maritimus* + Mediterranean beard grass
- \**Polypogon monspeliensis* + rabbitfoot grass
- \**Polypogon viridis* +  
[*Agrostis v.*] water beard grass
- Puccinellia nuttalliana* +  
(SL) Nuttall's alkali grass
- Puccinellia simplex* +  
(SL) annual alkali grass
- \**Rytidosperma penicillatum*  
[*Danthonia pilosa*, misappl.] hairy oat grass
- Scribneria bolanderi* +  
(slv) Bolander's scribneria
- \**Secale cereale* rye
- Setaria parviflora* +  
[*S. gracilis*] knotroot bristle grass
- \**Setaria pumila* subsp. *p.*  
[*S. p.*] yellow bristle grass
- \**Sorghum bicolor* sorghum
- \**Sorghum halepense* Johnson grass
- \**Stenotaphrum secundatum* Saint Augustine grass
- \**Stipa brachychaeta* ▼  
[*Achnatherum brachychaetum*] puna needlegrass
- Stipa cernua* +  
[*Nassella c.*] (mc, PV) nodding needle grass
- Stipa lepida* +  
[*Nassella l.*] foothill needlegrass
- \**Stipa miliacea* var. *m.*  
[*Piptatherum miliaceum* subsp. *m.*] smilo grass

**POACEAE (cont'd.)**

<i>Stipa pulchra</i> + [ <i>Nassella p.</i> ]	purple needlegrass
* <i>Stipa tenuissima</i> + ■	feather grass
<i>Torreyochloa pallida</i> var. <i>pauciflora</i> + (NM, sv-x)	weak manna grass
<i>Trisetum canescens</i> ? +	tall trisetum
<i>Trisetum cernuum</i> ? +	nodding trisetum
* <i>Triticum aestivum</i>	wheat

**\* PONTEDERIACEAE – Pickerel-weed Family**

* <i>Eichhornia crassipes</i>	water hyacinth
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**\* POTAMOGETONACEAE – Pondweed Family**

<i>Potamogeton illinoensis</i> + (pv)	shining pondweed
<i>Potamogeton natans</i> + (nm, pv)	floating-leaved pondweed
<i>Potamogeton nodosus</i> + (PV, "sc")	long-leaved pondweed
<i>Stuckenia pectinata</i> [ <i>Potamogeton pectinatus</i> ]	fennel-leaf pondweed

**\* RUPPIACEAE – Ditch-grass Family**

<i>Ruppia cirrhosa</i> +	spiral ditch-grass
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**\* RUSCACEAE – Butcher's-broom Family**

<i>Maianthemum racemosum</i> + [ <i>Smilacina racemosa</i> ]	false Solomon's seal
<i>Maianthemum stellatum</i> + [ <i>Smilacina stellata</i> ]	slim Solomon's seal

**\* THEMIDACEAE – Brodiaea Family**

<i>Brodiaea elegans</i> subsp. <i>e.</i> +	harvest brodiaea
<i>Brodiaea terrestris</i> subsp. <i>t.</i> +	dwarf brodiaea
<i>Dichelostemma capitatum</i> subsp. <i>c.</i> +	blue dicks
<i>Dichelostemma congestum</i> + (mc, slv)	fork-toothed ookow
<i>Dichelostemma multiflorum</i> + x (mc-x)	wild hyacinth

## THEMIDACEAE (cont'd.)

- Muilla maritima* +  
(BLM, ZS) common muilla
- Triteleia hyacinthina* + white brodiaea
- Triteleia ixioides* subsp. *i.* + golden brodiaea
- Triteleia laxa* + Ithuriel's spear

## \* TYPHACEAE – Cattail Family

- Sparganium eurycarpum* var. *e.* + broad-fruited bur-reed  
[*S. e.* subsp. *e.*]
- Sparganium eurycarpum* var. *greenei* + Greene's bur-fruited b.-reed  
[*S. erectum* subsp. *stoloniferum*]
- Typha angustifolia* + ▼ narrow-leaved cattail
- Typha domingensis* + southern cattail
- Typha latifolia* + broad-leaved cattail

## \* ZANICHELLIACEAE – Horned-pondweed Family

- Zanichellia palustris* +  
(PV) horned-pondweed

## \* ZOSTERACEAE – Eel-grass Family

- Phyllospadix scouleri* + ▼ Scouler's surf-grass  
(SB)
- Phyllospadix torreyi* + Torrey's surf-grass  
(NC, sb)
- Zostera pacifica* + Pacific eel-grass  
("sc")



## \*APPENDIX 1: LISTED TAXA

Nomenclature follows CNPS Online Inventory, 8th edition (2013). ? = ID/presence in County in question; X = Taxon extirpated in County. For more information, see Notes under name listed or name in [brackets] if provided. Note: Listing status subject to change.

## RARIETY CODES

<b>FE</b>	Federally listed, threatened	<b>Sen</b>	Bureau of Land Management Sensitive Species
<b>FT</b>	Federally listed, endangered		
<b>CE</b>	State-listed, rare		
<b>CT</b>	State-listed, threatened		
<b>CR</b>	State-listed, endangered		

## California Rare Plant Rank (CRPR)

<b>1B</b>	Rare, threatened, or endangered in CA and elsewhere
<b>2B</b>	Rare, threatened, or endangered in CA, more common elsewhere
<b>3</b>	More information needed—a review list
<b>4</b>	Limited distribution—a watch list

## Threat Ranks

<b>0.1</b>	Seriously threatened in CA
<b>0.2</b>	Moderately threatened in CA
<b>0.3</b>	Not very threatened in CA

<i>Agrostis blasdalei</i>	Blasdale's bent grass	1B.2/Sen
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	1B.2/Sen
<i>Arabis blepharophylla</i>	coast rockcress	4.3
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	1B.2
<i>A. canescens</i> subsp. <i>sonomensis</i> ?	Sonoma canescent manzanita	1B.2/Sen
<i>Arctostaphylos glutinosa</i>	Schreiber's manzanita	1B.2
<i>Arctostaphylos hookeri</i> subsp. <i>h.</i>	Hooker's manzanita	1B.2/Sen
<i>Arctostaphylos ohloneana</i>	Ohlone manzanita	1B.1
<i>Arctostaphylos pajaroensis</i> ?	Pajaro manzanita	1B.1/Sen X
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	1B.2
<i>Arenaria paludicola</i>	marsh sandwort	FE/CE/1B.1 X
<i>Azolla microphylla</i>	Mexican mosquito fern	4.2 X
<i>Calandrinia breweri</i>	Brewer's calandrinia	4.2
<i>Calochortus uniflorus</i>	large-flowered mariposa lily	4.2
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mtns. pussypaws	1B.1/Sen
<i>Campanula californica</i>	swamp harebell	1B.2/Sen X
<i>Carex comosa</i>	bristly sedge	2B.1
<i>Carex saliniformis</i>	deceiving sedge	1B.2
<i>Castilleja ambigua</i> subsp. <i>a.</i>	Johnny-nip	4.2
<i>Castilleja latifolia</i>	Monterey coast paintbrush	4.3
<i>Ceanothus rigidus</i>	Monterey ceanothus	4.2 X
<i>Centromadia parryi</i> subsp. <i>congdonii</i>	Congdon's tarplant	1B.1/Sen
<i>Chorizanthe cuspidata</i> var. <i>c.</i> ?	San Francisco Bay spineflower	1B.2 X
<i>Chorizanthe douglasii</i> ?	Douglas's spineflower	4.3 X
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Ben Lomond spineflower	FE/1B.1
<i>Chorizanthe pungens</i> var. <i>p.</i>	Monterey spineflower	FT/1B.2
<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Scotts Valley spineflower	FE/1B.1
<i>Chorizanthe robusta</i> var. <i>r.</i>	robust spineflower	FE/1B.1
<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water hemlock	2B.1
<i>Clarkia breweri</i> ?	Brewer's clarkia	4.2 X
<i>Clarkia concinna</i> subsp. <i>automixa</i>	Santa Clara red ribbons	4.3 X
<i>Collinsia multicolor</i>	San Francisco collinsia	1B.2

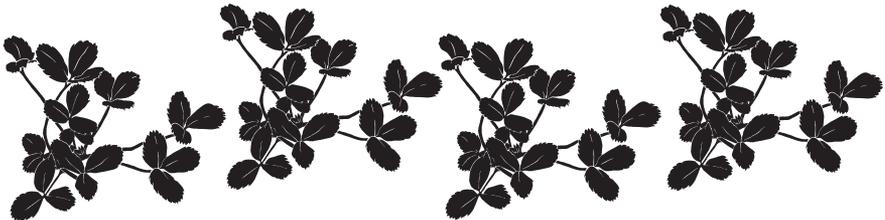
<i>Corethrogyne leucophylla</i> ?	branching beach aster	3.2
[C. <i>filaginifolia</i> ]		
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	4.2/Sen X
<i>Cypripedium montanum</i>	mountain lady's-slipper	4.2/Sen X
<i>Elymus californicus</i>	California bottle-brush grass	4.3
<i>Eriogonum nudum</i> var. <i>decurrens</i>	Ben Lomond buckwheat	1B.1
<i>Erysimum ammophilum</i>	sand-loving wallflower	1B.2/Sen
<i>Erysimum franciscanum</i>	San Francisco wallflower	4.2
<i>Erysimum teretifolium</i>	Santa Cruz wallflower	FE/CE/1B.1
<i>Fritillaria agrestis</i>	stinkbells	4.2 X
<i>Gilia tenuiflora</i> subsp. <i>arenaria</i>	Monterey gilia	FE/CT/1B.2
<i>Hesperoax sparsiflora</i> var. <i>brevifolia</i> ?	short-leaved evax	1B.2/Sen
<i>Hesperocyparis abramsiana</i> var. <i>a.</i>	Santa Cruz cypress	FE/CE/1B.2
<i>Hoita strobilina</i> ?	Loma Prieta hoita	1B.1 X
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT/CE/1B.1
<i>Horkelia cuneata</i> var. <i>sericea</i> ?	Kellogg's horkelia	1B.1
<i>Horkelia marinensis</i>	Point Reyes horkelia	1B.2
<i>Hosackia gracilis</i>	harlequin lotus	4.2
<i>Iris longipetala</i>	coast iris	4.2
<i>Leptosiphon ambiguus</i>	serpentine leptosiphon	4.2 X
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	4.2
<i>Lilium rubescens</i> ?	redwood lily	4.2 X
<i>Lomatium parvifolium</i>	small-leaved lomatium	4.2
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	1B.2
[M. <i>fasciculatus</i> var. <i>nuttallii</i> ]		
<i>Micropus amphibolus</i>	Mt. Diablo Cottonweed	3.2
<i>Microseris paludosa</i>	marsh microseris	1B.2
<i>Mimulus rattanii</i> subsp. <i>decurtatus</i>	SC Co. Monkeyflower	4.2
[Diplacus <i>r.</i> ; TJM2 = <i>M. r.</i> ]		
<i>Monardella sinuata</i> var. <i>nigrescens</i>	northern curly-leaved m-della	4.2
<i>Monolopia gracilens</i>	woodland woolly threads	1B.2
<i>Pedicularis dudleyi</i>	Dudley's lousewort	CR/1B.2 X
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mtns. beardtongue	1B.2
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	FE/CE/1B.1 X
<i>Perideridia gairdneri</i> subsp. <i>g.</i>	Gairdner's yampah	4.2
<i>Pinus radiata</i>	Monterey pine	1B.1
<i>Piperia candida</i>	white-flowered rein orchid	1B.2/Sen
<i>Piperia michaelii</i>	Michael's rein orchid	4.2
<i>Plagiobothrys chorisianus</i> var. <i>c.</i>	Choris's popcorn-flower	1B.2
<i>Plagiobothrys c.</i> var. <i>hickmanii</i>	Hickman's popcorn-flower	4.2
<i>Plagiobothrys diffusus</i>	San Francisco popcorn-flower	CE/1B.1
<i>Polygonum hickmanii</i>	Scotts Valley polygonum	FE/CE/1B.1
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	4.2 X
<i>Rhynchospora californica</i> ?	California beaked rush	1B.1/Sen X
<i>Rosa pinetorum</i> ?	pine rose	1B.2
<i>Sanicula hoffmannii</i>	Hoffmann's sanicle	4.3
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	4.2
<i>Silene verecunda</i> subsp. <i>v.</i>	San Francisco champion	1B.2
[S. <i>v.</i> ]		
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	1B.2
<i>Toxicoscordion fontanum</i>	marsh zigadenus	4.2
<i>Trifolium buckvestiorum</i>	Santa Cruz clover	1B.1/Sen
<i>Trifolium hydrophilum</i>	saline clover	1B.2
<i>Trifolium polyodon</i>	Pacific Grove clover	CR/1B.1/Sen

## \*APPENDIX 2: ENDEMIC TAXA

All of the total current (and historic) population is (or was) located within County.

★ = Listed taxon; X = Taxon extirpated in County; NCR = Taxon not currently recognized; U = Undescribed taxon. For more information, see Notes under name listed or name in [brackets] if provided.

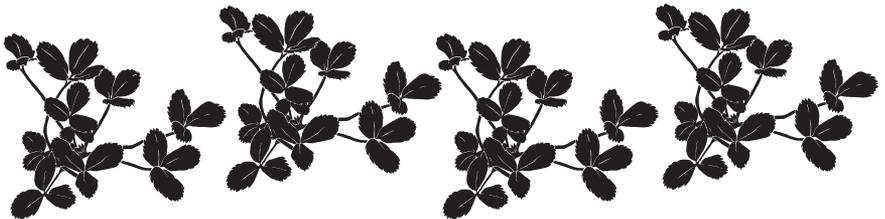
- *Arctostaphylos glutinosa* – ★
- *Arctostaphylos ohloneana* – ★
- *Arctostaphylos silvicola* – ★
- *Chorizanthe robusta* var. *hartwegii* – ★
- *Clarkia unguiculata* subsp. (Sand Hill Bluff form) – U, X [C. u.]
- *Eriogonum nudum* var. *decurrens* – ★
- *Erysimum teretifolium* – ★
- *Eschscholzia californica* (Sandhills form) – U
- *Hesperocyparis abramsiana* var. *a.* – ★
- *Gilia longituba* Benth. subsp. (San Lorenzo Valley form) – NCR/U  
[*Leptosiphon parviflorus*]
- *Minuartia californica* var. (Scotts Valley grasslands form) – U [M. c.]
- *Pinus ponderosa* var. *benthamiana* (Hartw.) Vasey – NCR [*P. p.* var. *pacifica*]
- *Polygonum hickmanii* – ★
- *Pseudognaphalium* sp. (Sandhills form) – U [*P. californicum*]
- *Trifolium grayi* var. 1 (Scotts Valley form) – U [T. g.]
- *Trifolium grayi* var. 2 (upper San Lorenzo Valley & adjacent areas form) – U  
[T. g.]



### \*APPENDIX 3: TAXA EXTIRPATED IN COUNTY

Taxa definitely (or presumably) extirpated in the County. ? = ID/presence in County in question; ★ = Listed taxon; NCR = Taxon not currently recognized; U = Undescribed taxon; Ev = Documented from Camp Evers, Scotts Valley. For more information, see Notes under name listed or name in [brackets] if provided.

- *Arctostaphylos pajaroensis* ? – ★
- *Arenaria paludicola* – ★, Ev
- *Azolla microphylla* – ★, Ev
- *Berula erecta* – Ev
- *Blepharizonia laxa*
- *Calochortus venustus*
- *Camissonia campestris* subsp. *c.* ?
- *Campanula californica* – ★, Ev
- *Carex echinata* subsp. *phyllomanica* – Ev
- *Carex hassei* – Ev
- *Carex utriculata* – Ev
- *Castilleja minor* subsp. *spiralis*
- *C. rubicundula* subsp. *lithospermoides*
- *Ceanothus rigidus*
- *Chorizanthe cuspidata* var. *c.* ? – ★
- *Chorizanthe douglasii* ? – ★
- *Chorizanthe membranacea*
- *Clarkia breweri* ? – ★
- *Clarkia concinna* subsp. *automixa* – ★
- *Clarkia unguiculata* subsp. – U [C. u.]
- *Cyperus laevigatus*
- *Cypripedium fasciculatum* – ★
- *Cypripedium montanum* – ★
- *Dichelostemma multiflorum*
- *Fritillaria agrestis* – ★
- *Gilia angelensis*
- *Hoita strobilina* ? – ★
- *Hosackia pinnata*
- *Hypericum scouleri* ?
- *Lasthenia glabrata* subsp. *g.*
- *Layia chrysanthemoides*
- *Layia platyglossa* subsp. *p.* – NCR [L. p.]
- *Leptosiphon ambiguus* – ★
- *Leptosiphon bicolor*
- *Leptosiphon ciliatus*
- *Lilium rubescens* ? – ★
- *Linanthus dichotomus* subsp. *d.*
- *Nuphar polysepala*
- *Parnassia palustris*
- *Pedicularis dudleyi* – ★
- *Pentachaeta bellidiflora* – ★
- *Phacelia ciliata*
- *Phalaris lemmonii* – Ev
- *Platanthera dilatata* var. *leucostachys*
- *Pogogyne serpylloides* subsp. *intermedia* – NCR [P. s.]
- *Polygonum paronychia*
- *Polystichum imbricans* subsp. *i.*
- *Ranunculus lobbii* – ★
- *Rhynchospora californica* ? – ★
- *Solanum xanti* ?
- *Tropidocarpum gracile*
- *Verbena lasiostachys* var. *scabrida* ?



## \*APPENDIX 4: TAXA NOT CURRENTLY RECOGNIZED

These superseded names (many are pre-*TJM1*) refer to distinctive forms occurring in the County that still appear to deserve taxonomic recognition. For more information, see Notes under current name provided in *bold type* in [brackets].

- *Achillea millefolium* var. *arenicola* (A. A. Heller) Nobs;  
*A. m.* var. *californica* (Pollard) Jepson [*A. m.*]
- *Agrostis aristiglumis* Swallen [*A. microphylla*]
- *Agrostis exarata* var. *e.*; *A. e.* var. *monolepis* (Torrey) A. Hitchc. [*A. e.*]
- *Atriplex lentiformis* subsp. *breweri* (S. Watson) H. M. Hall & Clements [*A. l.*]
- *Cardamine californica* var. *integrifolia* (Torrey & A. Gray) Rollins [*C. c.*]
- *Carex teneraeformis* MacKenzie [*C. subfusca*]
- *Caulanthus lasiophyllus* var. *inalienus* (B. L. Robinson) Payson; *Thelypodium lasiophyllum* (Hook. & Arn.) E. Greene var. *inalienum* B. L. Robinson [*C. l.*]
- *Ceanothus cuneatus* var. *dubius* J. T. Howell [*C. c.* var. *c.*]
- *Ceanothus papillosus* var. *roweanus* McMinn [*C. p.*]
- *Clarkia rubicunda* subsp. *blasdalei* (Jepson) H. Lewis & M. Lewis [*C. r.*]
- *Corethrogyne californica* DC. var. *c.*; *C. filaginifolia* var. *f.*; *C. f.* var. *rigida* A. Gray [*C. filaginifolia*]
- *Distichlis spicata* var. *nana* Beetle; *D. s.* var. *stolonifera* Beetle [*D. s.*]
- *Elymus glaucus* subsp. *jepsonii* (Burt Davy) Gould [*E. g.* subsp. *g.*]
- *Epilobium paniculatum* Torrey & A. Gray forma *adenocladon* Hausskn.;  
*E. p.* forma *laevicaule* (Rydb.) St. John; *E. p.* var. *jucundum* (Rydb.) Trel.;  
*E. p.* var. *p.* [*E. brachycarpum*]
- *Erigeron bilbaoanus* (E. J. Rémy) Cabrera [= *Conyza bilbaoana* E. J. Rémy]  
[*E. sumatrensis*]
- *Erysimum franciscanum* var. *crassifolium* R. Rossbach [*E. f.*]
- *Festuca confusa* Piper; *F. eastwoodiae* Piper; *F. grayi* (Abrams) Piper; *F. pacifica* Piper; *F. reflexa* Buckley [*F. microstachys*]
- *Festuca roemerii* (Pavlick) E. B. Alexeev var. *klamathensis* B. L. Wilson  
[*F. idahoensis*]
- *Gilia longituba* Benth. [= *Linanthus longitubus* (Benth.) A. Heller]  
[*Leptosiphon parviflorus*]
- *Haplopappus ericoides* (Less.) Hook. & Arn. subsp. *blakei* C. Wolf;  
*H. e.* subsp. *e.* [*Ericameria e.*]
- *Hesperomecon linearis* var. *pulchella* (E. Greene) Jepson [*H. l.*]
- *Heterotheca sessiliflora* var. *camphorata* (Eastw.) Semple [= *Chrysopsis villosa* (Pursh) Nutt. var. *c.* Eastw.] [*H. s.* subsp. *echioides*]
- *Iris douglasiana* var. *major* Torrey [*I. d.*]
- *Lathyrus vestitus* subsp. *puberulus* (E. Greene) C. Hitchc.; *L. v.* subsp. *v.*  
[*L. v.* var. *v.*]
- *Layia platyglossa* subsp. *campestris* Keck; *L. p.* subsp. *p.* [*L. p.*]
- *Lolium multiflorum* Lam.; *L. perenne* L. [*Festuca perennis*]
- *Lotus balsamiferus* E. Greene [*Hosackia stipularis* var. *s.*]
- *Lupinus bicolor* var. *microphyllus* (S. Watson) C. P. Smith; *L. b.* var. *pipersmithii*

- (A. Heller) C. P. Smith; *L. b.* var. *tridentatus* Eastw.; *L. b.* var. *trifidus* (S. Watson) C. P. Smith; *L. b.* var. *umbellatus* (E. Greene) C. P. Smith; *L. micranthus* Douglas [L. b.]
- *Lupinus propinquus* E. Greene [L. *arboresus*]
  - *Madia capitata* Nutt. [M. *sativa*]
  - *Madia elegans* subsp. *densifolia* (E. Greene) Keck; *M. e.* subsp. *vernalis* Keck [M. *e.*]
  - *Malacothamnus arcuatus* (E. Greene) E. Greene [M. *fasciculatus* var. *nuttallii*]
  - *Microseris linearifolia* (Nutt.) Schultz-Bip. [*Uropappus lindleyi*]
  - *Mimulus guttatus* var. *micranthus* (A. Heller) G. R. Campbell [*Erythranthe arvensis*]
  - *Mimulus rattanii* A. Gray subsp. *decurtatus* (A. L. Grant) Pennell [*Diplacus r.*]
  - *Minuartia pusilla* (S. Watson) Mattf. var. *diffusa* (Maguire) McNeill [M. *californica*]
  - *Montia hallii* (A. Gray) E. Greene; *M. verna* Necker [M. *fontana*]
  - *Nemophila humifusa* Kell. [N. *pedunculata*]
  - *Orthocarpus densiflorus* Benth. var. *noctuinus* (Eastw.) J. T. Howell [*Castilleja densiflora* subsp. *d.*]
  - *Phacelia ramosissima* var. *montereyensis* Munz; *P. r.* var. *r.* [P. *r.*]
  - *Phalaris paradoxa* var. *p.*; *P. p.* var. *praemorsa* (Lam.) Coss. & Durieu [P. *p.*]
  - *Pinus ponderosa* var. *benthamiana* (Hartw.) Vasey [P. *p.* var. *pacifica*]
  - *Pinus* × *attenuradiata* Stockw. & Righter [see *P. radiata*]
  - *Plantago bigelovii* A. Gray ? [P. *elongata*]
  - *Pogogyne serpylloides* subsp. *intermedia* J. T. Howell [P. *s.*]
  - *Polypodium californicum* var. *kaulfussii* D. C. Eaton [P. *c.*]
  - *Pyrola picta* forma *aphylla* (Smith) Campbell [P. *p.*]
  - *Ribes menziesii* var. *leptosmum* (Coville) Jepson; *R. m.* var. *senile* (Coville) Jepson [R. *m.* var. *m.*]
  - *Scirpus americanus* Pers.; *S. olneyi* A. Gray [*Schoenoplectus americanus*]
  - *Setaria gracilis* Kunth [S. *parviflora*]
  - *Silene verecunda* subsp. *platyota* (S. Watson) C. L. Hitchc. & Maguire; *S. v.* subsp. *v.* [S. *v.*]
  - *Spergularia marina* var. *m.*; *S. m.* var. *tenuis* (E. Greene) R. Rossbach [S. *m.*]
  - *Trifolium depauperatum* var. *laciniatum* (E. Greene) Jepson [T. *d.* var. *d.*]
  - *Trifolium flavulum* E. Greene [T. *fucatum*]
  - *Trifolium rostratum* E. Greene [T. *variegatum* vars.]
  - *Trifolium stenophyllum* Nutt. [T. *depauperatum* var. *truncatum*]
  - *Zigadenus fremontii* (Torrey) S. Watson var. *minor* (Hook. & Arn.) Jepson [*Toxicoscordion f.*]
-

## \*APPENDIX 5: UNDESCRIBED TAXA

These are distinctive forms that may deserve taxonomic recognition. Many are quite rare and in need of legal protection, so it is hoped that they will be studied further and perhaps formally described. X = Taxon extirpated in County. For more information, see Notes under name listed or name in [brackets] if provided.

- *Armeria maritima* subsp. *californica* – tall, inland form
- *Artemisia pycnocephala* – tall, inland form
- *Calochortus albus* – large-flowered, coastal form
- *Calochortus luteus* – local form (vs. interior form)
- *Carex* spp. – Swanton forms [*C. harfordii*]
- *Clarkia unguiculata* subsp. – Sand Hill Bluff form X [*C. u.*]
- *Clarkia* sp. – related to *C. davyi* [*C. d.*]
- *Eriogonum nudum* var. – tall, large-leaved form [*E. n. var. auriculatum*]
- *Erythranthe floribunda* – local form (vs. interior form)
- *Eschscholzia californica* – Sandhills form
- *Fritillaria affinis* – form resembling *F. lanceolata* Pursh. var. *tristulis* A. L. Grant
- *Gilia clivorum* – white-flowered form
- *Gilia longituba* Benth. subspp. – two local forms [*Leptosiphon parviflorus*]
- *Isolepis cernua* – perennial form
- *Kopsiopsis* sp. – Sierra Azul Ridge form [*K. strobilacea*]
- *Layia platyglossa* – all-yellow form
- *Leptosiphon grandiflorus* subsp. – Santa Cruz Mtns. form [*L. g.*]
- *Minuartia californica* var. – Scotts Valley grasslands form [*M. c.*]
- *Muilla maritima* – two local forms (Sandhills & grassland)
- *Perideridia gairdneri* subsp. *g.* – southern (Seascape Uplands) form
- *Pseudognaphalium* sp. – coastal form [*P. californicum*]
- *Pseudognaphalium* sp. – Sandhills form [*P. californicum*]
- *Salix exigua* var. *hindsiana* – coastal form
- *Sanicula* sp. – form resembling *S. crassicaulis* [*S. c.*]
- *Sanicula* sp. – form resembling *S. laciniata* [*S. crassicaulis*]
- *Trifolium grayi* vars. – three forms [*T. g.*]
- *Trifolium obtusiflorum* var. – Santa Cruz Mtns. form [*T. o.*]
- *Trifolium polyodon* var. – northern form [*T. p.*]
- *Trifolium variegatum* var. – Swanton form
- *Trifolium willdenovii* var. – form resembling prostrate *T. oliganthum* [*T. o.*]
- *Trifolium* sp. – form related to *T. physanthum* Hook. & Arn. [*T. barbigerum*]
- *Trifolium* sp. – form resembling *T. gambelii* Nutt. [*T. fucatum*]
- *Triteleia laxa* – two forms

## \*APPENDIX 6: MOST INVASIVE NON-NATIVE TAXA

Rate of spread, abundance, and damage to native habitats were considered in this qualitative assessment of terrestrial weeds. For more information, see **calweed-mapper.calflora.org**. For information on eradication, see Ken Moore's Wildland Restoration Team website: **www.wildwork.org**. To participate in local habitat-restoration activities, see **www.cruzcnps.org/habitat\_restoration.html**.

### Coastal

- *Ammophila arenaria* European beachgrass
- *Carpobrotus edulis* and hybrids highway iceplant
- *Conium maculatum* poison hemlock
- *Hypericum canariense* Canary Island St. Johnswort
- *Plantago coronopus* cut-leaved plantain

### Grassland

- *Carduus pycnocephalus* subsp. *p.* Italian thistle
- *Holcus lanatus* velvet grass
- *Phalaris aquatica* harding grass
- Poaceae spp. various annual grasses
- *Trifolium angustifolium* prickly clover
- *Trifolium subterraneum* subterranean clover

### Sandhills

- *Cytisus striatus* Portuguese broom
- *Dittrichia graveolens* stinkwort
- *Festuca myuros* rattail fescue
- *Hypochaeris glabra* smooth cat's-ear

### Woodland (especially Riparian)

- *Ageratina adenophora* eupatory
- *Delairea odorata* Cape ivy
- *Ehrharta erecta* panic veldt grass
- *Euphorbia oblongata* oblong spurge
- *Hedera* spp. ivy
- *Myosotis latifolia* common forget-me-not
- *Rubus ulmifolius* var. *anoplothysus* thornless blackberry
- *Vinca major* periwinkle

### Various Habitats

- *Acacia dealbata* silver wattle
- *Cortaderia jubata* jubata grass
- *Eucalyptus globulus* Tasmanian blue gum
- *Foeniculum vulgare* fennel
- *Genista monspessulana* French broom
- *Rubus armeniacus* Himalayan blackberry
- *Spartium junceum* Spanish broom

## \*APPENDIX 7: REJECTED TAXA

A partial list culled from a variety of sources – current nomenclature used unless noted. Native taxa that are clearly out of range are not included (see *TJM2*). *Note:* Unvouchered taxa on C. L. Anderson's 1892 lists that have not been documented since then are not included in this edition of the *Checklist* and do not appear below.

- *Acacia decurrens* – local records = *A. dealbata*
  - *Agrostis gigantea* – mis-id/ waif?
  - *Amsinckia retrorsa* – mis-id/ waif?
  - *Anemone oregana* var. *o.* – local records = *A. grayi*
  - *Aquilegia eximia* – not in County
  - *Arctostaphylos glandulosa* subspp. *cushingiana/glandulosa* – mis-id
  - *Arctostaphylos glauca* – mis-id; intergrades occur on Santa Clara Co. line
  - *Arctostaphylos montereyensis* – mis-id
  - *Arctostaphylos pumila* – mis-id
  - *Arctostaphylos regismontana* – mis-id of *A. andersonii*
  - *Arctostaphylos tomentosa* subspp. – local records = *A. crustacea* subspp.
  - *Artemisia ludoviciana* – waif
  - *Berberis vulgaris* – waif
  - *Calochortus umbellatus* – mis-id
  - *Calycadenia multiglandulosa* – over County line in Santa Clara Co.
  - *Calyptridium umbellatum* – local records = *C. monospermum*
  - *Calystegia macrostegia* subspp. *cylostegia* – can intergrade w/ local *C. purpurata*
  - *Calystegia occidentalis* subspp. *o.* – local records = *C. purpurata* subspp. *p.*
  - *Carex pansa* – mis-id of *C. praegracilis*
  - *Ceanothus ferrisiae* – mis-id of *C. cuneatus*
  - *Ceanothus foliosus* var. *medius* – mis-id
  - *Ceanothus leucodermis* – mis-id of *C. incanus*
  - *Ceanothus palmeri* – local records = *C. integerrimus* var. *i.*
  - *Ceanothus thyrsoflorus* var. *griseus* – can intergrade w/ local *C. t.* var. *t.*
  - *Chenopodium chenopodioides* – unverified report
  - *Chrysolepis chrysophylla* var. *c.* – mis-id; see note for *C. c.* var. *minor*
  - *Clarkia affinis* – mis-id
  - *Clarkia amoena* subspp. *amoena/huntiana* – mis-id
  - *Cordylanthus pilosus* subspp. *p.* – mis-id
  - *Downingia concolor* var. *c.* – unverified report (PV)
  - *Draba* sp. – report of an unknown species at Laguna Ck. (BLM)
  - *Dryopteris expansa* – mis-id of *D. arguta*
  - *Dudleya farinosa* – mis-id
  - *Echinochloa muricata* var. *microstachya* – mis-id of *E. crus-galli*
  - *Eleocharis* sp. – report of an unknown species in a stock pond (PV)
  - *Elymus trachycaulus* subspp. *t.* – unverified report
  - *Epilobium campestre* – unverified report
  - *Eriogonum roseum* – mis-id
  - *Ficus carica* – waif
-

- *Fraxinus latifolia* – unverified report
  - *Galium andrewsii* subsp. *gatense* – over County line in Santa Clara Co.
  - *Galium nuttallii* subsp. *n.* – mis-id of *G. californicum* subsp. *c.*?
  - *Geranium retrorsum* L'Hér. ex DC. – CA pls = *G. core-core*
  - *Grindelia hirsutula* Hook. & Arn. var. *maritima* (E. Greene) M. A. Lane – erroneously reported for County; now synonymous w/ *G. h.*
  - *Hesperocyparis goveniana* – local records = *H. abramsiana* var. *a.*
  - *Hulsea heterochroma* – over County line in Santa Clara Co.
  - *Iris macrosiphon* – mis-id; see note for *I. fernaldii*
  - *Leptosiphon acicularis* – mis-id of *L. parviflorus*
  - *Limnanthes douglasii* subsp. *rosea* – mis-id of *L. d.* subsp. *nivea*
  - *Lomatium macrocarpum* – mis-id
  - *Lonicera interrupta* – mis-id of *L. hispidula*
  - *Lonicera subspicata* var. *denudata* – one 1901 record; mis-id?
  - *Lupinus albifrons* var. *collinus* – mis-id of *L. a.* var. *a.*
  - *Madia anomala* – mis-id of *M. gracilis*?
  - *Microseris elegans* – mis-id of *M. bigelovii*?
  - *Monardella antonina* Hardham subsp. *a.* – confused w/ *M. villosa* subsp. *v.*, and now synonymous w/ it
  - *Nepeta cataria* – waif
  - *Papaver heterophyllum* – one old record from “Santa Cruz Mtns.”
  - *Parietaria hespera* var. *californica* – mis-id of *P. h.* var. *h.*
  - *Pectocarya linearis* subsp. *ferocula* – unverified report
  - *Phacelia egena* – study needed; see note for *P. imbricata* var. *i.*
  - *Polygonum parryi* – local records = *P. hickmanii*
  - *Prosartes smithii* – mis-id of *P. hookeri*
  - *Prosopis glandulosa* var. *torreyana* – waif
  - *Psilocarphus brevissimus* var. *b.* – unverified report
  - *Quercus dumosa* – local records = *Q. berberidifolia*
  - *Ranunculus canus* var. *canus* – mis-id of *R. californicus* var. *californicus*?
  - *Rhamnus crocea* – unverified report
  - *Rhamnus ilicifolia* – unverified report
  - *Rorippa curvipes* – unverified report
  - *Salvia verbenacea* – waif
  - *Sedum stenopetalum* – mis-id
  - *Senecio aphanactis* – only one depauperate specimen (BDS); study needed
  - *Setaria viridis* – mis-id
  - *Schinus molle* – unverified report
  - *Silene vulgaris* – waif
  - *Streptanthus glandulosus* subsp. *g.* – over County line in Santa Clara Co.
  - *Thermopsis macrophylla* (var. *m.*) – local records = *T. californica* var. *c.*
  - *Toxicoscordion venenosum* var. *v.* – unverified report
  - *Trifolium dichotomum* – mis-id of *T. albopurpureum*
  - *Triphysaria floribunda* – mis-id
  - *Triphysaria versicolor* subsp. *faucibarbata* – mis-id
-

## APPENDIX 8: NOTES



### CODES, SYMBOLS, & TERMS

<b>CLA</b>	C. L. Anderson's two 1892 plant lists – <i>see Introduction</i>
<b>CRPR</b>	California Rare Plant Rank – <i>see "Rarity Codes" (inside back cover)</i>
<b>FNANM</b>	<i>Flora of North America North of Mexico</i>
<b>JHT</b>	J. H. Thomas's <i>Flora of the Santa Cruz Mountains of CA</i> (1961)
<b>LR</b>	Locally rare – <i>see p. 10</i>
<b>Sen</b>	Bureau of Land Management Sensitive Species
<b>TJM1</b>	<i>The Jepson Manual: Higher Plants of California</i> (1993)
<b>TJM2</b>	<i>The Jepson Manual: Vascular Plants of California, Second Edition</i> (2012)
<b>record</b>	Vouchered specimen; "old" record = pre-1961
<b>report</b>	Observation by a qualified botanist; "old" report = pre-1961
<b>sensu lato</b>	In the broad sense; broad circumscription of a taxon
<b>sensu stricto</b>	In the narrow sense; narrow circumscription of a taxon
▲ ▼	Refer to entry above/below

*See Floristic Regions map (pp. 12 & 166) & "Region Codes" (p. 13 & inside back cover); see also "Locality Data Conventions" (p. 11 & inside back cover).*

*For key to abbreviations not listed here, see TJM2 ("Abbreviations and Symbols" & "Geographic Subdivisions of California"). For definitions of botanical terms, see TJM2 ("Glossary").*

## ~A~

- ◆ *Abronia latifolia*: Perennial; lvs fleshy; fls yellow (vs. ▼). Dunes.
- ◆ *Abronia umbellata* var. *u.*: Annual; lvs ± not fleshy; fls magenta (vs. ▲). Dunes.
- ◆ *Acacia dealbata*: TJM2: Has been reported as *A. decurrens*.
- ◆ *Acer macrophyllum*: Monoecious; lvs simple, 5-lobed; petals present (vs. ▼).
- ◆ *Acer negundo*: Dioecious; lvs compound, lflets stalked; petals 0 (vs. ▲).
- ◆ *Achillea millefolium*: Two forms occur locally, both not currently recognized (see JHT): *A. m.* var. *arenicola* (A. A. Heller) Nobs (coastal dunes) w/ pls tomentose, lvs thick; and *A. m.* var. *californica* (Pollard) Jepson (coastal bluffs and inland) w/ pls glabrous to cobwebby, lvs thin. Non-local forms often seeded.
- ◆ *Acmispon americanus* var. *a.*: Summer-flwng annual; herbage gen hairy; calyx teeth > tube; corolla white to pinkish. In TJM2, native *Lotus* spp. treated as *Acmispon* or *Hosackia* spp. *Acmispon* spp. have gland-like, often inconspicuous stipules (vs. *Hosackia* spp. w/ conspicuous, lf-like stipules).
- ◆ *Acmispon brachycarpus*: Annual; densely long-hairy; calyx teeth 1-2× tube; fls subsessile, yellow, turning red in age.
- ◆ *Acmispon cytisoides*: Perennial; gen mat-forming; fls white to pink, turning red in age. Reported by CLA from “along coast” and recorded in nc. More common in Monterey and San Luis Obispo cos. TJM2: Hybridizes w/ other *Acmispon* spp.
- ◆ *Acmispon glaber* var. *g.*: Perennial; sts gen ascending to erect; lvs glabrous, lflets 3-6; infl sessile; corolla yellow. Prostrate pls occasional on immediate coast. TJM2: Hybridizes w/ *A. cytisoides*, *A. junceus*.
- ◆ *Acmispon heermannii* var. *orbicularis*: Perennial; sts prostrate, often mat-forming; lvs hairy; ovary gen soft spreading-hairy; corolla yellow to reddish.
- ◆ *Acmispon junceus* var. *biolettii*: Perennial; sts wiry, decumbent; lvs strigose; peduncle 8-25 mm; corolla yellow; fr well-exserted (vs. ▼).
- ◆ *Acmispon junceus* var. *j.*: As above but w/ sts gen stout, prostrate to ascending; peduncle 1-5 mm; fr ± exserted.
- ◆ *Acmispon maritimus* var. *m.*: Annual; pl fleshy, glabrous or strigose; infl gen 2-4 fld; corolla bright-yellow. Coastal scrub. Only three records: “sc” (1881), pv (1950), & NC (2010). At northern edge of range here.
- ◆ *Acmispon parviflorus*: Annual; pl ± glabrous; sts ascending to erect; infl 1-fld; corolla pink, quickly fading.
- ◆ *Acmispon strigosus*: Annual; pl fleshy, strigose or not; sts prostrate, often mat-forming; infl 1-2-fld; corolla yellow, turning orange-red in age.
- ◆ *Acmispon wrangelianus*: Annual; pl strigose or hairs soft and spreading; sts prostrate; calyx teeth ± = tube; corolla yellow, turning red in age.
- ◆ *Ageratina adenophora*: TJM2: Reproduces by asexual seed; highly invasive.
- ◆ *Agoseris apargioides* var. *a.*: Perennial. Coastal bluffs, dunes. TJM2: Pls south of Golden Gate now referable to this taxon, not *A. a.* var. *eastwoodiae*.
- ◆ *Agoseris heterophylla* var. *cryptopleura*: Annual; out-crosser; ligules > involucre; lvs often cauline. TJM2: Indistinguishable from var. *heterophylla* when not in fl.

- ◆ *Agoseris heterophylla* var. *h.*: As above but self-pollinating; ligules = involucre. TJM2: Indistinguishable from var. *cryptopleura* when not in fl.
- ◆ *Agoseris hirsuta*: TJM2: Perennial; ± inland in ± fine-textured soils. FNAME: Occurs primarily on grassy hills in the San Francisco Bay area and extends both north and south in the Coast Ranges. Has been treated as *A. apargioides* subsp. [or var.] *a.* in recent floras. Closely related to *A. a.* and *A. heterophylla*. Morphologically similar to *A. h.* var. *cryptopleura*. Study needed.
- ◆ *Agrostis blasdalei*: Densely tufted perennial; lf blades filiform; infl narrow. Coastal prairie. Variable. Apparently hybridizes w/ *A. densiflora* and *A. exarata*.
- ◆ *Agrostis densiflora*: Coastal bluffs. Apparently hybridizes w/ *A. blasdalei* and *A. exarata*. A lg form w/ lacerate paleae occurs on cliff faces at Scott Ck. Beach (NC).
- ◆ *Agrostis exarata*: Perennial. Two local forms are no longer recognized (see JHT):  
 1) the more common [= *A. e.* var. *monolepis* (Torrey) A. Hitchc.; *A. e.* var. *pacifica* Vasey] is a smaller, slender pl w/ conspicuously awned lemmas; it apparently hybridizes w/ *A. blasdalei* and *A. densiflora*;  
 2) the rare form [= *A. e.* var. *exarata*], which gen occurs in shallow water, is a robust, taller pl w/ a dense, interrupted spike and awnless lemmas. LR designation and locations (BLM, nm, PV, & S) refer to this entity.
- ◆ *Agrostis hallii*: Rhiz. peren.; ligule 4+ mm; callus hrs gen > half lemma; awn 0.
- ◆ *Agrostis microphylla*: Annual; lemma awned from middle, awn slightly bent. NC specimens (all w/ paleae and growing in moist areas on mudstone cliff faces, not in vernal pools) appear to match what has been called *A. aristiglumis* Swallen (now synonymous w/ *A. m.*).
- ◆ *Agrostis pallens*: Rhizomatous; ligule to 3 mm; callus hairs minute; awn 0.
- ◆ *Agrostis scabra*: Roadsides, woodland. County out of TJM2 range of species.
- ◆ *Agrostis stolonifera*: Stoloniferous. Can be confused w/ rhizomatous *A. gigantea*. One CLA record of the latter exists from the 1880s.
- ◆ *Ailanthus altissima*: When crushed, lvs and buds emit a rancid odor.
- ◆ *Alopecurus saccatus*: Reported by CLA from “wet meadows. One of the earliest grasses to flower. Growing in shallow ponds even before the water entirely disappears.” Rediscovered in 1975 (sv) and then again in 2005 (NM).
- ◆ *Allophyllum divaricatum*: Lobes of lwr lvs 4–8 mm wide; corolla tube reddish-purple, lobes pink (vs. ▼); skunklike odor. Disturbed areas in chaparral, woodland.
- ◆ *Allophyllum gilioides* subsp. *g.*: Widest lf or lf lobes 2–4 mm wide; corolla dark-blue-purple (vs. ▲); fls 4–8, in dense clusters (vs. ▼). Open, sandy areas.
- ◆ *Allophyllum gilioides* subsp. *violaceum*: Same as above but w/ fl(s) single, in pairs, or in 3s, not densely clustered. Only one record: CRR (2013).
- ◆ *Alnus rhombifolia*: Lf margins gen serrate, not tightly rolled-under. Mostly southern and interior parts of County (vs. ▼).
- ◆ *Alnus rubra*: Lf margins doubly serrate, tightly rolled-under. Mostly along North Coastal streams (vs. ▲).
- ◆ *Amaranthus blitoides*: Sporadic garden weed; doubtfully native here.
- ◆ *Ambrosia confertiflora*: Perhaps not native to the Central Coast. Only one 1953 record from the “Southern Pacific Railroad Yards.”

- ◆ *Amelanchier utahensis*: Deciduous shrub; lvs gen serrate above middle, finely hairy abaxially in fr; fr a blue-black pome. Along streams, coastal scrub.
- ◆ *Ammannia coccinea*: Lvs with basal, ear-like lobes; fls 3–5 per axil, corolla magenta. Wet areas. Only two records: mc (1991) & SLV (1998).
- ◆ *Amsinckia intermedia*: Corolla orange w/ red spots, 7–11 mm (vs. *A. menziesii*).
- ◆ *Amsinckia lunaris*: Corolla bilaterally symmetrical, often heterostylous. Steep slopes, rich soils in grassy patches. Only recorded from a few locations: NC & S.
- ◆ *Amsinckia lycopsoides?*: Reported by CLA, and two old records/reports: pv & s. ID/nativity in County in question. TJM2: Can hybridize w/ *A. intermedia*.
- ◆ *Amsinckia menziesii*: Corolla yellow to orange-yellow, 4–7 mm (vs. *A. intermedia*). Weedy but behaves as a native here.
- ◆ *Anagallis arvensis*: Corolla commonly bright-orange but occasionally indigo, pale-orange, or purplish-brown. TJM2: Another name currently in use for this taxon is *Lysimachia a.* (L.) U. Manns & Anderb.
- ◆ *Anagallis minima*: Calyx > pink corolla; fls ± sessile. TJM2: Another name currently in use for this taxon is *Lysimachia m.* (L.) U. Manns & Anderb.
- ◆ *Anaphalis margaritacea*: Rhizomatous (vs. *Pseudognaphalium* spp.), ± dioecious perennial; unscented; sts densely white-tomentose.
- ◆ *Anemone grayi*: Our pls have been erroneously called *A. oregana* A. Gray. (*A. o.* var. *o.* ranges from the Klamath Ranges north to Washington.)
- ◆ *Angelica tomentosa*: Pl glaucous. Wooded areas. *A. hendersonii* not recorded for County, though it occurs from San Mateo Co. northward.
- ◆ *Antirrhinum vexillocalyculatum* subsp. *v.*: Weak-stemmed, twining; corolla lavender. Rocky slopes, disturbed areas. Last recorded in 1966.
- ◆ *Apiastrum angustifolium*: Annual; lvs gen opposite; fr elliptic-cordate, compressed side-to-side, papillate. Chaparral, coastal scrub.
- ◆ *Apocynum androsaemifolium*: Pl to 3 dm; lvs ovate to round; corolla white to pink to reddish-purple. Exposed slopes, chaparral (vs. ▼).
- ◆ *Apocynum cannabinum*: Pl 3–12 dm; lvs lanceolate to narrowly ovate; corolla white or greenish. Marshy, disturbed areas (vs. ▲).
- ◆ *Arabis blepharophylla*: Corolla pink-purple. Rocky outcrops, slides.
- ◆ *Arceuthobium campylopodum*: Documented from UCSC campus on *Pinus attenuata* (BLM) and from Loma Prieta area (sar) on *P. a.* and *P. sabiniana*.
- ◆ *Arctostaphylos andersonii*: Obligate seeder (= no burl); lf base cordate, clasping. Tall shrub to small tree found along forest edges and in chaparral. Endemic to central and southern Santa Cruz Mtns., mostly in redwood zone. Hybridizes w/ *A. canescens* subsp. *c.*, *A. crustacea* subsp., *A. glutinosa*, *A. sensitiva*, and *A. silvicola*. Begins to take on characters of *A. regismontana* in northernmost part of County.
- ◆ *Arctostaphylos canescens* subsp. *c.*: Obligate seeder; lvs hairy on both surfaces, lf base not deeply lobed; ovary and fr densely hairy; pedicel and ovary hairs glandless. Common in North Coast Ranges to southern Oregon, ours is a southern disjunct population occurring in chaparral along granite ridges between Loma Prieta and Mt. Madonna. Occ individuals keying to subsp. *sonomensis* (CRPR 1B.2/Sen) – w/ pedicel and ovary hairs gland-tipped – occur intermixed in this pop.

◆ *Arctostaphylos crustacea* subsp. *crinita*: Burl-former; tetraploid; abaxial lf surface densely hairy, adaxial surface hairy or not (but < than abaxial surface). Occurs in central and southern Santa Cruz Mtns. (also Fort Ord and Mt. Toro in Monterey Co.). Locally abundant in BLM, where it is extraordinarily variable, apparently hybridizing w/ adjacent diploid species (*A. andersonii*, *A. glutinosa*, *A. sensitiva*, *A. silvicola*). This variability reaches an extreme in S, where some pls display similarities to non-local species, including *A. uva-ursi* and even *A. c.* subsp. *subcordata* from the northern Channel Islands.

◆ *Arctostaphylos crustacea* subsp. *c.*: Burl-former; abaxial lf surface glabrous or sparsely hairy. Occurs throughout County except BLM. Common on east side of Santa Cruz Mtns. Loma Prieta area pop is distinct, showing evidence of introgression w/ *A. canescens* and/or *A. glauca*, both of which occur nearby. A more isolated group of pops in hills surrounding PV is also distinct, flwg at least one month ahead of other pops and w/ lf morphology approaching that of *A. andersonii*.

◆ *Arctostaphylos glutinosa*: Obligate seeder; lvs hairy on both surfaces, lf base deeply lobed. Knobcone pine-maritime chaparral. County endemic; only on siliceous shale in the Chalks (Lockheed; S). An infrequent, green-lvd (non-canescens) form occurs at lower elevations, suggesting intergradation w/ closely related *A. andersonii*. Reports from ER probably misidentified.

◆ *Arctostaphylos hookeri* subsp. *h.*: Obligate seeder; lvs bright-green, lustrous, petioled, similar on both surfaces, w/ lf base truncate or rounded. Endemic to Monterey Bay maritime chaparral; at northern edge of range here. Locally, only known from the Aromas Red Sands near Watsonville (PV).

◆ *Arctostaphylos ohloneana*: Obligate seeder; lvs green, petioled, similar on both surfaces, w/ lf base truncate or rounded. Discovered by James A. West and Randall Morgan in the late 1970s, this County endemic is only found on siliceous shale in the Chalks (Lockheed; S), growing in knobcone pine-maritime chaparral. Many pls killed in 2009 Lockheed fire, but seedlings have since been observed.

◆ *Arctostaphylos pajaroensis?*: Obligate seeder; old st bark persistent; lvs blue-green, lf base lobed, clasping. Reported from nr Watsonville. ID in question; can be confused w/ *A. andersonii* hybrids. Presumably extirpated if ID was correct.

◆ *Arctostaphylos sensitiva*: Obligate seeder; lvs dk-green adaxially, lt-green abaxially, petioled, w/ truncate or rounded base; fls 4-merous (occ 5-merous). Found in a variety of soil types in maritime chaparral; southern range limit at UCSC. Hybridizes w/ *A. andersonii*, *A. crustacea* subsp. *crinita*, *A. glutinosa*, and *A. silvicola*.

◆ *Arctostaphylos silvicola*: Obligate seeder; lvs gray-hairy on both surfaces, lf base rounded to wedge-shaped; ovary and fr hairs 0. County endemic found on Santa Margarita Sandstone in Sandhills (BDS & ZS) in maritime chaparral. Closely related to and probably derived from *A. canescens*. Hybridizes w/ *A. andersonii*, *A. crustacea* subsp. *crinita*, and *A. sensitiva*.

◆ *Arctotheca calendula*: Annual; non-creeping; prolific seeder (vs. ▼).

◆ *Arctotheca prostrata*: Perennial; sts creeping; not as invasive as *A. calendula*.

◆ *Arenaria paludicola*: Ancient, rich wetlands. Occurred at Camp Evers (sv), along w/ many other species, all of which were extirpated when the area was developed in the 1960s. In CA, one wild population still extant in San Luis Obispo Co., though in decline.

- ◆ *Aristida ternipes* var. *gentilis*: Most likely not native locally. According to *TJM2*, out of range. Occurs mainly as a roadside weed here.
- ◆ *Armeria maritima* subsp. *californica*: Normally on the immediate coast, pls in a small, isolated population in ZS are unusually tall for this taxon – up to 1 m. A parallel population occurs at Fort Ord, Monterey Co., about the same distance inland as ZS. This form may deserve taxonomic recognition. Study needed.
- ◆ *Artemisia pycnocephala*: Often used for dune restoration so not native everywhere it now occurs. A form w/ sts erect rather than sprawling occurs in PV & ZS. A parallel inland population occurs at Fort Ord, Monterey Co. This form may deserve taxonomic recognition. Study needed.
- ◆ *Asclepias fascicularis*: Lvs linear to lanceolate. Corolla greenish-white, horns exserted, exceeding hood. Disturbed ground. Only three records/reports.
- ◆ *Aspidotis californica*: Shaded rock outcrops.
- ◆ *Astragalus gambelianus*: Group 1. Slender annual; fls purple-tinged, 2.5–3.3 mm; fr reflexed. Open areas.
- ◆ *Athysanus pusillus*: Infl 1-sided; fr ± round. Rocky areas, grassy slopes.
- ◆ *Atriplex lentiformis*: Erect shrub. Often planted; the few along the Pajaro River may be native. The coastal, large-lvd form has been called *A. l.* subsp. *breweri* (S. Watson) H. M. Hall & Clements. County out of range in *TJM2*.
- ◆ *Atriplex leucophylla*: Prostrate to decumbent perennial; lvs elliptic to wide-ovate, densely scurfy. Sandy areas, dunes.
- ◆ *Atriplex patula*: Annual; lvs green, proximal lanceolate to oblong (occ hastate), distal linear. Salt marshes, non-saline areas. Currently, only known from SB.
- ◆ *Atriplex prostrata*: Annual; lvs green, triangular-hastate. Wet areas.
- ◆ *Atriplex semibaccata*: Mat-like perennial to subshrub; lvs oblong to oblong-ovate, scurfy, especially abaxially; fr bract fleshy, reddish. Disturbed areas.
- ◆ *Atriplex serenana* var. *s.*: Annual; lvs greenish, ± sessile, elliptic to lanceolate, irregularly dentate. Alkaline flats, bluffs. Only two records: pv (1909 & 1962).
- ◆ *Avena barbata*: Pl gen to 1 m+; spikelet slender; lemma bristle-tipped, teeth 2–6 mm (vs. ▼); callus bearded (vs. *A. sativa*); awned.
- ◆ *Avena fatua*: Pl gen < 1 m; spikelet “fatter”; lemma tip ragged or 2-forked, teeth ≤ 1.5 mm (vs. ▲); callus bearded (vs. ▼); awned.
- ◆ *Avena sativa*: Callus glabrous; gen awnless (vs. *A. barbata* & *A. fatua*).
- ◆ *Azolla microphylla*: Only one old record: Camp Evers (sv) (1958). Extirpated.

~B~

- ◆ *Baccharis pilularis* subsp. *consanguinea*: Sts erect forming rounded shrub; lvs gen 15+ mm (vs. ▼). Subsp. intergrade.
- ◆ *Baccharis pilularis* subsp. *p.*: Sts prostrate, mat-forming; lvs gen to 15 mm (vs. ▲). Bluffs and beaches. Subsp. intergrade.
- ◆ *Baccharis salicifolia* subsp. *s.*: Shrub, often sticky; lf blade lance-elliptic. Only 2 records/reports: Pajaro River (pv) (1980) & Newell Creek (slv) (1980).

- ◆ *Barbarea orthoceras*: Basal lvs w/ 2–4 lateral lobes; fr to 4 cm long (vs. ▼).
- ◆ *Barbarea verna*: Basal lvs w/ 6+ lateral lobes; fr 4.5+ cm long (vs. ▲).
- ◆ *Beckmannia syzigachne*: Only one record: Quail Hollow Quarry (zs) (1991).
- ◆ *Bellardia trixago*: Lvs opposite distally; corolla pink and white, two-lipped.
- ◆ *Berberis aquifolium* var. *a.*: Not native to County; reported as an “escape from cultivation” in JHT & a 2013 report of pls naturalizing at Quail Hollow Ranch C. P.
- ◆ *Berberis nervosa*: Bud scales among upper lvs persistent; lf lfts 7–23, ± palmately veined (vs. ▼). Woodland in North County.
- ◆ *Berberis pinnata* subsp. *p.*: Bud scales among upper lvs deciduous; lf lfts gen 7–11, gen pinnately veined (vs. ▲). Coastal scrub in North County.
- ◆ *Berula erecta*: Marshy areas. One old record: Camp Evers (sv). Extirpated.
- ◆ *Bidens frondosa*: Lvs pinnate, petioled; ray fls 0–few; fr narrowly wedge-shaped, compressed front-to-back. Only recorded from locs adjacent to San Lorenzo River.
- ◆ *Bidens laevis*: Lvs simple; ray fls 7–8. Common in Watsonville wetlands (PV).
- ◆ *Bidens pilosa*: Lvs pinnate; ray fls 0 or minute; fr narrowly cylindrical or slightly compressed, 4-angled.
- ◆ *Blechnum spicant*: Dimorphic (fertile and sterile) fronds. Adjacent to creeks and streams in redwood forest. At southernmost edge of range here.
- ◆ *Blepharizonia laxa*: 1 record: Pajaro River (pv) (1978). Presumably extirpated.
- ◆ *Bolboschoenus fluviatilis*: Stigmas gen 3; anthers yellow; fr gen 3-sided, sinks in water; perianth bristles persistent. Freshwater marshes. Only one old record: Pajaro River (1909); also, one old record of a “*B. f.* hybrid” from Pajaro River. TJM2: Intermediates between *B.* spp. common; hybrids btw *B. f.* and *B. maritimus* subsp. *paludosus* have been recorded in CCo and SnFrB but are “rare.” *Bolboschoenus* spp. have sts sharply 3-angled; fl sts w/ 1+ cauline lvs; infl single, terminal.
- ◆ *Bolboschoenus maritimus* subsp. *paludosus*: Spikelets gen densely clustered; stigmas 2; fr 2-sided. Saline to brackish coastal marshes. Two old records from Neary Lagoon and the Pajaro River are possible hybrids between *B. maritimus* × *B. robustus*. TJM2: Hybrids “locally common” in CCo and SnFrB.
- ◆ *Bolboschoenus robustus*: Spikelets not densely clustered; stigmas gen 3; anthers orange; gen 3-sided fr that floats. Saline to brackish coastal marshes.
- ◆ *Bowlesia incana*: Lvs gen opposite, lobes 5–9. Shady, moist areas in grassland, shrubland, woodland. Only documented in NC & S.
- ◆ *Boykinia occidentalis*: Petals 3–4 mm; stamens 5, < calyx lobes.
- ◆ *Brassica nigra*: Hairy sts gen > 1 m; upper cauline lf base tapered, not lobed; fr w/ pedicels erect, ± appressed (vs. ▼) Slopes, roadsides.
- ◆ *Brassica rapa*: Gen glabrous, glaucous sts, gen ≤ 1 m; upper cauline lf base lobed, gen clasping; fr w/ pedicels ascending to ± spreading (vs. ▲). Cultivated land.
- ◆ *Brodiaea elegans* subsp. *e.*: Perianth tube funnel-shaped; staminodia held away from, < stamens (vs. ▼). Has been misidentified as *B. coronaria*. TJM2: Can hybridize w/ other *Brodiaea* spp.

- ◆ *Brodiaea terrestris* **subsp. t.**: Scape < pedicels; perianth tube narrowly bell-shaped; staminodia leaning toward or appressed to, > stamens (vs. ▲).
- ◆ *Bromus arenarius*: Lwr glume 7–10 mm; lemmas leathery, lemma awn from 1.5 mm+ below tip.
- ◆ *Bromus carinatus* **var. c.**: Spikelets strongly flattened; lemma veins 7, obscure, lemma awn 8+ mm. Several ecotypes occur locally. Study needed.
- ◆ *Bromus carinatus* **var. marginatus**: Same as above, but lemma awn gen to 7 mm.
- ◆ *Bromus catharticus* **var. c.**: Spikelets strongly flattened; lemma veins 9–11, easily visible, lemma awn to 3.5 mm (vs. ▼).
- ◆ *Bromus catharticus* **var. elatus**: Same as above, but lemma awn 6+ mm and spikelets plumper.
- ◆ *Bromus commutatus*: Infl spreading; lemmas leathery, lemma awn from < 1.5 mm below tip.
- ◆ *Bromus diandrus*: Lemmas 18–35 mm, lemma awn 30+ mm long.
- ◆ *Bromus grandis*: Upper glume 3-veined. Woodland, forest.
- ◆ *Bromus hordeaceus*: Infl gen dense; lemmas papery, veins distinctly raised. One of the main ingredients of Santa Cruz erosion-control mix.
- ◆ *Bromus inermis*: Rhizomatous perennial.
- ◆ *Bromus japonicus*: Lower glume 4–7 mm; lemmas leathery, lemma awn from 1.5 mm+ below tip.
- ◆ *Bromus laevipes*: Perennial. Lower glume 3-veined, upper glume 5-veined, glumes glabrous (see *B. pseudolaevipes*). Woodland, brushy slopes.
- ◆ *Bromus madritensis* **subsp. m.**: Infl dense, branches erect to ascending. Most branches visible, occasionally > spikelets; mature florets not overlapping (vs. ▼).
- ◆ *Bromus madritensis* **subsp. rubens**: Infl dense, branches obscure, < spikelets; mature florets overlapping (vs. ▲).
- ◆ *Bromus maritimus*: Like *B. carinatus*, but infl dense, spikelets overlapping. Coastal bluffs, dunes (NC).
- ◆ *Bromus pseudolaevipes*: Same as *B. laevipes* but w/ at least some hair on glumes.
- ◆ *Bromus racemosus*: Infl narrow; lemmas leathery; lemma awn from < 1.5 mm below tip.
- ◆ *Bromus sterilis*: Panicle branches bearing 1–3 spikelets; lemmas 13–20 mm, lemma awn 15–30 mm.
- ◆ *Bromus tectorum*: Longer panicle branches bearing 4+ spikelets; lemmas 9–13 mm, lemma awn 8–18 mm.
- ◆ *Bromus vulgaris*: Perennial; drooping panicles; lwr glume 1-veined. Woodland.

~C~

- ◆ *Cakile edentula*: Lower fr segment hornless; petals to 3 mm wide or 0 (vs. ▼). Formerly considered native. Several old records: nc & sc. TJM2: Now “less common in CA, being replaced by *C. maritima*.”
- ◆ *Cakile maritima*: Lower fr segment horned; petals 3+ mm wide (vs. ▲).

- ◆ *Calamagrostis koelerioides*: Rhizomes short, thick, pl appearing cespitose; lf sheath collar w/ few or no hairs (vs. *C. rubescens*). Only recorded in North County.
- ◆ *Calamagrostis nutkaensis*: Robust, cespitose; lf blade flat, 4–10 (occ 20) mm wide; lf collar smooth; callus hairs 2+ mm long. Moist areas. Extirpated from Camp Evers (sv) and Quail Hollow Ranch C. P. (slv).
- ◆ *Calamagrostis rubescens*: Long-rhizomatous, forming large colonies; lf sheath collar hairy (vs. *C. koelerioides*). Drier areas. “Typically flowers only following disturbance: fire, landslides, canopy removal, etc.” — James A. West
- ◆ *Calandrinia breweri*: Fr gen > calyx (vs. ▼). Burns, sandy chaparral openings.
- ◆ *Calandrinia ciliata*: Fr gen not > calyx (vs. ▲). Grassy areas, fields.
- ◆ *Callitriche heterophylla* var. *bolanderi*: Fr ± sessile, margin wings 0 or only above middle.
- ◆ *Callitriche marginata*: Fr pedunculate, peduncle gen > fr length.
- ◆ *Callitriche palustris*: Fr ± sessile, margin winged base-to-tip.
- ◆ *Calochortus albus*: A short-statured, floriferous, lg fld form occurs nr Greyhound Rock (NC). Possibly an endemic ecotype that may deserve taxonomic recognition.
- ◆ *Calochortus luteus*: Local pls are mostly triploid and have a band of red on each petal, whereas pls from the interior of CA are mostly diploid and have a large red spot on each petal. May deserve taxonomic recognition. TJM2: Fls variable.
- ◆ *Calochortus uniflorus*: Fls lavender. Moist areas in coastal prairie.
- ◆ *Calochortus venustus*: Only one old record: slv/zs (1910). Presumably extirp.
- ◆ *Calypto bulbosa* var. *occidentalis*: Basal lf 1; fls solitary, pink and purple, lip pouch-like. Moist, forested areas. At southern edge of range here. Declining.
- ◆ *Calyptridium monandrum*: Annual; petals gen 3, pink to reddish; stamen 1. Burns, open areas in sandy soil. Single pl found in Pajaro Hills (PV) in 2010.
- ◆ *Calyptridium monospermum*: Perennial; basal lvs in rosette; petals rose to white. Sandhills. Our pls have been referred to *C. umbellatum*. Not in surrounding cos.
- ◆ *Calyptridium parryi* var. *hesseae*: Annual; petals 4, gen white; stamens gen 3. Burns, open areas in sandy soil. Locally, not seen since 1950s; may be near extinction generally (only 10 of 20 total known occurrences still extant as of 2011). Genetic analysis indicates this taxon may be more closely related to *C. monandrum* than to *C. parryi*.
- ◆ *Calystegia purpurata* subsp. *p.*: County pls glabrous, therefore not referable to *C. occidentalis* subsp. *o.*
- ◆ *Calystegia sepium* subsp. *limnophila*: Reported by CLA from “along streams” and not recorded again until 2006 when rediscovered along Soquel Creek (MC).
- ◆ *Calystegia subacaulis* subsp. *s.*: Sts gen ca. 2 cm; pl hairs short, spreading to reflexed, sparse to dense. Grassland.
- ◆ *Camissonia campestris* subsp. *c.?*: Petals 5–15 mm; stigma > anthers. Mis-id? Reported by CLA from “sand hills,” and one old record: “scm” (1907). If ID correct, presumably extirpated. TJM2: Occ hybridizes w/ *C. contorta*. *Camissonia* spp.: fls gen emerge from distal part of st; fr ± cylindric; seeds shiny (vs. *Camissoniopsis* spp.).

- ◆ *Camissonia contorta*: Sts gen w/ spreading hairs; hairs on distal infls transparent; can be difficult to distinguish from *C. strigulosa*. TJM2: Putative parents of this taxon are *C. campestris* subsp. *c.* and *C. strigulosa*.
- ◆ *Camissonia strigulosa*: Sts strigulose or w/ long hairs on lower st (vs. *C. contorta*). Difficult to distinguish from *C. contorta*.
- ◆ *Camissoniopsis cheiranthifolia* subsp. *c.*: Prostrate. Coastal. *Camissoniopsis* spp.: fls emerge from base of pl; fr 4-angled (when dry); seeds dull (vs. *Camissonia* spp.).
- ◆ *Camissoniopsis hirtella*: The name used for this taxon in JHT (*Oenothera micrantha* Hornem. ex Spreng. var. *jonesii* Munz) was misapplied.
- ◆ *Camissoniopsis intermedia*: Only 1 old record: sar. More abundant to the south.
- ◆ *Campanula angustiflora*: Annual; fls pale-blue. Burns, sandy chaparral openings.
- ◆ *Campanula californica*: Perennial; corolla bell-shaped. Ancient, rich wetlands. Locally, only known from Camp Evers (sv); last recorded in 1944. Extirpated.
- ◆ *Cardamine californica*: Pls occurring in seasonally marshy sites, usually in full sun have been referred to as *C. c.* var. *integrifolia* (Nutt.) Rollins. LR designation and locs (S & SV) refer to this form.
- ◆ *Cardamine flexuosa*: Basal rosette 0; distal lfl largest. Nursery weed.
- ◆ *Cardamine oligosperma*: Stamens 6; pedicels ascending/spreading; fr sparsely hairy/glabrous, gen not appressed; seed margins 0. Non-native *A. hirsuta* may also be present, w/ stamens 4 (occ 6); pedicels erect/ascending; fr glabrous, gen appressed; seeds margined.
- ◆ *Carduus pycnocephalus* subsp. *p.*: Basal lvs 4–10 lobed; fl heads gen 2–5 per cluster (vs. ▼).
- ◆ *Carduus tenuiflorus*: Basal lvs 12–20 lobed; fl heads 5–20 per cluster (vs. ▲).
- ◆ *Carex amplifolia*: Groups 1, 5, 6. Rhizomatous; lvs broad, bluish-green, hairy. Shady, North Coastal creeks.
- ◆ *Carex aquatilis* var. *dives*: Group 8. Reported by CLA from “wet ground,” and one old record: slv (1950s).
- ◆ *Carex barbarae*: Group 8. Rhizomatous; pistillate fl bract awns bristly; perigynia 0 or lenticular, not indented, dull, gen red-spotted, faintly veined; perigynia beak-tip stout, notched, bristly. Similar to *C. obnupta*, but in drier areas. FNANM: Mature perigynia rarely produced, suggesting this taxon may be a stable hybrid, possibly between *C. obnupta* and *C. nebrascensis*.
- ◆ *Carex bolanderi*: Group 10. Loosely cespitose; gynecandrous; perigynia not winged. Common in wet areas in woodland, forest. Similar to *C. leptopoda*, but mature perigynia have longer beaks and spreading beak teeth.
- ◆ *Carex brevicaulis*: Group 2. Hairy perigynia w/ only 2 marginal nerves. Turflike.
- ◆ *Carex comosa*: Groups 4, 5, 6. Loosely cespitose; sts to 1 m. Only recorded from White’s Lagoon (NM). Wet areas.
- ◆ *Carex cusickii*: Groups 7, 9. Cespitose; androgynous spikelets; perigynia dark-brown to black. Boggy areas. Only four records. Camp Evers occurrence (sv) extirpated; last reported in 2013 from Eureka Canyon Rd. (NM/PV).

- ◆ *Carex densa*: Group 9. Cespitose; congested, androgynous spikelets; perigynia medium-brown. Common in moist areas.
- ◆ *Carex divulsa* subsp. *d.*: Group 9. Cespitose; androgynous spikelets. A Eurasian species widely sold in error as *C. tumulicola* for use in landscaping. Escaping.
- ◆ *Carex echinata* subsp. *phyllomanica*: Group 10. Marshy areas. Only recorded from Camp Evers (sv). Extirpated. At southern edge of range here; not recorded in surrounding counties.
- ◆ *Carex exsiccata*: Group 5. Pond margins. Only recent record from SLV (2007).
- ◆ *Carex globosa*: Group 2. Loosely cespitose; lowest pistillate spikelets arising among basal lvs; perigynia hairy, w/ many, distinct nerves. Woodland, Sandhills. Survives in drier habitats than any other local *Carex*.
- ◆ *Carex gracilior*: Groups 11C, D, H. Cespitose; gynecandrous; infl nodding. Moist soil. Easily confused w/ *C. harfordii* and *C. subbracteata*.
- ◆ *Carex gynodynamis*: Group 1. Loosely cespitose; lvs hairy, lf blade 3–9 mm wide; perigynia hairy, purple-splotched, red-dotted. Moist areas, woodland.
- ◆ *Carex harfordii*: Groups 11D, F, H. Variable. Cespitose; gynecandrous; thin-textured perigynia, w/ veins visible on both surfaces and gen reaching beak (vs. *C. subbracteata*). Shows interesting extremes and unusual features in NC & S.
- According to James A. West, who has been studying these pls for many years, the Swanton sedge complex consists of at least two separate entities: *C. "gianonei"* and *C. "nitidicarpa,"* along with the "forma imperfecta" – pls that are pistillately sterile but staminate functional. The Swanton area seems to be at the center of distribution for the complex, but pls showing similar characteristics extend north into San Mateo Co. and south to at least Point Lobos in Monterey Co. Pls appear to belong to Section Ouales, but differ from members of that section in the following characters:
- 1) spikelets may be either androgynous or gynecandrous, sometimes on the same pl or within the same infl;
  - 2) the infl is often condensed-paniculate rather than racemose, as in *C. densa* and other members of Section Multiflorae;
  - 3) pls often produce spikelets on long-filiform stalks, a characteristic of sections Montanae and Bicolores;
  - 4) pls often produce vegetative plantlets from nodes on the culms that can take root and grow. Similar to those produced by *Agrostis* spp., these are, as far as known, not produced by any species of *Carex* or other Cyperaceae in CA.
- For more information, see Mr. West's essay entitled "Traversing Swanton Road."
- ◆ *Carex hassei*: Groups 4, 8. Marshes. 1 old record: Camp Evers (sv) (1944). Extirp.
- ◆ *Carex hendersonii*: Group 4. Coastal forests. Only recorded from slv (1962) & PV (most recently in 2005). PV records may be southernmost for species.
- ◆ *Carex leptopoda*: Group 10. Loosely cespitose; gynecandrous; perigynia not winged. Moist, wooded areas. Similar to common *C. bolanderi*, but spikelets fewer and small and mature perigynia have shorter beaks and beak teeth.
- ◆ *Carex luzulina*: Groups 2, 4. Wet areas. Only one old record: slv (1957).
- ◆ *Carex nudata*: Group 8. Cespitose. Streambeds below high-water mark.
- ◆ *Carex obnupta*: Group 8. Rhizomatous, bed-forming; pistillate fl bract awns gen

- entire, membranous; perigynia shiny, dk-brown, veins/red spots 0, often indented on side(s); beak teeth 0 or tiny (vs. *C. barbarae*). Wet areas in dense forest.
- ◆ *Carex pachystachya?*: Group 11H. Moist meadows. If ID correct, only one record: slv (1955). Can be confused with *C. subbracteata*.
- ◆ *Carex pellita*: Groups 1, 2. Rhizomatous; lvs hairy, keeled; perigynia hairy. Moist areas. Only two old records: slv (1944 & 1950).
- ◆ *Carex praegracilis*: Group 7. Rhizomatous; occasionally dioecious. Marshy areas. Still common in SB; extirpated from Camp Evers (sv).
- ◆ *Carex saliniformis*: Group 8. Rhizomatous. Thought to be extirpated in County (extirpated from Camp Evers [sv]) until several colonies were discovered in 2000 in forested areas on the UCSC campus (BLM). At southern edge of range here.
- ◆ *Carex schottii*: Group 8. Cespitose. Wet areas. Only one old record: Watsonville (pv) (1928).
- ◆ *Carex serratodens*: Groups 4, 6. Cespitose. Wet meadows. Only recorded from a marshy area at Bonny Doon Ecological Reserve and at Cusick Meadow (NM).
- ◆ *Carex simulata*: Group 7. Long-rhizomatous; often dioecious. Marshy areas. Can be confused w/ *C. praegracilis* in our area. Extirpated from Camp Evers (sv) & one record from Lucille's Court Meadow (SLV) (1998). At southern edge of range here; not recorded in surrounding counties.
- ◆ *Carex spissa*: Groups 2, 4, 5, 6. Cespitose to rhizomatous. One report: SLV (2013).
- ◆ *Carex subbracteata*: Groups 11D, F, H. Cespitose; gynecandrous. Differs from *C. harfordii* in having thicker perigynia walls and perigynia veins (if present) that reach only to the top of the achene, if that.
- ◆ *Carex subfusca*: Groups 11F, G, H. Cespitose; gynecandrous; pale infl; small perigynia (2.3–3.5 mm long). *C. teneraeformis* MacKenzie (now synonymized w/ *C. s.*) has been recorded from moist areas in redwood forest in slv (see JHT). According to recent genetic work, *C. t.* may still represent a valid taxon.
- ◆ *Carex tumulicola*: Group 9. Loosely cespitose; androgynous; perigynia beak 1.2–3 mm, teeth reddish, tip notched. Variable. Meadows, wooded areas.
- ◆ *Carex utriculata*: Groups 4, 5. Rhizomatous. Only one old record from marsh at Camp Evers (sv) (1944). Extirpated. This is perhaps the southernmost coastal record for species; not recorded in adjacent counties.
- ◆ *Carpobrotus chilensis*: Fls bright-pink; lvs short, edges rounded (vs. ▼). Formerly believed to be native along CA coast. Not invasive, but hybridizes with *C. edulis*, and progeny are invasive.
- ◆ *Carpobrotus edulis*: Fls yellowish, aging pink; lvs long, edges sharp (vs. ▲). Invasive, as are hybrids w/ *C. chilensis*.
- ◆ *Castilleja affinis* subsp. *a.*: Pl bristly-puberulent. The common inland paintbrush, nearly always red-fld, except on coast where it intergrades w/ *C. wightii*.
- ◆ *Castilleja ambigua* subsp. *a.*: Infl 3–4 cm wide; bract lobes tipped yellow. Coastal prairie. Only documented from UCSC campus and environs (BLM).
- ◆ *Castilleja attenuata*: Infl 1–2 cm wide; corolla not widening distally; bract lobes tipped white or pale-yellow. Grassland.

- ◆ *Castilleja densiflora* subsp. *d.*: Infl gen rose-purple; corolla beak straight, puberulent. Great regional variation in color, markings, shape of sacs, etc.; one local form has a glabrous beak. A LR form w/ bract tips cream and a vanilla scent (NC, S, & sc-x) has been called *Orthocarpus densiflorus* Benth. var. *noctuinus* (Eastw.) J. T. Howell. It hybridizes w/ *C. d.* subsp. *d.* where the two co-occur.
- ◆ *Castilleja exserta* subsp. *e.*: Corolla beak hooked, densely shaggy-hairy; bract tips white to purple-red. Locally, known from SV grasslands & Sandhills (ZS).
- ◆ *Castilleja exserta* subsp. *latifolia*: Infl banded light and dark; distal bract tips pale-lavender. One tiny, surviving pop in NC. Two other pops (SB & coastal dunes at Fort Ord) may also be assignable to this taxon. Deserves CRPR 1B listing.
- ◆ *Castilleja foliolosa*: Herbage white- to gray-woolly. Chaparral edges.
- ◆ *Castilleja latifolia*: Herbage gray-green to purplish; lvs ± fleshy. Only recorded from dunes and coastal scrub in SB. At northern edge of range here.
- ◆ *Castilleja minor* subsp. *spiralis*: Annual; sts simple; lvs and bracts entire, lance-linear. Marshes. 1 old record: nr Watsonville (pv) (1929). Presumably extirpated.
- ◆ *Castilleja rubicundula* subsp. *lithospermoides*: Annual; bracts green. Reported by CLA and two old records: pv (1881) & “sc” (1936). Presumably extirpated.
- ◆ *Castilleja subinclusa* subsp. *franciscana*: Infl red and yellow. Only 1 record: s (1985). “This isolated pop differs from the type specimen in that the infls are covered with gland-tipped hairs. ... Hummingbird-pollinated.” – James A. West
- ◆ *Castilleja wightii*: Pls densely long-bristly and sticky-glandular. A complex of forms occur in NC & S that vary in fl color and other characters.
- ◆ *Caulanthus lasiophyllus*: Slopes. A more delicate, LR form w/ spreading or ascending, rather than reflexed, pods has been called *C. l.* var. *inalienus* (B. L. Robinson) Payson [JHT = *Thelypodium lasiophyllum* (Hook. & Arn.) E. Greene var. *inalienum* B. L. Robinson]; only recorded in S.
- ◆ *Ceanothus cuneatus* var. *c.*: Pl < 3 m; sts gen ascending to spreading, twigs gen gray-brown; lf tips acute to ± rounded; fls gen white (vs. ▼). Young growth often w/ toothed lvs, causing pls to be misid'd as *C. ferrisiae*, a rare serpentine endemic of Santa Clara Co. TJM2: Study needed to determine if the common, endemic buckbrush in the Santa Cruz Mtns. [JHT = *C. c.* var. *dubius* J. T. Howell], w/ lf blades 15–27 mm, 9–20 mm wide, wide-elliptic to -obovate, still deserves taxonomic recognition. Hybrids common within genus.
- ◆ *Ceanothus cuneatus* var. *ramulosus*: Pl gen < 1.5 m; sts ± arched, twigs gen brown; lf tips truncate to notched; fls gen pale-blue to lavender (occ white) (vs. ▲). Mostly in Sandhills (BDS & ZS).
- ◆ *Ceanothus dentatus*: Pl gen 0.5–1.5 m; lf blade 4–16 mm, 2–8 mm wide, glandular-papillate adaxially only near margin. Only recorded in the Aromas Red Sands (pv), most recently in 1991; probably near extirpation. More common to the south. Has been confused w/ the small-lvd form of *C. papillosus*.
- ◆ *Ceanothus foliosus* var. *f.*: Lf blade margin wavy, gland-toothed, not rolled-under; fls blue to purplish. Chaparral. Only recorded in SAR.
- ◆ *Ceanothus incanus*: Twigs rigid, thornlike, pale-gray to gray-green; lf blade widely ovate, abaxially gray-green, strigose; fls white; fr wrinkled.
- ◆ *Ceanothus integerrimus* var. *i.*: Lvs thin, 1-veined from base, lf margin entire; fls

white. Chaparral, forest. As opposed to widespread var. *macrothyrsus*, this southern Santa Cruz Mtns. endemic may be near extinction. Deserves CRPR 1B listing.

◆ *Ceanothus oliganthus* var. *sorediatus*: Sts erect; twigs flexible; abaxial lf surface pale; lvs 3-veined from base; fls blue. Chaparral ridges. More common over County line in Santa Clara Co.

◆ *Ceanothus papillosus*: Pl 1–3.5 m; lf blade 11–50 mm, 6–15 mm wide, thick, rolled-under, glandular-papillate adaxially and on margin. Hybrids w/ several species have been recorded. The small-lvd form — formerly recognized as *C. p.* var. *roweanus* McMinn — can be confused w/ *C. dentatus*.

◆ *Ceanothus rigidus*: Pl < 1.5 m; lvs opposite, entire, or teeth gen 5–9, sharp; fls usually blue to lavender (white). Central Coast endemic. Sandy areas in chaparral or pine forest. Tiny population in pv presumably extirpated (last recorded in 1986).

◆ *Ceanothus thyrsiflorus* var. *t.*: White-fl'd individuals occasional, as are intermediates between this taxon (w/ twigs gen glabrous; lf blades oblong-ovate to elliptic, w/ margins not to only partly rolled-under) and *C. t.* var. *griseus* (w/ twigs ± puberulent; lvs rounder, w/ margins rolled-under).

◆ *Ceanothus velutinus*?: Adaxial lf surface shiny, sticky; fls white. Only two old records: s (1912 & 1939). ID in question. Out of *TJM2* range for species.

◆ *Centaurium tenuiflorum*: Pls at Watsonville Airport (PV) (1994) w/ very dense, flat-topped infls and small, sessile fls key to this. A 1988 record of robust pls collected north of Soquel that branch from base, w/ lax, unbranched flwg sts and a long-peduncled fl at each node, do not key in *TJM2*. *Centaurium* is a difficult genus, recently made even more complicated by being split into two genera: *Centaurium* for the introduced spp. and *Zeltnera* for the natives. *Centaurium* spp. have stigmas 2, elliptic to ovate (vs. *Zeltnera* spp. w/ stigmas 1, 2-lobed, or 2, stigmas or lobes wedge- to fan-shaped).

◆ *Centromadia fitchii*: Disk pappus of 8–12 scales. Disturbed areas in grassland. MC pls have shortish spines while NM pls are the more typical, long-spined form. *Centromadia* spp.: Distal lvs and peduncle bracts gen spine-tipped.

◆ *Centromadia parryi* subsp. *congdonii*: Disk pappus of 3–5 scales. Long considered extirpated here (not recorded since 1909), but in 2008 a small colony was rediscovered in Watsonville Sloughs (PV) by Tim Kask.

◆ *Centromadia pungens* subsp. *p.*: Disk pappus 0. Alkali grassland. Reports/records outside of SL most likely accidental introductions that did not persist.

◆ *Cephalanthera austiniiae*: Pl white, becoming yellow or brown. Rich soil in forested areas. Only one old record: bb (1912).

◆ *Cerastium arvense* subsp. *strictum*: Perennial; petals showy; capsule ± = calyx. Moist, grassy areas. Only two reports: NM & SLV.

◆ *Cerastium fontanum* subsp. *vulgare*: Non-glandular perennial; petals inconspicuous; bract margins scarious.

◆ *Cerastium glomeratum*: ± glandular annual; bract margins not scarious.

◆ *Cercocarpus betuloides* var. *b.*: Plumose style persistent in fr. Ridgetop chaparral.

◆ *Cheilanthes cooperae*: Only recorded from a single limestone cliff in SLV. Though scattered throughout much of CA, this fern is apparently rare and quite localized. *C. intertexta* has been reported from Loma Prieta area in Santa Clara Co.

◆ *Chenopodium berlandieri* var(s).: Sepals strongly keeled abaxially. Not clear which var(s). is/are here. TJM2: Can be confused w/ *C. album*.

◆ *Chenopodium rubrum* var. *humile*: Vertical seeds subtended by calyx lobes; sts prostrate to spreading. Agricultural weed; most likely not native here.

◆ *Chlorogalum pomeridianum* var. *divaricatum*: ± prostrate or branches spreading from base; infl < 40 cm. Coastal bluffs, coastal prairie (vs. ▼).

◆ *Chlorogalum pomeridianum* var. *p.*: Pl erect; infl 50+ cm. Inland (vs. ▲).

◆ *Chorizanthe cuspidata* var. *c.?*: Sandy openings. Only one record: sb (1971); ID in question. No longer known south of San Mateo Co., although it may have once extended south to Santa Cruz on coastal headlands. Presumably extirp. if ever here.

◆ *Chorizanthe diffusa*: Fls glabrous, whitish. Yellow throat coloration distinguishes it from our other *Chorizanthe* spp.

◆ *Chorizanthe douglasii?*: Reported by CLA from "sandy ground," and one old record from "scm" (1929). Possibly a mis-id of *C. robusta* var. *hartwegii*. Extirpated.

◆ *Chorizanthe membranacea*: One old record: crr (1907). Presumably extirpated.

◆ *Chorizanthe pungens* var. *hartwegiana*: Differs from *C. p.* var. *pungens* in having perianth consistently pink and central st often erect. Open areas in Sandhills or on thin soils over mudstone. North County pls belong to this var.

◆ *Chorizanthe pungens* var. *p.*: Has sts consistently prostrate and perianth white to pink (vs. ▲); gen both colors present in any population. Open areas in sandy soil. South County pls belong to this var. Based on recent DNA analysis, it appears that *C. p.* var. *pungens* is more closely related to *C. robusta* var. *r.* than to *C. p.* var. *hartwegiana* – despite its resemblance to the latter.

◆ *Chorizanthe robusta* var. *hartwegii*: Sts erect; perianth deep-pink. Sandstone and mudstone outcrops in grassland. Formerly presumed extinct, it was rediscovered in SV in 1989. This County endemic is very different from *C. r.* var. *robusta* in habitat as well as morphology, resembling *C. douglasii* in overall appearance. Based on recent DNA analysis, however, it appears to be nearly identical to *C. pungens* var. *hartwegiana*. Unlike other members of Subsection Pungentes, this taxon lacks hammer-shaped lf tips on early lvs.

◆ *Chorizanthe robusta* var. *r.*: Sts prostrate to erect (pls in the large SB population have sts prostrate, while other populations tend toward having sts erect); perianth white to pale-pink. Sandy or gravelly openings, dunes. The two recognized vars. may be separate species. One of the two populations at Pogonip shows evidence of hybridization w/ *C. pungens* var. *hartwegiana*.

◆ *Chrysolepis chrysophylla* var. *minor*: A shrub, small tree, < 5 (occ 10) m; lf blade ± folded, margin upturned. Reports/records of *C. c.* var. *c.* (a tree to 15+ m; lf blade ± flat) this far south are questionable, and the validity of the var. itself is arguable.

◆ *Cicuta douglasii*: Fr gen round, rib width >> intervals btw ribs (vs. ▼). Wet areas.

◆ *Cicuta maculata* var. *bolanderi*: Fr gen ovate, rib width gen ≤ intervals btw ribs (vs. ▲). Coastal wetlands. Only two reports: nc & SB.

◆ *Circaea alpina* subsp. *pacifica*: Moist, forested areas. Reported by CLA, and one record: SLV (1998). Not recorded from surrounding counties.

- ◆ *Cirsium douglasii* var. *d.*: Lvs gray tomentose; corolla dark-reddish-purple. Ancient, rich wetlands. Close to extirpation locally.
- ◆ *Cirsium occidentale* var. *o.*: Fl heads broad; fls purplish; phyllary tips connected by cobwebby hairs (vs. ▼). Coastal dunes. Locally, only known from SB. Inland records questionable as to var. *TJM2*: Can intergrade with *C. o.* var. *venustum* here.
- ◆ *Cirsium occidentale* var. *venustum*: Fl heads narrower; fls bright-red; phyllary tips not conspicuously connected by network of hairs (vs. ▲). Inland. *TJM2*: Can intergrade with *C. o.* var. *o.* here.
- ◆ *Cirsium quercetorum*: Pls forming low, rounded mounds; corolla white to purple. Coastal bluffs, coastal prairie (NC & S).
- ◆ *Clarkia breweri?*: Talus slopes. Only two old records: “scm” (1929) & Loma Prieta (sar?), but on Santa Clara Co. side. Presumably extirpated if ever here.
- ◆ *Clarkia concinna* subsp. *automixa*: Woodland. 3 old records: Saratoga Summit (crr?) (1953), Loma Prieta (sar?), & “scm”. Presumably extirpated.
- ◆ *Clarkia davyi?*: In the northwest part of the County are two apparently related species of *Clarkia*, one of which is probably *C. davyi*: 1) “One [BLM, NC, S] is erect, w/ sessile to pedicellate, bicolored fls and gray-encrusted seeds; 2) the other [NC, S] is ± decumbent, w/ solid-pink, pedicellate fls and dark-brown seeds. The two taxa do not interbreed even when they co-occur. Study needed.” —James A. West
- ◆ *Clarkia purpurea* subsp. *p.*: The form here is variable w/ infl dense (vs. the two other subsp.) and fls very lg, variously marked. *TJM2* states that stigmas are exerted beyond anthers in this taxon, but in our pls stigmas are scarcely exerted beyond anthers. As of 2013, only known locally from three disjunct populations growing in coastal grassland in S, though some pls at Quail Hollow Ranch C. P. w/ dense infls approach this form. Deserves CRPR 1B listing.
- ◆ *Clarkia purpurea* subsp. *quadrivulnera*: Infl open; petals ≤ 15 mm; stigma not exerted beyond anthers (vs. ▼).
- ◆ *Clarkia purpurea* subsp. *viminea*: Infl open; petals > 15 mm; stigma exerted beyond anthers (vs. ▲).
- ◆ *Clarkia rhomboidea*: Petals gen spotted; petal claw broad, 2-lobed. Woodland. Only two records: “sc” (1881) & mc (1987)
- ◆ *Clarkia rubicunda*: Corolla bowl-shaped; ovary 4-grooved; stigma > anthers. A prostrate to decumbent form (see JHT) of the immediate coast (occurring from Marin to San Luis Obispo cos.) — w/ more crowded infls and larger, pale fls — has been called *C. r.* subsp. *blasdalei* (Jepson) H. Lewis & M. Lewis.
- ◆ *Clarkia unguiculata*: Petals clawed; ovary 8-grooved. A double-fl'd, mixed-color form is widely seeded in wildflower mixes along w/ *C. amoena* cultivars. An undescribed, compact, endemic coastal form w/ very narrow, intensely colored petals was discovered ca. 1980 at Sand Hill Bluff (nc) and shortly after disappeared in the wild. (It is still maintained in cultivation.)
- ◆ *Claytonia exigua* subsp. *e.*: Cauline lvs free or ± fused on one side; petals 2–5 mm. Subsp. *glauca* (cauline lvs fused into ± disk; petals ± 2 mm) may be here, too.
- ◆ *Claytonia parviflora* subsp. *p.*: Basal lvs > 3× longer than wide, linear; cauline lvs fused into ± disk. *TJM2*: Variable; intergrades w/ *C. perfoliata* complex.

◆ *Claytonia parviflora* subsp. *viridis*: As above but cauline lvs gen free. TJM2: Intergrades w/ *C. rubra*.

◆ *Claytonia perfoliata* subsp. *mexicana*: Basal lvs < 3× longer than wide, deltate to reniform, lf tips mucronate; cauline disk angles gen 2, short-pointed. TJM2: Subsp. difficult; a highly variable complex; intergrades w/ *C. p.* subsp. *perfoliata*, *C. parviflora*, and *C. rubra*.

◆ *Claytonia perfoliata* subsp. *p.*: Basal lvs < 3× longer than wide, elliptic to deltate, tips obtuse to acute; cauline lvs gen round or ± obtuse-angled. In S, “highly variable in regards to stature, foliar and infl gestalt, calyx color/pattern, and corolla color.” — James A. West TJM2: Hybridizes w/ *C. perfoliata* subsp. *mexicana*, *C. parviflora*, and *C. rubra*.

◆ *Claytonia rubra* subsp. *depressa*: Basal lvs < 3× longer than wide, elliptic to obovate, base wedge-shaped; petioles often red. Locally, found in SV grasslands on a north-facing slope growing w/ a rich mix of annuals. Possibly elsewhere. TJM2: Variable; can intergrade w/ *C. parviflora* and *C. perfoliata*.

◆ *Claytonia rubra* subsp. *r.*: As above but basal lvs diamond-shaped to deltate, base truncate; petioles or whole pl often red. Chaparral, under shrubs.

◆ *Claytonia sibirica*: Perennial (occ annual); petals 6–12 mm, pink or white. Moist areas in woodland, along streams. At southern edge of range here.

◆ *Clematis lasiantha*: 3–5 lflets; infl gen 1-fl'd, flwg January–June. Chaparral. (vs. ▼)

◆ *Clematis ligusticifolia*: 5+ lflets; infl > 1-fl'd, flwg June–Sep. Streamsides. (vs. ▲)

◆ *Collinsia bartsiiifolia* var. *b.*: Corolla white to pale-lavender; upper lip ± = lower lip. Only documented in Zayante Sandhills (ZS).

◆ *Collinsia heterophylla* var. *h.*: Proximal pedicels < calyx (vs. ▼). County pls gen pale-fl'd compared to showier inland forms. Grows w/ *C. multicolor* in NC & S, “but does not seem to hybridize even though visited by at least two shared pollinating vectors, both members of the genus *Bombus*.” — James A. West

◆ *Collinsia multicolor*: Proximal pedicels >> calyx, distal pedicels ± = calyx (vs. ▲); corolla 2-lipped, white and lavender to blue-purple. Moist, shady slopes. Only recorded in NC & S, where there are at least 5 extant pops as of 2013.

◆ *Collomia grandiflora*: Lf entire; corolla 2 cm+, pale-apricot. Disturbed areas.

◆ *Corallorhiza maculata* var. *m.*: Lip with 2 lateral lobes, spotted (vs. *C. striata*); lip ± not widening to tip (vs. ▼).

◆ *Corallorhiza maculata* var. *occidentalis*: Same as above, but lip widening to tip. TJM2: Typically blooms 2–4 weeks earlier than var. *maculata*. A common, unspotted form — which has been called forma *immaculata* (M. Peck) J. T. Howell — is now referable to this taxon. Corolla can vary from deep-red to yellowish w/ white lip.

◆ *Corallorhiza striata*: Lip entire, striped (vs. *C. maculata*), red to purplish. A yellow form was reported in the 1970s in s. At southern edge of coastal range here.

◆ *Corethrogyne filaginifolia*: Variable. We have several forms locally (see JHT):

1) the common form (especially in ZS) has erect sts and multiple, glandular heads [= *C. f.* var. *rigida* A. Gray];

2) the form w/ prostrate sts and lg, single heads from NC [= *C. californica* DC. var. *c.*];

3) the LR, very early-flwg, prostrate form w/ nonglandular, white-tomentose involucre and single fl heads from SL [= *C. f.* var. *f.*]; and

4) a form = to *C. leucophylla* Menzies ex Jepson (w/ CRPR 3.2) has been reported from NC. According to CNPS Inventory: this form “needs taxonomic study.”

- ◆ *Cornus nuttallii*: Forest. Reported by CLA, and one 1946 record from off of Hwy 17 nr the Summit. A population of 30+ trees is apparently naturalized in SLV.
- ◆ *Cornus sericea* subsp. *occidentalis*: Lvs gen densely rough-hairy abaxially; petals 3+ mm; faces of fr stone ridged (vs. ▼). Subspecies intergrade.
- ◆ *Cornus sericea* subsp. *s.*: Lvs gen ± glabrous to strigose abaxially; petals 2–3 mm; faces of fr stone smooth (vs. ▲). Subspecies intergrade.
- ◆ *Cortaderia jubata*: Panicle elevated far above foliage; fertile infl pinkish (vs. ▼). TJM2: Pls pistillate, producing fr asexually.
- ◆ *Cortaderia selloana*: Panicle barely elevated above foliage; fertile infl whitish (vs. ▲). TJM2: Pls staminate and pistillate, producing fr sexually.
- ◆ *Crassula aquatica*: One fl per node; petals > sepals. Vernal pools.
- ◆ *Crassula connata*: Fls 2 per node; fl parts in 4s, rounded (vs. ▼).
- ◆ *Crassula tillaea*: Fls 2 per node; fl parts in 3s, pointed (vs. ▲).
- ◆ *Crepis capillaris*: Involucre 5–8 mm; fr all ± beakless.
- ◆ *Crepis setosa*: Involucre 8–11 mm; fr all beaked.
- ◆ *Crepis vesicaria* subsp. *taraxicifolia*: Involucre 8–12 mm; fr all beaked or outer fr beakless, inner fr narrowed but not beaked. Increasingly common.
- ◆ *Cressa truxillensis*: Alkaline areas. Only recorded in SL, most recently in 2004.
- ◆ *Crocathemum scoparium* var. *vulgare*: [TJM2 = *Helianthemum* s.] Fire-follower.
- ◆ *Cryptantha clevelandii* var. *florosa*: This and *C. micromeres* are the commonest *Cryptantha* spp. locally. *Cryptantha* spp.: Nutlet adaxially grooved distal to scar; scar raised or gen not (vs. *Plagiobothrys* spp.).
- ◆ *Cryptantha flaccida*: Sts appressed-hairy; nutlet 1, lance-ovate, smooth, shiny. Well-drained soils, rocky areas.
- ◆ *Cryptantha leiocarpa*: Sts prostrate. Sand dunes. Only recorded in SB.
- ◆ *Cryptantha micromeres*: Nutlets 4, 1 ± > others, 3 smaller ones tubercled, lgr one smooth. This and *C. clevelandii* var. *florosa* are the commonest *Cryptantha* spp. locally. The name *Johnstonella* m. (A. Gray) Hasenstab & M. G. Simpson has been recently (2012) applied to this taxon.
- ◆ *Cryptantha microstachys*: Sts ± red-brown; nutlet gen 1, lanceolate, smooth, shiny. Burned or open, disturbed areas in chaparral, woodland.
- ◆ *Cryptantha muricata* var. *jonesii*: Nutlets 3–4, papillate. Ridgetop chaparral.
- ◆ *Cryptantha torreyana* var. *pumila*: Nutlets 3–4, smooth. Grassy areas away from immediate coast. Some pls in S approach *C. t.* var. *torreyana*.
- ◆ *Cuscuta campestris*: *Cuscuta* spp. are stem parasites. Only one record: PV (2004).
- ◆ *Cuscuta subinclusa*: JHT: Commonest, upland species of *Cuscuta* in the Santa Cruz Mtns., parasitic on a large number of pls.

- ◆ *Cyperus difformis*: Clumping annual; basal lf blades present; fl heads dense, spheric; fl bract < 1.1 mm, obtuse, brownish-purple.
- ◆ *Cyperus eragrostis*: Clumping perennial; spikelets 20–70, 5–20 mm; fl bracts 4–8, beige, lance-ovate, acute; fr body length ± = width. Weedy.
- ◆ *Cyperus erythrorhizos*: Robust, clumping annual; roots reddish; spikelets 20–150, 3–11 mm; fl bracts 6–30, light-brown, red-speckled; fr body distinctly mucronate, length > width.
- ◆ *Cyperus esculentus* var. *leptostachyus*: Perennial; culms solitary; stolons tuberous; fl bracts yellow to brown.
- ◆ *Cyperus involucratus*: Papyrus-like perennial to 2 m; basal lf blades 0; spikelets in stellate clusters.
- ◆ *Cyperus laevigatus*: Perennial; stigmas 2; spikelets flat; fr 2-sided, fr face adjacent to spikelet axis (vs. ▼). Alkaline areas. Only one old record: sl (1929). Apparently extirpated by filling of Soda Lake. Population disjunct from southern CA.
- ◆ *Cyperus niger*: As above but fr edge adjacent to spikelet axis; fl bracts light-brown to black. Marshes, roadside ditches.
- ◆ *Cyperus squarrosus*: Annual; fl bracts strongly outcurved, tip bristled. Moist, disturbed areas. Reported by CLA, and 2 records: “sc” (1881) & Harkins Slough (PV).
- ◆ *Cyperus strigosus*: Perennial; rhizomes 0; st base corm-like; spikelet falling as a unit. Moist, disturbed areas.
- ◆ *Cypridium fasciculatum*: Lvs 2, opposite (vs. ▼). Moist, forested areas. Last recorded in 1967. Presumably extirpated. At the southern edge of its range here; has always been rare in County.
- ◆ *Cypridium montanum*: Lvs > 2, alternate (vs. ▲). Forest. Reported by CLA and others; last recorded in 1946. Presumably extirpated. At the southern edge of its coastal range here; has always been rare in County.
- ◆ *Cystopteris fragilis*: Moist, shaded areas.
- ◆ *Cytisus scoparius*: Branches gen 5-angled; fr glabrous except margin (vs. ▼).
- ◆ *Cytisus striatus*: Branches gen 8–10-angled; fr densely white-hairy (vs. ▲).

~D~

- ◆ *Danthonia californica*: Principal native perennial bunchgrass of intact coastal prairie. Cleistogamous fr gen found at lower nodes of culm enclosed in lf sheath. These are generally larger and more numerous than chasmogamous fr (which are produced in terminal panicles) and may lack lemmas and paleas. Production of cleistogamous fr seems to increase as grazing pressure intensifies.
- ◆ *Datura stramonium*: Annual; corolla length 6–9 cm, glabrous, white or pale-bluish-purple, corolla lobes 8–10 mm (vs. ▼). Orchard weed.
- ◆ *Datura wrightii*: Annual or perennial; corolla length 15–20 cm, puberulent, white, corolla lobes 10–20 mm (vs. ▲). Sandy or gravelly soils. Only one report: Pajaro River (pv) (1980). TJM2: May have been an early, Spanish introduction.
- ◆ *Deinandra kelloggii*: Ray fls 5, deep-yellow; disk fls 6. Grassland. One report: pv.
- ◆ *Delphinium californicum* subsp. *c.*: Sts gen > 1 m; sepals generally pale-lavender. Coastal scrub.

- ◆ *Delphinium decorum* subsp. *d.*: Sts to 35 cm; sepals gen not reflexed, dark-blue-purple; fls few. Coastal grassland; North County.
- ◆ *Delphinium hesperium* subsp. *h.*: Sepals spreading; infl crowded; pedicels puberulent; lower petals hairier adaxially than abaxially; proximal st striate. Grassy slopes. Our pls intermediate between this taxon (w/ sepals dark-blue-purple) and *D. h.* subsp. *pallescens* (w/ sepals white to pink or light-blue).
- ◆ *Delphinium parryi* subsp. *p.*: Sepals gen spreading; lower petals equally hairy adaxially and abaxially; proximal st not striate. Only recorded from Sandhills (ZS).
- ◆ *Delphinium patens* subsp. *p.*: Pedicels gen glabrous; sepals reflexed, light- or dark-blue; lower petals gen hairier adaxially. Grassland, woodland; inland.
- ◆ *Deschampsia cespitosa* subsp. *c.*: Infl open. Wet meadows, gen inland (vs. ▼).
- ◆ *Deschampsia cespitosa* subsp. *holciformis*: Infl compact. Wet meadows, gen coastal (vs. ▲).
- ◆ *Deschampsia danthonioides*: Annual; basal lvs not tufted. Vernal moist areas.
- ◆ *Dichelostemma capitatum* subsp. *c.*: Infl umbel-like; perianth tube not narrowed above ovary; fls blue; stamens 6, unequal; filaments forming crown-like tube; staminodia 0.
- ◆ *Dichelostemma congestum*: Infl raceme-like; perianth tube ± narrowed above ovary; fls blue-purple; stamens 3, equal; staminodia notched. Woodland, grassland. Documented twice: slv (1950s) & mc (1985). At southern edge of range here.
- ◆ *Dichelostemma multiflorum*: Infl umbel-like; perianth narrowed above ovary; fls pink to blue-purple; stamens 3, equal; staminodia truncate to rounded. Woodland, grassland. Only one record: mc (1988). Extirpated. At southern edge of range here.
- ◆ *Dichondra donelliana*: Sts 1–2 mm thick; calyx in fr  $\geq 2.5$  mm (vs. ▼). Coastal grassland (mc & S). Can be confused w/ non-native *D. micrantha*.
- ◆ *Dichondra micrantha*: Sts < 1 mm thick; calyx in fr < 2.5 mm. Lawn pl (vs. ▲).
- ◆ *Diplacus aurantiacus*: [TJM2 = *Mimulus aurantiacus* var. *a.*] Common orange-fl shrub of coastal scrub, chaparral. *Diplacus* spp. have parietal placentation; fr apically attenuate, fr wall glabrous/eglandular; pedicel < calyx or ± 0; calyx w/ midvein angled or wing-angled.
- ◆ *Diplacus congdonii*: [TJM2 = *Mimulus c.*] Corolla magenta, < 3 cm long, lower lip obvious. Forest openings (slv); last recorded in 1954. Cleistogamous fls produced when pl is stressed.
- ◆ *Diplacus douglasii*: [TJM2 = *Mimulus d.*] Corolla limb magenta, throat striped gold and purple, reduced lower lip. Meadows (SLV). Pls often produce cleistogamous fls later in the season.
- ◆ *Diplacus rattanii*: [TJM2 = *Mimulus r.*] Corolla pink to magenta. Chaparral margins in Sandhills and other sandy areas. All local pls belong to what has been called *Mimulus r.* A. Gray subsp. *decurtatus* (A. L. Grant) Pennell (w/ CRPR 4.2). May again be recognized as a separate taxon (either as a full species or subsp.).
- ◆ *Dipsacus fullonum*: Receptacle bract ending in straight, ± flexible spine (vs. ▼).
- ◆ *Dipsacus sativus*: Receptacle bract ending in recurved, stiff spine (vs. ▲).
- ◆ *Distichlis spicata*: Coastal, stoloniferous pls w/ congested spikelets have been called *D. s.* var. *stolonifera* Beetle; those at SL (not stoloniferous and w/ spikelets

not conspicuously congested) have been called *D. s. var. nana* Beetle; the latter is LR. See JHT.

◆ *Dittrichia graveolens*: Camphor-scented annual; branching pattern Christmas tree-like; sts reddish proximally; corolla yellow; phyllaries graduated; fall-flwg.

◆ *Drymocallis glandulosa* var. *wrangelliana*: Lateral lflft pairs gen 3; petals cream or pale-yellow. *Drymocallis* spp. have terminal lflft distinct; stamens 20+ (vs. *Horkealia* spp.).

◆ *Dudleya caespitosa*: *D. farinosa* occurs to north and south, but is not present in County. TJM2: *D. c.* is part of a difficult complex. (See note for *D. lanceolata/palmeri*)

◆ *Dudleya cymosa* subsp. *c.*: Rocky areas at higher elevations. (See note ▼.)

◆ *Dudleya lanceolata/palmeri*: Local *Dudleyas* assort into 3 or 4 main categories: the common, thick-leaved, yellow-fl'd *D. caespitosa* along the immediate coast (and farther inland in BLM & S); the rare, small, reddish-fl'd *D. cymosa* (mostly > 2000 ft); and a variable group of pops occupying an intermediate lowland zone from SLV & ZS southeastward to PV. These belong to the *D. lanceolata/palmeri/caespitosa* complex, and vary gradually from orange-fl'd in northwest to yellow-fl'd in southeast of County. Points of view differ as to whether the plants of the north represent *D. p.* (based on key characters, particularly st dimensions) or *D. l.*, while others represent forms of *D. l.* or *D. c.*, or hybrids. —Stephen McCabe & R. Morgan

### ~E~

◆ *Ehrendorferia chrysantha*: Fls yellow. Ridgetop chaparral. Fire-follower.

◆ *Ehrharta calycina*: Glumes purplish at maturity; sterile lemma soft-hairy (vs. ▼). Still uncommon here; quite invasive elsewhere.

◆ *Ehrharta erecta*: Glumes greenish at maturity; sterile lemma ± glabrous, upper transversely wrinkled (vs. ▲). Extremely invasive and spreading rapidly, even in deeply shaded areas. Caryopsis only viable for one year.

◆ *Elatine brachysperma*: Sts gen 1–5 cm; lvs opposite; fls 1 per node; petals 3; stamens 3, opposite sepals. Muddy edges of vernal pools. Often overlooked.

◆ *Eleocharis acicularis* var. *a.*: Weakly rhizomatous perennial; sts to 60 cm, 0.2–1 mm diam, often 3–4 angled; stigmas and stamens 3; fr 3-sided or round.

◆ *Eleocharis engelmannii* var. *e.*: Two records: Pinto Lake (pv) (1958 & 1976). TJM2: Confusion exists between this taxon, *E. obtusa*, and *E. ovata*.

◆ *Eleocharis macrostachya*: Long-rhizomatous perennial; sts to 100 cm, 0.2–4 mm diam; stigmas 2; fr 2-sided, tubercles pyramidal. Most common spikerush locally.

◆ *Eleocharis montevidensis*: Wet areas. Three records/reports: blm & PV.

◆ *Eleocharis ovata*: Two records: Pinto Lake (pv) (1950s). TJM2: Pinto Lake is one of possibly three locations in CA for this species.

◆ *Eleocharis parishii*: Only two old records: Pajaro River (pv) (1949 & 1957).

◆ *Eleocharis radicans*: Only two old records: Pinto Lake (pv) (1944 & 1958).

◆ *Eleocharis rostellata*: Marshes. Two old records: Watsonville Sloughs (pv) (1957) & Camp Evers (sv) (1957). Camp Evers occurrence extirpated.

◆ *Elymus californicus*: Glumes 0 or << lowest lemma. A robust grass that occurs in moist coastal forest and woodland. At southern edge of range here.

- ◆*Elymus condensatus*: Robust, cespitose perennial; sts to 35 dm; infl panicle-like. Documented from MC, NM, & PV.
- ◆*Elymus glaucus* subsp. *g.*: Lemma awn gen 20+ mm (vs. ▼). Variable. Several distinct forms occur locally — including what has been called *E. g.* subsp. *jepsonii* (Burt Davy) Gould, w/ green, hairy lf sheaths and blades (vs. *E. g.* subsp. *g.*, w/ glaucous, glabrous or scabrous lf sheaths and blades) (see TJM1).
- ◆*Elymus glaucus* subsp. *virescens*: Lemma awn to 7 mm (vs. ▲). “A distinctive, genetically stable form occurs on bluffs near Greyhound Rock [NC] w/ reduced stature, a densely cespitose habit, and virtually awnless glumes and lemmas that tends towards this taxon — or may be something different.” — James A. West
- ◆*Elymus mollis* subsp. *m.*: Rhizomatous; lvs broad, grayish; glumes rounded, middle of glume 3–5 mm wide (vs. *E. × vancouverensis*). Beaches.
- ◆*Elymus multisetus*: Infl axis breaking apart w/ age; glumes split into 3–9 awn-like divisions. Open, sandy to rocky areas, grassy slopes. A small colony of a hybrid w/ *E. glaucus* subsp. *g.* has been documented from sv (early 1990s).
- ◆*Elymus triticoides*: Rhizomatous; lemma awn to 3 mm. Often saline meadows. Extremely variable; nearly every clone is unique (green or glaucous, sparsely or densely fld, short or tall, fertile or sterile, narrow-lvd or broad-lvd, etc.).
- ◆*Elymus × vancouverensis*: Rhizomatous; glumes keeled, middle of glume 1–2 mm wide (vs. *E. mollis*). A sterile hybrid between *E. triticoides* and *E. mollis*. Beaches. At southern edge of range here.
- ◆*Emmenanthe penduliflora* var. *p.*: Often found following fire or disturbance.
- ◆*Enemion occidentale*: Woodland, forest. Lvs compound; fr a follicle, ovules  $\geq 2$  per ovary. Only one old record: bb (1941).
- ◆*Epilobium brachycarpum*: Annual, glabrous, sts peeling proximally; lvs gen early deciduous. Drier areas (vs. *E. ciliatum*). Presumably native locally but mostly ruderal. JHT recognizes four named vars. and formas [JHT = *E. paniculatum* Torrey & A. Gray] in our area. The two most common [= *E. p.* var. *p.* and *E. p.* forma *adenocladon* Hausskn.] have calyx tubes 2–3 mm long, w/ capsules  $\pm$  glandular-pubescent in the former and densely glandular-pubescent in the latter.
- ◆*Epilobium ciliatum* subsp. *c.*: Perennial; sts w/ strigose lines, gen not exfoliating; wetter areas (vs. *E. brachycarpum*); petals 2–6 mm and lvs reduced distally (vs. ▼).
- ◆*Epilobium ciliatum* subsp. *watsonii*: Longer petals (to 14 mm) than above, fls darker pink, and lvs not as reduced distally.
- ◆*Epilobium hallianum*: Small, underground, bulb-like shoots (= turions). Rare in ancient, rich wetlands; extirpated from Camp Evers (sv); still extant in S as of 2011. Not recorded from surrounding counties.
- ◆*Epipactis gigantea*: Moist places, streams. Only reported from Laguna Creek (BLM) & the San Lorenzo River (SC/SLV) (1990s).
- ◆*Equisetum arvense*: Sts dimorphic; unbranched, nonphotosynthetic, fertile sts produced 1st; sterile sts green, whorled, gen 5 mm or < in diam; fertile st sheath teeth 6–10; sterile st sheath teeth 6–14 (vs. *E. telmateia* subsp. *b.*).
- ◆*Equisetum × ferrissii*: Sts annual to perennial, monomorphic; cone tip short, sharply pointed; sheaths often w/ dark bands; spores white, misshapen. Hybrid between *E. hyemale* subsp. *affine* and *E. laevigatum*.

◆ *Equisetum hyemale* subsp. *affine*: Sts perennial, monomorphic, gen scabrous; cone tip pointed; sheaths gen w/ 2 dark bands; spores green, spheric.

◆ *Equisetum laevigatum*: Sts annual, slender, monomorphic; cone tip blunt; sheath w/ 1 dark band at top. Mostly ruderal.

◆ *Equisetum telmateia* subsp. *braunii*: Like *E. arvense*, but w/ sterile sts stouter and taller, 5–20 mm in diam; fertile st sheath teeth 20+; sterile st sheath teeth 14+. Our most common *Equisetum* sp.

◆ *Eragrostis hypnoides*: Mat-forming annual, rooting at nodes; infl elliptic. Only recorded from pv: Pinto Lake (1960) & Merk Rd. pond (1977).

◆ *Eragrostis mexicana* subsp. *virescens*: Widely spreading to erect, warm-season annual; infl linear to lance-linear. Probably not native locally; behaves like a weed.

◆ *Eragrostis pectinacea* var. *p.*: Probably not native locally; only one record (2006).

◆ *Ericameria arborescens*: Aromatic summer- to fall-blooming shrub; lvs linear; fls yellow, clustered, ray fls 0. Chaparral.

◆ *Ericameria ericoides*: Two forms formerly recognized (see JHT): the Sandhills form [= *Haplopappus e.* (Less.) Hook. & Arn. subsp. *blakei* C. Wolf], w/ fr soft, silky-hairy; and the coastal form [= *H. e.* subsp. *e.*] w/ fr glabrous.

◆ *Erigeron bonariensis*: Pl to 1 m, gray-hairy; central st < branches; lf 10+ mm wide; fl heads disciform; phyllary midveins not red-brown when dry (vs. ▼). Mostly a sidewalk weed.

◆ *Erigeron canadensis*: Pl to 2 m, not gray-hairy; central st gen > branches; lf 4–10 mm wide, ± glabrous in age; fl heads obscurely radiate; phyllary midveins red-brown when dry (vs. ▲). Local nativity uncertain; weedy. (See *E. sumatrensis*.)

◆ *Erigeron foliosus* var. *franciscensis*: Ray fls 28–48; phyllaries strongly graduated, phyllary midveins raised, orange-resinous. Grassy slopes, oak woodland.

◆ *Erigeron petrophilus* var. *p.*: Herbage densely glandular-hairy; basal lvs absent at flwg; ray fls 0. Rocky areas on ridgetops (CRR & ER).

◆ *Erigeron philadelphicus* var. *p.*: Sts spreading-hairy; ray fls ± 150+, coiled when dry. Roadsides, areas near sag ponds in fault zone (PV & SAR).

◆ *Erigeron sumatrensis*: Robust; central st gen > branches, hairy; lvs 5–20 mm wide; fl heads disciform.

*Erigeron bilbaoanus* (E. J. Rémy) Cabrera [= *Conyza bilbaoana* E. J. Rémy, misappl.], now synonymized w/ *E. s.* (to which it bears little resemblance), is an uncommon relative of *E. canadensis*. Like *E. c.* except for purple pigment of herbage and lack of ray fls. Gen an urban weed.

◆ *Eriodictyon californicum*: Can be prolific after fires. Black powder on sts and lvs is caused by a sooty mold, *Heteroconium glutinosum*, which is currently understood to be restricted to this species; mold seemingly not present at higher elevations.

◆ *Eriogonum arborescens*: Group 4. Naturalized at Seacliff and Manresa S. B.'s.

◆ *Eriogonum fasciculatum* var. *f.*: Group 4. Differs from other vars. of *E. f.* in its low, decumbent habit. Only recorded from Aptos High School (PV) (2006).

◆ *Eriogonum fasciculatum* var. *foliolosum*: Group 4. Sparingly introduced locally; noted by JHT as occurring "near Watsonville," but "native from Monterey Co. southward."

- ◆*Eriogonum gracile* var. *g.*: Group 1. Annual; tallish, erect; fls pinkish. Sandy soil.
- ◆*Eriogonum hirtiflorum*: Group 2. Sandy or gravelly soil. Only known from area nr Eagle Rock: blm/er; last recorded in 1957.
- ◆*Eriogonum latifolium*: Group 4. One of the many forms of *E. nudum* (or vice versa according to taxonomic priority), all of which hybridize freely. Typical *E. l.* is found only on the immediate coast, w/ hybrid or intermediate individuals inland.
- ◆*Eriogonum luteolum* var. *l.*: Group 1. Annual. Pls low and spreading; basal lvs rounded, undulate; fls yellow. Known only from rocky substrates in SAR (grows in serpentine over the Santa Clara Co. line).
- ◆*Eriogonum nudum* var. *auriculatum*: Group 4. Rocky outcrops. An unpublished local form is in some ways intermediate between vars. *a.* and *decurrens* and is in other ways unique. Reaching up to 2.3 m, it is glabrous like var. *a.* but has a woody caudex, winged petioles, and grows in sandy soil like var. *d.* (see ▼); sts are more inflated and lvs larger than both vars. This form reaches its extreme in PV. If recognized as distinct, deserving of LR designation and CRPR 1B listing.
- ◆*Eriogonum nudum* var. *decurrens*: Group 4. Lf blades 1–3 cm. County endemic; Sandhills (BDS & ZS). The “typical” form has tomentose infl scapes, but pls at margins of range are glabrous like *E. n.* var. *auriculatum*.
- ◆*Eriophyllum confertiflorum* var. *c.*: Subshrub; infl w/ 3–30+ fl heads, densely clustered; rays 2–5 mm long. A rayless form has been documented.
- ◆*Eriophyllum lanatum* var. *achilleoides*: Annual to perennial; infl w/ 1–5+ fl heads; rays 6–9 mm long. Reported from SAR (2006) in chaparral in Loma Prieta area. More common over Santa Clara Co. line.
- ◆*Eriophyllum stachaedifolium*: Subshrub; infl w/ 5–15+ fl heads; rays 3–5 mm long. Coastal.
- ◆*Erodium botrys*: Lvs simple, lobed; sts short-hairy; top of mericarp w/ 0 or narrow pits above 3–4 glabrous ridges; sepals w/ prominent, reddish mucro (vs. ▼); fls showy. Common in coastal grasslands.
- ◆*Erodium brachycarpum*: As above but sts ± glandular-hairy; top of mericarp w/ roundish pits above 1–2 hairy ridges; sepals w/ short, green mucro.
- ◆*Erodium cicutarium*: Lvs pinnate; lflets deeply dissected; sepal tips bristly. Smaller fls, drier habitats than *E. botrys*.
- ◆*Erodium moschatum*: Lvs pinnate; lflets broad; sepal tips glabrous. Garden weed.
- ◆*Erysimum ammophilum*: Dunes (SB). At northern edge of range here.
- ◆*Erysimum capitatum* var. *c.*: Orange-fl'd. Open areas at higher elevations.
- ◆*Erysimum franciscanum*: The local form (NC) has been called *E. f.* var. *crassifolium* R. Rossbach. Woody at base, unlike *E. f.* [var. *f.*], and fls yellow, not cream.
- ◆*Erysimum teretifolium*: Yellow-fl'd; basal lvs threadlike. County endemic; Sandhills (BDS & ZS).
- ◆*Erythranthe androsacea*: [T]M2 = *Mimulus androsaceus*] Fls reddish-purple. Zayante Sandhills (ZS). At northern edge of coastal range here. A pale-fl'd variant reported from Quail Hollow Quarry. *Erythranthe* spp. have axile placentation; frs apically rounded to truncate.
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◆*Erythranthe arvensis*: [TJM2 = *Mimulus guttatus*] Since TJM2, along w/ the rest of *Mimulus*, the *M. guttatus* complex has been reevaluated on the basis of genetic evidence. Now referable to the genus *Erythranthe*, it has been split into several species, four of which probably occur locally (see JHT). According to JHT, *E. a.* is an annual; calyces ± truncate at top and bottom w/ glabrous sinuses. A LR, small-fl'd (corolla < 1 cm long), cleistogamous form [= *M. g.* var. *micranthus* (A. Heller) G. R. Campbell] has been synonymized with *E. a.* (rightly or not).

◆*Erythranthe floribunda*: [TJM2 = *Mimulus floribundus*] Annual; rhizomes 0; pl slimy-hairy; corolla yellow. Our local form is very different from the common interior (of CA) version. The latter is relatively robust, w/ lg, showy, red-spotted fls and grows in colonies among dry rockpiles. Ours is a more delicate, sprawling pl w/ inconspicuous fls, and gen grows singly along wooded streams. Study needed.

◆*Erythranthe grandis*: [TJM2 = *Mimulus guttatus*] JHT: Lg-fl'd perennial; corolla yellow; calyx pubescent to tomentose, 17–30 mm long. Seeps and ditches along the coast. The most familiar, showy member of the *Mimulus guttatus* segregates locally.

◆*Erythranthe guttata?*: [TJM2 = *Mimulus guttatus*] Perennial?; corolla yellow. JHT: Sts 2–13 mm in diameter, not bent; infl not coiled; calyx glabrous to sparsely pubescent; upper calyx tooth gen 2× as long as others; inland. Local status unclear.

◆*Erythranthe moschata*: [TJM2 = *Mimulus moschatus*] Rhizomatous perennial; pl glabrous to slimy-hairy, gen w/ musk scent; calyx lobes << tube; corolla yellow.

◆*Erythranthe nasuta*: [TJM2 = *Mimulus guttatus*] Yellow-fl'd annual. JHT: Sts 5–7 mm in diameter, often bent; infl often coiled when young; calyx glabrous to sparsely pubescent; upper calyx tooth gen 3× as long as others. Corolla lip often w/ a conspicuous, red blotch.

◆*Eschscholzia californica*: The coastal form (lg, yellow fls w/ orange centers) has been observed to be hybridizing w/ the non-local, bright-orange form in areas where the latter has been seeded. A County endemic, the genetically unique, Sandhills form has long, slender sts; small, purple-tinged lvs; and small, yellow fls w/ yellow vs. black filaments. Deserves taxonomic recognition.

◆*Eucalyptus camaldulensis*: Umbels of 7–11, small, white fls.

◆*Eucalyptus globulus*: Fl single, lg, sessile; capsule wrinkled.

◆*Eucalyptus viminalis*: Fls small, white, in clusters of 3; capsule smooth.

◆*Euphorbia crenulata*: Gen annual, glabrous; lvs entire to finely crenate; infl gland 2-horned; fr lobes not keeled.

◆*Euphorbia helioscopia*: Annual; sts glabrous or sparsely hairy; 5 whorled infl branches; infl gland horns 0; fr smooth.

◆*Euphorbia lathyris*: Glabrous biennial; proximal lvs sessile, opposite, 4-ranked.

◆*Euphorbia maculata*: [TJM2 = *Chamaesyce m.*] Annual; sts hairy; gland appendage scalloped, white to pink, width ± = gland width; fr evenly strigose.

◆*Euphorbia oblongata*: Perennial; sts densely hairy; proximal lvs sessile, alternate. Spreading rapidly in wooded areas, roadsides.

◆*Euphorbia pepulus*: Annual, glabrous; lvs entire; gland 2-horned; fr lobes 2-keeled.

◆*Euphorbia prostrata*: [TJM2 = *Chamaesyce p.*] Annual; sts hairy or becoming glabrous; gland appendage width >= gland width; only fr lobes hairy.

- ◆ *Euphorbia serpens*: [TJM2 = *Chamaesyce* s.] Annual, glabrous; gland appendage width  $\geq$  gland width; stipules fused into wide, membranous scale.
- ◆ *Euphorbia serpyllifolia* subsp. s.: [TJM2 = *Chamaesyce* s. subsp. s.] Annual, glabrous; gland appendage width  $<$  gland width. Disturbed areas.
- ◆ *Euphorbia spathulata*: Annual, glabrous; 3(4) whorled branches; lf margin finely toothed; infl gland horns 0; fr tubercled, especially near tip and on lobes.
- ◆ *Extriplex californica*: [TJM2 = *Atriplex* c.] Spreading to decumbent perennial; lvs lanceolate to elliptic, proximal opposite, gray-scurfy. Beaches, dunes.

## ~F~

- ◆ *Festuca arundinacea*: Robust, weedy perennial; basal lobes of lf blades prominent, hairy; lemma short-awned. Treated as *Schedonorus arundinaceus* (Schreb.) Dumort. in FNANM.
- ◆ *Festuca bromoides*: Lwr glume  $>$  half the length of upper glume (vs. *F. myuros*).
- ◆ *Festuca elmeri*: Lf blade flat; lemma very scabrous, w/ 5 distinct veins, the awn subterminal, emerging from between two small teeth (vs. *F. subulata* and *F. subuliflora*; see notes). Moist, forested areas.
- ◆ *Festuca idahoensis*: Gen densely clumped; lf blade rolled, stiff; lf sheath open at least half its length, gen green, clearly persistent, hairs not downward-pointing (vs. *F. rubra*). Only two records.  
Pls in NC & PV key to *F. roemerii* (Pavlick) E. B. Alexeev var. *klamathensis* B. L. Wilson (synonymized w/ *F. i.* in TJM2, but recognized as distinct in FNANM).  
1) *F. idahoensis*: lf blades 3–5 ribbed, adaxially pubescent or scabrous; infl branches usually somewhat spreading at maturity; vs.  
2) *F. roemerii*: lf blades 5–9 ribbed, adaxially glabrous or pubescent, sometimes scabrous; infl branches erect to slightly spreading at maturity.
- ◆ *Festuca microstachys*: The *F. m.* complex was formerly divided into several, easily distinguishable taxa (see JHT). These fall into two distinct groups:  
The first group has panicle branches spreading but spikelets appressed:  
a) *F. confusa* Piper [TJM1 = *Vulpia microstachys* var. *confusa*], w/ glumes hairy and lemmas glabrous;  
b) *F. grayi* (Abrams) Piper [TJM1 = *V. m.* var. *ciliata*], w/ glumes and lemmas hairy; and  
c) *F. pacifica* Piper [TJM1 = *V. m.* var. *pauciflora*], w/ glumes and lemmas glabrous or scabrous – our most common form.  
The second group has panicle branches and spikelets all spreading:  
a) *F. eastwoodiae* Piper [TJM1 = *V. m.* var. *ciliata*], w/ glumes and lemmas hairy;  
b) *F. microstachys* Nutt. [TJM1 = *V. m.* var. *m.*], w/ glumes glabrous and lemmas hairy; and  
c) *F. reflexa* Buckley [TJM1 = *V. m.* var. *pauciflora*], w/ glumes and lemmas glabrous or scabrous like *F. pacifica*.
- ◆ *Festuca myuros*: Lower glume gen  $<$  half length of upper glume, or minute (vs. *F. bromoides*).
- ◆ *Festuca occidentalis*: Pl  $<$  3 dm; lf blade folded, soft, 0.5–1 mm wide; ovary tip hairy. Moist, forested areas.
- ◆ *Festuca octoflora*: Florets 7–12; closely overlapping. Fire-follower; sandy soils.

◆ *Festuca perennis*: Glumes < rest of spikelet; lower lemma membranous (vs. *F. temulenta*). Two taxa have been combined under this name in TJM2:

1) the tall, awned, annual form [= *Lolium multiflorum* Lam.], which is abundant locally; and

2) the uncommon, awnless, perennial form [= *L. perenne* L.], which is mostly used in lawns. "Differs from *L. m.* in being a shorter, longer-lived perennial w/ narrower lvs that are folded, rather than rolled, in the bud." – FNANM The two maintain themselves as separate species locally, though hybridizing elsewhere.

◆ *Festuca rubra*: Gen rhizomatous (occ short-); lf sheath reddish, closed, gen w/ downward-pointing hairs, senescent sheaths rapidly becoming fibrous; lf blade < 3 mm wide, ± folded. Extremely variable; at least two non-local forms introduced. Native forms rare, localized. Many subsp. recognized in FNANM. Study needed.

◆ *Festuca subulata*: "Differs from related *F. elmeri* by its glabrous/sparsely scabrous lemma w/ inconspicuous veins, and the awn terminal, not from a bifid apex; differs from *F. subuliflora* by having florets sessile, not long-stipitate." – James A. West Moist forest. Disjunct from normal range of species (central and northern Sierra northward).

◆ *Festuca subuliflora*: Florets long-stipitate (vs. ▲); lemma base w/ a tuft of hairs. Moist forest; at southern edge of range here.

◆ *Festuca temulenta*: Glumes ≥ rest of spikelet except awns; lower lemma thickened at base (vs. *F. perennis*). Uncommon.

◆ *Fragaria chiloensis*: Lvs thick, leathery; petals 10–18 mm (vs. ▼); often dioecious. Coastal. TJM2: Can hybridize with *F. vesca*.

◆ *Fragaria vesca*: Lvs thin; petals gen 5–8 mm (vs. ▲).

◆ *Frangula californica* subsp. *c.*: Abaxial lf surface bright-green or yellow (vs. ▼). TJM2, quoting C. B. Wolf (1938), states that "from [the] San Francisco Bay region to Santa Barbara Co. is a form of *Rhamnus californica* [now this taxon] in which the lvs are whitened beneath, but upon examination show pubescence much shorter than that in *R. tomentella* [now *F. c.* subsp. *t.*]. In older lvs it often disappears. This form is very abundant."

◆ *Frangula californica* subsp. *tomentella*?: Abaxial lf surface velvety or silvery (vs. ▲). The status of this taxon locally is uncertain; may not occur here.

◆ *Fremontodendron californicum*: Ridgeway chaparral.

◆ *Fritillaria affinis*: Highly variable. A tall form w/ numerous, long, narrow lvs occurs in the central and southern parts of the County; and a compact, low-growing form w/ lg, dk, thick-textured fls and broad lvs is found in one small area in NC. This form resembles *F. lanceolata* Pursh. var. *tristulis* A. L. Grant (w/ perianth parts 2.7+ cm long, scarcely mottled; CRPR 1B.1), no longer recognized.

◆ *Fritillaria agrestis*: Only two old records from along the coast. Extirpated.

~G~

◆ *Galium aparine*: Climbing or prostrate annual; lvs in whorls of 6–8, narrowly oblanceolate; fr w/ hooked hairs. Previously considered to be non-native. Locally, behaves as an aggressive weed.

◆ *Galium californicum* subsp. *c.*: Low, tufted, hairy perennial; lvs in whorls of 4.

- ◆ *Galium divaricatum*: Slender, erect annual; lvs in whorls of 5–8, gen weakly reflexed; ovary and fr glabrous. Like *G. parisiense*.
- ◆ *Galium murale*: Tiny annual; lvs in whorls of 4–6; nutlets sausage-shaped.
- ◆ *Galium parisiense*: Slender, erect annual; lvs in whorls of 6, gen reflexed in age; ovary and fr hooked-hairy. Like *G. divaricatum*.
- ◆ *Galium porrigens* var. *p.*: Climbing, woody, scabrous perennial; lvs in whorls of 4; fr glabrous.
- ◆ *Galium tricornutum*: Differs from common *G. aparine* by having acute tubercles (vs. hooked hairs) on fr.
- ◆ *Galium trifidum* subsp. *columbianum*: Weak, sprawling, minutely scabrous perennial; corolla gen 3-lobed; fr glabrous. Marshes, near ponds and rivers.
- ◆ *Galium triflorum*: Decumbent perennial; lvs broad, whorls of 6. Fragrant. Forest.
- ◆ *Gamochaeta calviceps*: Lf faces similar; phyllaries brownish (vs. ▼).
- ◆ *Gamochaeta ustulata*: Lf faces contrasting; phyllaries dk-brown/purple (vs. ▲).
- ◆ *Garrya elliptica*: Lf margin wavy; lf w/ densely matted, woolly hairs abaxially, not appressed toward tip. Lower elevations.
- ◆ *Garrya flavescens*: Lf flat to ± concave-convex w/ abaxial hairs sparse to ± dense, ± coarse, appressed toward tip. Only one old record: Maymen’s Flat (sar) (1936). Ridgetop chaparral.
- ◆ *Garrya fremontii*: Lf flat w/ sparse or no hairs abaxially. Ridgetop chaparral.
- ◆ *Gastridium phleoides*: Mature glumes swollen below.
- ◆ *Geranium bicknellii*?: Mis-id? In TJM2, considered to be out of range here.
- ◆ *Geranium dissectum*: Lf segments 7–9, lf divided 0.75–0.95 to base (vs. ▼).
- ◆ *Geranium molle*: Lf segments 5–7, lf divided 0.5–0.75 to base (vs. ▲).
- ◆ *Gilia achilleifolia* subsp. *a.*: Dense infl (9–25 fls); lg, bright-blue fls w/ wide throats (vs. ▼). In S, occ occurs w/ pls tending towards *G. a.* subsp. *multicaulis*.
- ◆ *Gilia achilleifolia* subsp. *multicaulis*: Open infl (1–7 fls); small, pale fls w/ narrow throats (vs. ▲). Variable. TJM2: “Often grows with *G. a.* subsp. *achilleifolia* and may ultimately be better treated as a separate species.”
- ◆ *Gilia angelensis*: Only one old record: “sc” (1881). Presumably extirpated.
- ◆ *Gilia capitata* subsp. *c.*: Corolla lobes < 1 mm wide (vs. ▼). Only two old records: slv. Commonly seeded in “native wildflower” mixes.
- ◆ *Gilia capitata* subsp. *staminea*: Corolla lobes 3 mm wide (vs. ▲). Sandy areas.
- ◆ *Gilia clivorum*: Grassy areas. Extremely variable between populations in lf morphology, glandulosity, fl color, etc. A tall, non-glandular, white-fl’d form has been reported from S. Study needed.
- ◆ *Gilia tenuiflora* subsp. *arenaria*: Longest stamens ± exerted; stigmas among anthers; fr 5–6.2 mm (vs. ▼). Sand dunes. Monterey Bay endemic. Locally, only (correctly) recorded in SB.
- ◆ *Gilia tenuiflora* subsp. *t.*: Longest stamens exerted; stigmas exceeding anthers; fr 3.5–6 mm (vs. ▲). Sandhills (BDS & ZS).

- ◆ *Githopsis diffusa* **subsp. robusta**: Corolla 3–7 mm; ovary narrowed nr middle, base swollen; fls violet-blue. Burns, disturbed areas: er, slv. Last recorded in 1955.
- ◆ *Githopsis specularioides*: Corolla 4.5–14 mm; ovary ± narrowed at top, base long-tapered; fls deep-blue.
- ◆ *Glyceria declinata*: Infl narrow; spikelets appressed; lemma tip gen 3-lobed.
- ◆ *Glycyrrhiza lepidota*: Moist, disturbed areas. Only one report: Pajaro River (pv).
- ◆ *Gnaphalium palustre*: Prostrate or spreading annual. Drying mud, along shorelines, moist areas. Only remaining member of this genus in TJM2; other former local members now segregated into *Gamochoeta* and *Pseudognaphalium* spp.
- ◆ *Goodyera oblongifolia*: Lvs dark-green, in a basal rosette, gen mottled. Moist or dry, forested areas. At southern edge of range here.
- ◆ *Gratiola ebracteata*: Corolla 2-lipped, 5-lobed, tube 4-angled. Pond margins, muddy areas. Only one report: Santa Rosalia Mtn. (nm/sar) (1978).
- ◆ *Grindelia camporum*?: Sts whitish-green, glabrous; phyllary tips roundish (vs. ▼). *Grindelia* is a difficult genus that has been subjected to much taxonomic reworking. This widespread sp. may be present in the County only as an accidental introduction from the Central Valley, since pls most nearly fitting its description are at the Watsonville Airport. Nevertheless, if it were to occur natively here, the most likely location would be PV.
- ◆ *Grindelia hirsutula*: Occasionally similar to *G. camporum*, but sts ± reddish, pubescent; lvs non-viscid and narrower, more acute, and less strongly toothed; phyllary tips flattish. Grassland, inland. County reports of *G. h. var. maritima* (E. Greene) M. A. Lane (w/ CRPR 3.2) (not currently recognized) are erroneous.
- ◆ *Grindelia stricta* **var. angustifolia**: Lg, shrubby pls of coastal salt marshes and estuaries. Pls that key to this occur along our coast although, according to TJM2, this taxon is endemic to the San Francisco Bay. Study needed.
- ◆ *Grindelia stricta* **var. platyphylla**: Lvs broad, sessile, and rounded at tip. Our only prostrate *Grindelia*. Bluffs and headlands (NC).

~H~

- ◆ *Hedera canariensis*: Pl w/ stellate, red-orange hairs w/ rays appressed; lvs on juvenile sts unlobed to shallowly 3-lobed (vs. ▼). Other *Hedera* spp. may occur here.
- ◆ *Hedera helix*: Pl w/ stellate, white hairs w/ rays spreading; lvs on juvenile sts palmately 3–5-lobed (vs. ▲). Other *Hedera* spp. may occur here.
- ◆ *Helianthus bolanderi*: Only one record: pv (1984). Out of range. Accidental intro?
- ◆ *Hemitomes congestum*: Non-green, fleshy perennial; lvs 0; infl dense; fls gen pink, cream. Redwood–Douglas-fir forest.
- ◆ *Hemizonia congesta* **subsp. luzulifolia**: Ray fls white; phyllary tip gen < body. Often a weed of hayfields but behaves natively here.
- ◆ *Hesperevax acaulis* **var. ambusticola**: Very small annual; heads gen 1, terminal (vs. ▼). Open areas. Only recorded in BLM (2013), though easily overlooked.
- ◆ *Hesperevax sparsiflora* **var. brevifolia**?: Distal heads 3–5 per group (vs. ▲); lgst lvs to 12 mm (vs. ▼). One old record: slv (1950). Notation on specimen states that pls are tending towards *var. sparsiflora*. TJM2: *var. brevifolia* is a northern CCo to

NCo taxon. Intermediates between vars. may occur in SnFrB.

◆ *Hesperovax sparsiflora* var. s.: As above but lgst lvs 13+ mm. Open areas. Only two records: slv (1954) & NM (2005).

◆ *Hesperocnide tenella*: Stinging hairs; lvs opp; pistillate sepals 2–4, fused to tip.

◆ *Hesperocyparis abramsiana* var. a.: Seed cones 16–25 mm, 14–22 mm diam. County endemic (may be downlisted from FE to FT). Groves located in BDS, ER, & SLV on sterile, sandy soils in chaparral within a forest mosaic. Several forms: multi-stemmed (grows out in the open), drooping, and normal. *H. a.* var. *butanoensis* occurs in one grove in San Mateo Co.: seed cones 22–32 mm, 22–31 mm diam.

◆ *Hesperocyparis macrocarpa*: Endemic to the Monterey Peninsula (CRPR 1B.2), where it is known from only two occurrences; not native here; widely naturalized.

◆ *Hesperomecon linearis*: Spreading-hairy annual; stamens many; stigmas 3; fr not breaking into units. Only in Zayante Sandhills (ZS). Local pls formerly recognized as *H. l.* var. *pulchella* (E. Greene) Jepson, w/ alternating white and yellow petals. In ZS some pls have all-yellow petals.

◆ *Heterocodon rariflorum*: Fls sessile, axillary; corolla 3–5 mm, cylindric, pale-blue.

◆ *Heterotheca grandiflora*: Local nativity uncertain, although reported in the mid-19th century from “sandy areas,” north to at least the Monterey Bay region.

◆ *Heterotheca sessiliflora* subsp. *bolanderi*: Distal lvs oblanceolate, little-reduced (vs. ▼). A low, dense form only known locally from S. TJM2: “Highly variable, especially in CW; subspp. ± merge where ranges overlap.”

◆ *Heterotheca sessiliflora* subsp. *echioides*: Distal lvs elliptic to lanceolate, reduced (vs. ▲). TJM2: “Densely glandular pls ... w/ ± glabrous disk corolla lobes may be treated as *H. s.* var. *camphorata* (Eastw.) Semple” [JHT = *Chrysopsis villosa* (Pursh) Nutt. var. *camphorata* Eastw.]. This form is common in Sandhills (BDS & ZS).

◆ *Heuchera micrantha*: Petals 2–3 mm; stamens 5, > calyx lobes; styles 2+ mm, exserted. TJM2: Extremely variable; many intergrading vars. formerly recognized.

◆ *Heuchera pilosissima*?: As above but styles 1–1.5 mm, barely exserted. Shady slopes. Reported by CLA, and one old record: slv (1931). ID in question. TJM2: Can intergrade w/ *H. micrantha*.

◆ *Hieracium albiflorum*: One 1931 record from the Summit area of a possible hybrid between this taxon and *H. argutum*, which is more common to the south.

◆ *Hirschfeldia incana*: Hairy annual/perennial. Basal lvs rosetted, pinnately lobed; sepals spreading to reflexed; petals yellow; fr erect, appressed; gen summer-flwg.

◆ *Hippuris vulgaris*: Wind-pollinated rhizomatous perennial; lvs in whorls of 6–12; petals 0. Pond margins. Only recorded in S.

◆ *Hoita macrostachya*: Sts erect, not stoloniferous. Streams and springs.

◆ *Hoita orbicularis*: Sts prostrate to decumbent, stoloniferous. Marshy areas.

◆ *Hoita strobilina*?: Sts erect; fls 13–19 mm. Mesic areas in serpentine-derived soils, chaparral. Reported by CLA from “brushy places.” Common in Loma Prieta area, but not inside County line. Presumably extirpated if ever here.

◆ *Holocarpus macradenia*: Ray fls 8+, yellow; disk fls 40+; anthers red to dark-purple. < 400 m in coastal terrace prairie or valley/foothill grassland. As of 2013, 20 occurrences presumed extant in 6 Bay Area counties; 8 possibly extirpated; and

9 extirpated. This species has declined greatly due to lack of grazing and other forms of disturbance.

◆ *Holocarpha virgata* subsp. *v.*: St branches straight, rigid; ray fls 3–8; disk fls 9–25+; anthers ± red to dark-purple. Reported by CLA from “fields,” and two records/reports: PV (1989 & 2003).

◆ *Hordeum brachyantherum* subsp. *b.*: Peren.; sts robust; lf sheath glabrous (vs. ▼).

◆ *Hordeum brachyantherum* subsp. *californicum*: Sts slender; lf sheath hairy (vs. ▲). Only definitely recorded from grasslands in sv; other records questionable.

◆ *Hordeum depressum*: Annual; upper lf auricles gen 0; infl gen ± enclosed in upper lf sheath in age. Moist, alkaline areas. Locally, only documented in SL.

◆ *Hordeum jubatum* subsp. *j.*: Annual, perennial; glumes strongly divergent at maturity; central lemma awn 25–90 mm. One old record: crr (1935).

◆ *Hordeum marinum* subsp. *gussoneanum*: Annual; upper lf auricles gen 0; central lemma awn 6–18 mm. Prefers seasonally wet, alkaline grassland.

◆ *Hordeum murinum* subsp. *glaucum*: Summer annual; upper lf auricles obvious; lateral glume margins ciliate; lemma of central floret ≤ those of lateral florets.

◆ *Hordeum murinum* subsp. *leporinum*: As above, but lemma of central floret << those of lateral florets.

◆ *Hordeum vulgare*: Used for erosion control and in hay, but not persisting.

◆ *Horkelia californica* var. *c.*: Pl green; lflts 4–9 per side, lobed ± halfway to base; hypanthium hairy inside; sepals w/ red spots; style 3+ mm (vs. ▼). *Horkelia* spp. have uppermost lateral lflt gen fused w/ terminal lflt; stamens 10; petals white (vs. *Drymocallis* spp.). TJM2: Vars. intergrade.

◆ *Horkelia californica* var. *frondosa*: As above but lflts 3–5 per side, double-toothed < 1/4 to base; hypanthium glabrous inside; sepals lacking red spots; style 2–3 mm. Only two reports: sv (1991).

◆ *Horkelia cuneata* var. *c.*: Glandular (vs. ▼); lflts w/ pinnate venation (vs. *H. marinensis*).

◆ *Horkelia cuneata* var. *sericea*?: As above but not obviously glandular. Sandy soil. ID problematic for local pls, most of which intergrade w/ var. *cuneata*. TJM2: Remaining pls less distinct from var. *cuneata* than those formerly nr San Francisco.

◆ *Horkelia marinensis*: Pl matted, gray, w/ strong odor; lflts w/ palmate venation (vs. *H. cuneata*). Coastal prairie. At southern edge of range here.

◆ *Hosackia crassifolia* var. *c.*: Robust perennial (to 1.5 m); fls yellow-green. Chaparral or woodland at higher elevations. In TJM2, native *Lotus* spp. treated as *Hosackia* and *Acmispon* spp. *Hosackia* spp. have conspicuous, lf-like stipules (vs. *Acmispon* spp. w/ inconspicuous, glandlike stipules).

◆ *Hosackia gracilis*: Moist meadows. Fls w/ banner yellow, wings pink-purple, fading white. Reported by CLA as being “everywhere”; now rare (w/ CRPR 4.2).

◆ *Hosackia oblongifolia* var. *o.*: Corolla white and yellow. Moist areas; North Co.

◆ *Hosackia pinnata*: Only one old record: “sc” (1905). Presumably extirpated.

◆ *Hosackia stipularis* var. *s.*: Pl spreading soft-hairy; sts fleshy; fls pink to reddish-purple. Some populations in S have “foliage/infls covered w/ balsam-scented

glands, falling within the circumscription of what was formerly called *Lotus balsamiferus* E. Greene." – James A. West

◆ *Hydrocotyle ranunculoides*: Lf blade round-reniform (vs. ▼).

◆ *Hydrocotyle verticillata*: Lf blade round, peltate (vs. ▲).

◆ *Hypericum scouleri?*: Erect perennial; lvs ovate to elliptic; fr 3-lobed. Reported by CLA from "moist ground." A 1926 record from Loma Prieta was most likely in Santa Clara Co. Presumably extirpated if ever here.

◆ *Hypochaeris glabra*: Annual, gen glabrous; lvs thin; ligules 5–8 mm; outer fr gen beakless, inner beaked (vs. ▼). Mainly in Sandhills (BDS & ZS).

◆ *Hypochaeris radicata*: Perennial, rough-hairy; lvs thick; ligules 10+ mm; all fr beaked (vs. ▲). Garden and grassland weed.

~I~

◆ *Iris douglasiana*: Basal lvs 10–22 mm wide, pink at base; perianth tube 10–24 mm, funnel-shaped (vs. ▼). Typical dark-purple form grows on coast in North County and inland in South County. Taller, woodland form w/ various fl colors (lavender, lilac, white, pale-yellow) replaces the typical form in North Coastal woods; the latter may be referable to what has been called *I. d.* var. *major* Torrey.

◆ *Iris fernaldii*: Basal lvs 6–8 mm wide, grayish-green, not pink at base; perianth tube > 30 mm, gradually funnel-shaped distally (vs. ▲). Normally cream or whitish w/ purple veins, but some pls in North County are deep-purple. Can be confused w/ *I. macrosiphon* (not present in County), but *I. m.* has basal lvs 3–6 mm wide and the perianth tube more abruptly inflated, bowl-like. *I. f.* at southern edge of range here.

◆ *Iris longipetala*: Basal lvs 5–11 mm wide; perianth tube 5–13 mm, funnel-shaped; stigma 2-lobed; lowest two bracts gen alternate, enclosing perianth tube; fls lilac to purple w/ darker veins. Moist, grassy areas. Only recorded in sv (1989).

◆ *Isoetes nuttallii*: Corms gen 3-lobed; lvs > 8 cm long. Wet or moist soil.

◆ *Isoetes orcuttii*: Corms gen 3-lobed; lvs < 8 cm long. *I. howellii* (w/ corms 2-lobed) occurs in ephemeral ponds in surrounding counties; may be present here.

◆ *Isolepis carinata*: Annual; fl bracts acute, strongly keeled, clasping shed fr. Drying areas in wet soil.

◆ *Isolepis cernua*: The common form locally is perennial, found mainly on coastal cliffs but also occ inland; it is sold in nurseries as the "fiber optic plant." The annual (so-called "typical") form has only been documented twice: nr UCSC (BLM) & S, where it grows w/ the perennial form. *TJM2*: Taxon annual (perennial?).

◆ *Iva axillaris*: Lvs entire. Reported by CLA from sandy, saline areas. Documented from Neary Lagoon (nc) & Soda Lake (SL) (2004).

~J~

◆ *Juglans hindsii*: Lflts narrowly triangular to narrowly lanceolate, acuminate, ± serrate; abaxial vein axils w/ tufts of hairs. Widely planted as a rootstock for English walnut, then scion dies and rootstock persists. Not native here, but naturalized outside its native range.

- ◆ *Juglans nigra*: TJM2: "Resembles *J. h.* but has lflets uniformly pubescent abaxially, nuts deeply grooved, coarsely warty." Taller than *J. h.* w/ larger lvs and nuts. Commonly naturalized along creeks. Spread by jays and squirrels.
- ◆ *Juglans regia*: Lflets 5–11, elliptic to oblong-ovate, entire; nut shell ± thin, wrinkled. Spread by jays and squirrels.
- ◆ *Juncus acuminatus*: Group 3. Cespitose perennial; lf blades tubular, septate; infl dense; 3 stamens. Wet areas. Only one old record: s (1954).
- ◆ *Juncus balticus* subsp. *ater*: Group 2. Rhizomatous perennial; sts gen cylindrical; lf blades 0 or vestigial; perianth < 5.5 (occ 6) mm. Variable. TJM2: Part of "intergrading complex needing study. Hybridizes w/ *J. breweri*, *J. lescurii*, and *J. mexicanus*." Pls resembling *J. breweri* have been reported from S.
- ◆ *Juncus bufonius* var. *b.*: Group 1. Annual; sts branched; infl open. Non-saline areas (vs. ▼). TJM2: vars. difficult to distinguish.
- ◆ *Juncus bufonius* var. *congestus*: Group 1. Annual; infl dense. Saline areas (vs. ▲).
- ◆ *Juncus capitatus*: Group 1. Annual; basal infl bract 2× fl length; fls clustered.
- ◆ *Juncus effusus* subsp. *pacificus*: Group 2. Robust, cespitose perennial; sts green, w/ inconspicuous ridges; lf sheath dark-brown to blackish, w/ a raised, convex rim, apices thickened; stamens 3.
- ◆ *Juncus falcatus* subsp. *f.*: Group 6. Rhizomatous perennial; lf blades grasslike; lf sheath appendages 0 or obscure.
- ◆ *Juncus hesperius*: Group 2. Cespitose perennial; sts green; lf sheath green to medium brown, apices thin, raised rim 0; stamens 3.
- ◆ *Juncus kelloggii*: Group 1. Annual, to 6 cm; basal infl bract=fl length. Moist areas.
- ◆ *Juncus lescurii*: Group 2. Rhizomatous perennial; sts gen round, erect; lf blades 0 or vestigial; perianth gen > 6 mm. Dunes, coastal marshes. TJM2: Part of "intergrading complex" (see *J. balticus* subsp. *ater*). May have been derived from "hybridization of *J. b.* subsp. *a.*, *J. breweri*."
- ◆ *Juncus mexicanus*: Group 2. Rhizomatous perennial; lf blades well-developed on some upper sheaths, > 5 cm, st-like. TJM2: Part of "intergrading complex" (see ▲).
- ◆ *Juncus occidentalis*: Group 5. Lf blades wiry; perianth green or w/ brown stripes. In S, "there is a small, reproducing population w/ more open, paniculate infls rather than subcapitate." — James A. West
- ◆ *Juncus patens*: Group 2. Cespitose perennial; sts blue-green, distinctly ridged; stamens 6. James A. West has noted that "when exposed to moisture, the mature capsules envelop the seeds in a gelatinous encasement like a cluster of microscopic frog eggs"; he has also documented hybrids between this taxon and *J. hesperius*.
- ◆ *Juncus phaeocephalus* var. *paniculatus*: Group 4. Perennial, forming dense stands in moist grassland; lf blades iris-like; infl w/ many, few-fl'd heads; fr gradually tapered to long beak.
- ◆ *Juncus phaeocephalus* var. *p.*: Group 4. As above but w/ few, many-fl'd heads.
- ◆ *Juncus xiphioides*: Group 4. Perennial; lf blades iris-like; infl w/ many, few-fl'd heads; fr abruptly tapered to beak.

## ~K~

- ◆ *Keckiella corymbosa*: Corolla bright-pink to red. Rocky ridges. Documented from Eagle Rock (ER) & Loma Prieta region (SAR).
- ◆ *Kickxia elatine*: Distal lvs hastate to sagittate (vs. ▼).
- ◆ *Kickxia spuria*: Lvs narrowly to widely ovate or subcordate throughout (vs. ▲).
- ◆ *Koeleria macrantha*: Infl dense, cylindric, spike-like, or more open in full fl; spikelets shiny; glumes similar in shape. Sandy areas.
- ◆ *Kopsiopsis strobilacea*: Woodland, chaparral. Gen on *Arctostaphylos*. "A possible new species of *Kopsiopsis* occurs in SAR and at Uvas Canyon Co. Park, Santa Clara Co., growing not far from *K. s.* in both areas. It approaches the northern *K. hookeri* but keys to *K. s.* Differs from *K. s.* in being smaller and later-flwg, w/ yellow rather than purple fls, and spoon-shaped rather than oval bracts. Intermediates reported from Sonoma Co. northward may also prove to be this taxon." – Kevin Bryant

## ~L~

- ◆ *Lactuca saligna*: Lvs lance-linear, entire or few-lobed; peduncles and infl branches often appressed to axis (vs. ▼).
- ◆ *Lactuca serriola*: Lvs oblanceolate to oblong-elliptic to obovate in outline; infl branches often widely spreading (vs. ▲).
- ◆ *Laennecia coulteri*: Lvs clasping, lobed or toothed. Disturbed, gen alkaline areas.
- ◆ *Lamium amplexicaule*: Upper st lvs clasping; inner corolla tube hairs 0 (vs. ▼).
- ◆ *Lamium purpureum*: Upper st lvs petioled; inner corolla tube hairy (vs. ▲).
- ◆ *Landoltia punctata*: Roots gen 2–7. Freshwater. Only two records: NM & pv.
- ◆ *Lastarriaea coriacea*: Sandy soil. Only two records: "sc" (1887) & PV (1994).
- ◆ *Lasthenia californica* subsp. *c.*? : TJM2: "Pappus of 1–7 clear, linear to awl-like scales or 0. ... Circumscription previously included *L. gracilis*. Pls of [this taxon] and *L. gracilis* without pappus (epappose) not distinguishable morphologically; molecular studies show them as separate and distinct taxa." No records of *L. c.* have been confirmed as yet in County, but it potentially occurs in BLM & NC, where epappose pls have been documented.
- ◆ *Lasthenia glaberrima*: Phyllaries fused > 2/3; lvs entire; heads radiate or disciform; pappus present. Vernal moist areas. Only two records: s (1983) & SC (2000).
- ◆ *Lasthenia glabrata* subsp. *g.*: Phyllaries fused > 2/3; pappus 0. Reported by CLA from "moist places," and last recorded in 1903 "w of Watsonville ... in low meadows near the coast." Presumably extirpated. Often used in wildflower mixes.
- ◆ *Lasthenia gracilis*: Pappus of white, lance-ovate (flared at base) scales or 0. Most, if not all, goldfields in County are referable to this taxon. Not closely related to *L. californica* subsp. *c.*, but similar in appearance (see note ▲). Though pls of these two taxa without pappus (epappose) are not distinguishable morphologically, DNA studies show them as being separate and distinct. Extremely reduced locally, and the best indicator of the richest, and often most endangered, botanical hotspots (i.e., Sandhills, coastal headlands, interior grasslands, and forest meadows). The Sandhills form is unusually tall and late-flowering.

◆ *Lasthenia minor*: Mid-cauline lvs gen pinnately lobed; receptacle conic; phyllaries free. Grassland, coastal bluffs; pv (1903), mc (1908), & sb (1950s) pops presumably extirpated. As of 2013, one small colony still extant on Davenport bluffs (NC).

◆ *Lathyrus littoralis*: Sts and lvs silvery-silky. Only recorded from coastal strand in SB & NC. *Lathyrus* spp. (vs. *Vicia* spp.) have lflts ± rolled in bud; and style flat-tish, puberulent near middle for ± 1/3–1/2 length adaxially.

◆ *Lathyrus vestitus* var. *v.*: Most of our pls belong to what has been called *L. v.* subsp. *puberulus* (E. Greene) C. Hitchc. According to JHT, these are climbing pls, gen > 4 dm tall, w/ internodes gen > 5 cm long; subsp. *vestitus* refers to erect pls, gen < 3 dm tall, w/ internodes gen < 3 cm long. This low, shrubby, grassland form has only been documented from NM (2005) & CRR (2013).

◆ *Layia chrysanthemoides*: Grassland. Only one old record: “sc” (1889). Extirpated.

◆ *Layia gaillardoides*: Main st not strictly erect; ligules conspicuous (vs. ▼). Grassy or brushy slopes. In S, fls are all-yellow, w/ no white tips.

◆ *Layia hieracioides*: Main st erect; ligules inconspicuous (vs. ▲).

◆ *Layia platyglossa*: Inland pls w/ sts erect and not particularly succulent have been called *L. p.* subsp. *campestris* Keck. A form of the immediate coast w/ a semi-prostrate to decumbent habit and succulent sts has been called *L. p.* subsp. *p.* There is only one old record for this LR form from sb, now extirpated. Pls in Lucille’s Court Meadow (SLV) & ZS are of a distinctive, all-yellow (“tipless”) form, which may deserve taxonomic recognition.

◆ *Leersia oryzoides*: One 2012 record from along the San Lorenzo River. According to TJM2, out of range here.

◆ *Lemna gibba*: Lower surface pl body gen bulging. Ponds or puddles. TJM2: Can be confused w/ *L. minor* (w/ lower surface flat). *Lemna* spp.: Root gen 1.

◆ *Lemna turionifera*: Freshwater. Only one old record: Natural Bridges (sc) (1955). TJM2: “Like *L. minor*, except for winter buds.”

◆ *Lemna valdiviana*: Freshwater. Only two old records: Pajaro River (pv) (1927) & Camp Evers (sv) (1950s); the latter occurrence extirpated.

◆ *Leontodon saxatilis* subsp. *longirostris*: Annual/biennial; inner fr beaks 2+ mm.

◆ *Leontodon saxatilis* subsp. *s.*: Perennial/biennial; inner fr beaks ca. 1 mm long.

◆ *Lepidium didymum*: Fr spectacle-shaped.

◆ *Lepidium nitidum*: Pedicel strongly flattened; sepals not persistent. Early-flwg.

◆ *Lepidium oxycarpum*: Fl petals 0; stamens 4; fr tip winged, notch V-shaped. Alkaline flats. Only recorded in SL.

◆ *Lepidium strictum*: Sepals persistent in fr; stamens 2; fr notched, net-veined. Local nativity questionable; behaves as a weed here.

◆ *Lepidium virginicum* subsp. *menziesii*: Local nativity in doubt; weedy here.

◆ *Leptochloa fusca* subsp. *fascicularis*: Local nativity in doubt; occurs as a summer weed in irrigated gardens. Our pls match this taxon in measurements, but lemmas are ± glabrous and awn is reduced to a mucro from an obtuse lemma tip.

◆ *Leptosiphon ambiguus*: Only two old records: Boulder Creek (slv) (1951)—both on sandstone since we have no serpentine here. Presumably extirpated.

◆ *Leptosiphon androsaceus*: Unlike other *Leptosiphon* spp., this taxon gen occurs in part shade. Varies in fl color (white through deep-lavender and pink) and varies in calyx indument (glabrous to ciliate along margins to pubescent throughout).

“Two known populations in County consist of pls that differ from typical *L. a.* by their growth habit and in having sts that do not terminate in dense, bracted heads.” —Eva Buxton

The typical form farther north differs considerably from ours (and from the Monterey Co. form) in having lgr fls, more fls per head, and narrower lf divisions.

◆ *Leptosiphon bicolor*: Openings, grassy areas. Last recorded in 1954. Presumably extirpated.

◆ *Leptosiphon ciliatus*: Openings, grassy areas. Only one old record: crr (1950s). Presumably extirpated.

◆ *Leptosiphon grandiflorus*: Local pops appear to belong to an undescribed subsp. differing from *L. grandiflorus* sensu stricto in its long-exserted floral tube (to 18+ mm vs. 5–6 mm) w/ purple lines inside; consistently lavender-pink fls (vs. white); and its lack of red “guidelines” at the base of the corolla lobes. Several old records exist from mc & nm; occurrences presumably extirpated. A tiny population was discovered in Bonny Doon (BLM) in 1995. In cultivation. Study needed.

◆ *Leptosiphon parviflorus*: As treated in TJM1/2, *L. p.* conflates two large, rather distantly related species-complexes, one more inland and southern, the other more northern and coastal; study needed.

1) *L. parviflorus* sensu stricto reaches its northern range limit in the Zayante Sandhills (ZS). Corolla tube 2–4-cm-long; fls yellow to white to bright-pink, lacking paired red “guidelines” at base of each corolla lobe; anthers widely separated. Slopes and outcrops in association w/ woody vegetation.

2) More common than *L. p.* sensu stricto, the second “species complex” has been called *Gilia longituba* Benth. [= *Linanthus longitubus* (Benth.) A. Heller]. It reaches its southern range limit at the Monterey Peninsula. Corolla tube 4–5-cm-long; gen w/ a pair of red “guidelines” at base of each corolla lobe; anthers clustered. Open grassland. There are four apparent subspecies:

a) a widespread, white-to-cream-fl'd (occ pink or light-yellow) form that ranges from Monterey to Napa Co., and inland to the Hamilton Range (locally: BLM, slv);

b) a County endemic, orange-yellow-fl'd form w/ a very long tube only known from Lucille’s Court Meadow in Boulder Creek (SLV); and — not from County,

c) a larger-fl'd but shorter-tubed, bright-yellow-fl'd form only known from a single population on the San Mateo coast [currently = *L. croceus*; CRPR 1B.1]; and

d) a deep-pink- to white-fl'd (rarely bright-yellow) form from western Marin Co., which gen lacks paired red “guidelines” at base of each corolla lobe.

◆ *Leptosiphon pygmaeus* subsp. *continentalis*: Fls white or blue, pedicels thread-like. Ridgetop chaparral margins.

◆ *Ligusticum apifolium*: Corolla white; involucl gen 0, or < pedicel. Restricted to a narrow zone in coastal prairie in S; at southern edge of range here.

◆ *Lilium rubescens*?: Chaparral, forest openings. According to Munz and Keck, this species occurs “Santa Cruz Co. and north.” There exists one 1896 specimen collected by W. L. Jepson from “scm”. Otherwise, found in Napa and Sonoma cos. into northwestern California. Presumably extirpated if ever here.

- ◆ *Limnanthes douglasii* subsp. *nivea*: Fls white. Wet meadows. Only 3 records/reports: blm (now extirpated) & SLV (still extant as of 2013).
- ◆ *Linanthus dichotomus* subsp. *d.*: Openings. Last record: slv (1944). Presumably extirpated.
- ◆ *Lindernia dubia*: Corolla 2-lipped, 5-lobed, tube cylindric. Only recorded from Pinto Lake (pv), most recently in 1976. Not recorded in surrounding counties.
- ◆ *Lithophragma affine*: Base of hypanthium triangular (vs. ▼).
- ◆ *Lithophragma heterophyllum*: Base of hypanthium square or round (vs. ▲).
- ◆ *Loeflingia squarrosa*: Only recorded in Zayante Sandhills (ZS). At northern edge of coastal range here.
- ◆ *Logfia filaginoides*: Lvs gen flexible, oblanceolate, <= fl heads (vs. ▼).
- ◆ *Logfia gallica*: Lvs gen stiff, awl-shaped, > fl heads (vs. ▲).
- ◆ *Lomatium caruifolium* var. *c.*: Sts absent; lvs finely dissected; corolla yellow. Coastal prairie. In S, pls display "extremely variable foliage ranging from glabrous through densely pubescent." —James A. West
- ◆ *Lomatium dasycarpum* subsp. *d.*: Sts gen present; pl densely hairy; corolla tomentose, greenish-white or purplish. Rocky areas on ridgetops.
- ◆ *Lomatium parvifolium*: Herbage ± fleshy; lf segments 1–4 cm wide; fr notched at base and tip; corolla bright-yellow. Pine woods, maritime chaparral (PV). More common to the south.
- ◆ *Lomatium utriculatum*: Sts leafy; lvs finely dissected; cauline lf petioles sheathing; corolla yellow; fr glabrous. Ridges and grassy slopes. Only two records/reports: Saratoga Summit (crr?) & SV.
- ◆ *Lonicera involucrata* var. *ledebourii*: Conspicuous involucre formed by lf-like, yellow to reddish bracts. Along streams. More common in surrounding counties.
- ◆ *Ludwigia palustris*: Lvs opposite; petals 0 (vs. ▼). Pond margins. Only recorded from three locations: BLM, nm, & SV. Not recorded in surrounding counties.
- ◆ *Ludwigia peploides* subsp. *p.*: Lvs alternate; petals 5, 9–13 mm (vs. ▲).
- ◆ *Lupinus affinis*: Like *L. nanus* but upper keel margins w/ tooth (occ inconspicuous) near middle. Grassy areas; solitary. Reported by CLA, and two records: mc (1977 & 1988).
- ◆ *Lupinus albifrons* var. *a.*: Shrub; fls lavender; banner back pubescent; upper keel margins ciliate; infl snaps off easily. Sandhills, chaparral (vs. *L. chamissonis*). *L. a.* var. *collinus* is not known to be present locally.
- ◆ *Lupinus arboreus*: Shrub; fls yellow or purple; banner back glabrous; upper keel margins ciliate claw to tip, lwr glabrous. Nr Watsonville, hybridizes w/ *L. chamissonis* and/or *L. albifrons* var. *a.* Occ hybridizes w/ *L. albifrons* var. *a.* in Sandhills. In NC & S, hybridizes freely w/ *L. variicolor* and *L. formosus* var. *f.* Herbaceous pls in redwood belt w/ glabrous lvs and dk-purple fls have been called *L. propinquus* E. Greene, a putative hybrid derived from *L. arboreus* and *L. latifolius* var. *l.*
- ◆ *Lupinus bicolor*: Annual; fls gen blue & white (occ all white, pink, lt-blue); pedicel gen < 3 mm; banner longer than wide (vs. *L. nanus*). Highly variable. The Sand-

hills form w/ a 3-lobed calyx lip is possibly = to *L. b. var. umbellatus* (E. Greene) C. P. Smith. Another synonymized form, *L. micranthus* Douglas, has relatively large lvs and pods but small fls. Its lvs are glabrous adaxially, while those of *L. bicolor* are hairy on both sides. See JHT for other synonymized forms.

◆ *Lupinus chamissonis*: Shrub; fls lavender; banner back densely hairy; upper keel margins glabrous, lower keel margins ciliate; infl tough and fibrous. Beaches (vs. *L. albifrons* var. *a.*).

◆ *Lupinus formosus* var. *f.*: Rhizomatous, hairy perennial; fls purple; banner back glabrous; keel glabrous. Open woods, grassland.

◆ *Lupinus latifolius* var. *dudleyi*: Perennial; sts densely hairy; fls blue, purple, or white; upper keel margins ciliate claw to middle, lower gen ciliate. Chaparral. Only 3 records/reports: slv (1903), er (1956), & s (1970s). Possibly extirpated.

◆ *Lupinus latifolius* var. *l.*: As ▲, but sts glabrous to finely pubescent. Woodland.

◆ *Lupinus microcarpus* var. *m.*: Cotyledons disk-like; calyx long-hairy. Only two records, both from South County. As of 2013, still extant in SL.

◆ *Lupinus nanus*: Annual; fls gen blue and white (occ all white, pink, light-blue); pedicel gen > 3 mm; banner as wide as or wider than long (vs. *L. bicolor*); upper keel margins lacking tooth (vs. *L. affinis*). Grassy areas; colonial.

◆ *Lupinus polyphyllus* var. *p.*: Sts stout, hollow; flts 9–17, 4–15 cm. Reported by CLA from “springs and marshes.” Extirpated at Camp Evers (sv).

◆ *Lupinus variicolor*: Low-growing shrub; fls showy, multicolored; banner back glabrous; upper keel margins ciliate. Coastal. Can hybridize w/ *L. arboreus*.

◆ *Luzula comosa* var. *c.*: Seeds to 0.9 mm wide, style to 0.5 mm (vs. ▼). Jepson eFlora: “[T]he whole group of *L. comosa* and *L. subsessilis* is imperfectly known.”

◆ *Luzula subsessilis*: Seeds 0.9+ mm wide; style 0.6+ mm (vs. ▲). Dry, open woodland. Only recorded in NC/S.

◆ *Lythrum hyssopifolia*: Annual or short-lived perennial; fls 1 per axil, sessile; petals 2–5 mm, pink.

◆ *Lythrum salicaria*: Erect perennial to 1.5 m; fls > 2 per axil; petals 7+ mm, red-purple. Only one report: pv (1990).

◆ *Lysichiton americanus*: Spathe lemon-yellow; lf blade > petiole, ± fleshy. Marshy areas in mixed-evergreen and redwood forest. Spathe emits fetid odor.

### ~M~

◆ *Madia elegans*: Fl heads showy. Subsp. not currently recognized but may represent valid taxa. [JHT: *M. e.* subsp. *densifolia* (E. Greene) Keck, w/ basal rosette well-developed, strongly glandular-pubescent above; flwg August–November; and *M. e.* subsp. *vernalis* Keck, w/ basal rosette 0, sparsely glandular above; flwg May–July.] TJM2: Highly variable and can form sterile hybrids w/ *M. sativa*.

◆ *Madia exigua*: Small, delicate, branching annual, glandular to base, cherry-scented; phyllary glands yellowish; disk fls 1–2 per head; anthers yellow to brownish.

◆ *Madia gracilis*: Sts slender; pl glandular in upper half; phyllary glands both pale- and dark-colored; anthers purplish. Hybridizes w/ *M. exigua* and *M. sativa*.

◆ *Madia sativa*: Sts stout; pl glandular throughout; disk fls > 1 per head. *M. capitata* Nutt., not currently recognized, is a (presumably) native, coastal, dense-headed counterpart of *M. sativa*, which was introduced from Chile. Both forms intergrade freely w/ each other (and w/ *M. elegans* and *M. gracilis*) and tend to be weedy.

◆ *Maianthemum racemosum*: Infl paniculate; fls 20+; perianth << stamens (vs. ▼).

◆ *Maianthemum stellatum*: Infl gen racemose; fls 5–15; perianth > stamens (vs. ▲).

◆ *Malacothamnus fasciculatus* var. *nuttallii*: Local pls have been called *M. arcuatus* (E. Greene) E. Greene (w/ CRPR 1B.2)—a name that is no longer recognized (see JHT). Fire-dependent; long-lived seeds. Last reported from SAR (2003).

◆ *Malacothrix clevelandii*: Burned or open areas in chaparral. ZS record is probably a misidentification of a yellow-fl'd form of *M. floccifera*.

◆ *Malacothrix floccifera*: Lf lobe bases w/ tufts of white hair; fls white w/ yellow centers. Sandy, open areas, burns. A form w/ entirely yellow fls occurs w/ typical form in ZS.

◆ *Malosma laurina*: This southern CA species was “planted in the 1930s in the Larkin Valley area as part of wildland ‘conservation’ programs and is now freely seeding.” —Dr. Dean W. Taylor

◆ *Malva arborea*: St base woody; petals rose to lavender w/ 5 dark veins.

◆ *Malva nicaeensis*: Bractlets widely lanceolate to ovate, bases fused.

◆ *Malva parviflora*: Bractlets linear to threadlike.

◆ *Malva pseudolavatera*: St base not woody; petals pink to white w/ 3 dark veins.

◆ *Malvella leprosa*: Alkaline soils; can be an agricultural weed. Only 1 record: SL.

◆ *Marah fabacea*: Corolla rotate, yellow-green to cream (vs. ▼). Common.

◆ *Marah oregana*: Corolla deeply cup-shaped, gen > 8 mm wide, white; (vs. ▲). Ridgtop chaparral, woodland.

◆ *Meconella californica*: Glabrous annual; corolla white; stamens gen 12, in 2 series; fr twisted, dehiscing from tip. Mountain meadows (SLV).

◆ *Medicago arabica*: Lflts gen w/ dk, central spot.

◆ *Medicago lupulina*: Fr reniform, black, only coiled at tip, not prickly.

◆ *Medicago minima*: Pl densely hairy; fr tan to brown, spirally coiled, prickly.

◆ *Medicago polymorpha*: Pl glabrous; fr spirally coiled, prickly.

◆ *Melica californica*: Fertile florets 2–5 per spikelet; glumes ± = spikelets.

◆ *Melica geyeri*: St base bulblike; lemma glabrous to scabrous (vs. *M. subulata*). Dry slopes, woodland, forest. Only two records/reports: bb (1929) & crr (1985); more common on east side of Santa Cruz Mtns.

◆ *Melica harfordii*: Fertile florets 2–6 per spikelet; glumes << spikelets.

◆ *Melica imperfecta*: Fertile florets 1–2 per spikelet; axis < sterile floret cluster (vs. *M. torreyana*).

◆ *Melica subulata*: St base bulblike; lemma hairy (vs. *M. geyeri*).

◆ *Melica torreyana*: Fertile florets 1–2 per spikelet; axis > sterile floret cluster (vs. *M. imperfecta*). Variable.

- ◆ *Melilotus albus*: Corolla white (vs. ▼).
- ◆ *Melilotus indicus*: Corolla yellow (vs. ▲).
- ◆ *Mentha canadensis*: Fl whorls distinct; upper and lower calyx teeth alike.
- ◆ *Mentzelia micrantha*: Burns, disturbed areas in ridgetop chaparral, woodland.
- ◆ *Micropus amphibolus*: Disk corolla gen 4-lobed (vs. ▼). Thin soils on dry slopes and ridges. TJM2: May be of hybrid origin w/ *Stylocline gnaphaloides* as one parent.
- ◆ *Micropus californicus* var. *c.*: Disk corolla gen 5-lobed (vs. ▲); longest paleae gen 3–4 mm, woolly (vs. ▼).
- ◆ *Micropus californicus* var. *subvestitus*: As above but longest paleae gen 2–3 mm, silky-tomentose. Only recorded from thin soils on dry slopes and ridges in S.
- ◆ *Microseris acuminata*: Grassland. Only recorded from Watsonville Airport (PV) (1994). *Microseris* spp: ± nodding in bud.
- ◆ *Microseris bigelovii*: Fr widest near middle. Extreme coastal form (NC & S) has lvs broad w/ rounded tips and minimal lobing. Farther south and inland (BLM & SV), lvs longer and acute, w/ narrow lobes (these may prove to be *M. elegans*, w/ fr widest at tip). In SV, some pls w/ scapes > 6 dm. In S, two populations have been documented that differ substantially in size of heads and fr. Study needed.
- ◆ *Microseris douglasii* subsp. *tenella*: Pappus scales ≤ 1 mm. Coastal prairie. Only recorded in PV (1994).
- ◆ *Microseris paludosa*: Perennial; ligules >> involucre. Moist areas in coastal prairie. Graham Hill Rd. population (sc) presumably extirpated.
- ◆ *Microsteris gracilis*: Open, grassy slopes. Only 2 reports/records: blm, CRR.
- ◆ *Mimetanthe pilosa*: [TJM2 = *Mimulus pilosus*] Annual; pl densely long-hairy, not slimy; calyx lobes ± = tube; corolla yellow. Moist, sandy areas. *Mimetanthe* spp. have parietal placentation; fr apically attenuate, fr wall densely pustulate-glandular; pedicel > calyx; calyx w/ midvein low-rounded (not angled or winged).
- ◆ *Minuartia californica*: An undescribed var. of *M. c.* is the only form of *M. c.* sensu stricto found locally. It is showy and robust w/ long peduncles and differs from typical *M. c.* in having stouter, more erect sts and lgr fls. Endemic to SV grasslands. Once published, would qualify for LR designation and possibly CRPR 1B listing.
- Minuartia pusilla* (S. Watson) Mattf. var. *diffusa* (Maguire) McNeill (now conspecific w/ *M. c.*) occurs in SLV & ZS and is LR. It differs from *M. c.* in seed morphology, pink anthers, dark sts, and shorter peduncles. Study needed to determine true range of this taxon (see Munz and Keck). Only extant occurrence known outside County is at Fort Ord, Monterey Co. Deserving of CRPR 1B listing.
- ◆ *Minuartia douglasii*: Infl glandular-hairy vs. *M. californica* (w/ infl glabrous).
- ◆ *Monardella sinuata* subsp. *nigrescens*: Annual; lf margin gen weakly wavy; bracts dk-tipped, dk-veined. Sandhills (BDS & ZS). TJM2: For more than a century, this was erroneously treated as *M. undulata* Benth. — a subshrub or shrub.
- ◆ *Monardella villosa* subsp. *franciscana*: “Sts decumbent; lvs thicker, ± deltate, gen woolly-pubescent abaxially, lf-base angles truncate (vs. ▼). Gen occurs in coastal scrub in gulches and terraces of NC and occasionally at more inland sites in S, especially near ecotones of scrub and grassland.” — Taylor Crow

◆ *Monardella villosa* subsp. *v.*: “Sts erect; lvs thinner, w/ sparser, shorter trichomes abaxially, and lf-base angles obtuse (vs. ▲). Inland. Quite variable locally in morphology and scent, particularly in S.” — Taylor Crow

This taxon now includes *M. antonina* Hardham subsp. *a.* (w/ CRPR 3), two ostensible records of which exist in County. However, the CNPS Inventory states that it is “easily confused w/ *M. villosa* subsp. *v.*; needs clarification.” Records also exist of an ostensible hybrid between *M. v.* subsp. *v.* and *M. purpurea*, the latter of which has been recorded at Loma Prieta, in Santa Clara Co., and gen grows on serpentine-derived soils (Santa Cruz Co. has no serpentine-derived soils).

◆ *Monolopia gracilens*: Sandy openings in chaparral, oak woodland. As of 2012, still extant at Quail Hollow Ranch C. P.; pls appeared in area cleared for trail.

◆ *Monolepis nuttalliana*: Moist, alkaline areas. Only recorded in SL.

◆ *Montia fontana*: Annual; cauline lvs opposite; petals ± = sepals. Two distinct forms occur here, presumably = to what have been called *M. hallii* (A. Gray) E. Greene and *M. verna* Necker (see JHT). The former has linear lvs and tiny seeds and sepals; the latter is more robust w/ spatulate lvs and seeds and sepals 2× lgr.

◆ *Montia parvifolia*: Stoloniferous perennial; basal lvs in rosette; cauline lvs alternate, lf axils gen w/ bulblets; petals 7–15 mm. Moist, shady areas.

◆ *Moraea collina*: Though the Jepson Interchange calls this noxious and highly invasive species “extirpated in CA,” a population may still be extant on the marine terrace east of Rodeo Gulch and Hidden Valley Rd.

◆ *Muilla maritima*: Fls greenish-white; perianth parts ± free at base, not forming obvious tube. A variable species complex. At least two forms occur locally: one in Sandhills, the other in grassland; both rare. May deserve taxonomic recognition.

◆ *Myosurus minimus*: Wet areas. Only one record: s (1988). Easily overlooked.

## ~N~

◆ *Najas guadalupensis* subsp. *g.*: Monocious; lf blade midrib not prickly abaxially. (vs. ▼) Ponds, lakes. Only recorded in PV, most recently in 2004.

◆ *Najas marina*: Dioecious; lf blade midrib prickly abaxially (vs. ▲). Only one record: Pinto Lake (pv) (1977).

◆ *Nasturtium officinale*: Formerly thought to be introduced; now a “native.”

◆ *Navarretia atractyloides*: St glandular-hairy; odor not skunk-like; outer bract tip lobes gen 3, unequal, ascending; fls purple (occ white). Roadsides, trails. Possibly not native here.

◆ *Navarretia hamata* subsp. *parviloba*: Outer bract tip lobes gen 3, ± equal, spreading, middle recurved (ca. 90 degrees); fls white to pale-blue or lavender. Chaparral margins in Sandhills.

◆ *Navarretia mellita*: Odor strong, not skunk-like; pl low, mounded, fine-textured; outer bract tip lobes 0; corolla lobes 5–7 mm, = calyx, light-blue.

◆ *Navarretia squarrosa*: Odor skunklike; outer bract tip lobes 0; corolla lobes 9–12 mm, > calyx, dark-blue. Our weediest *Navarretia*. A white-fl'd form has been observed in several locs, along with intergrades between it and the typical form.

◆ *Navarretia viscidula*: Corolla 9–16 mm, 2× calyx, purple or red-purple. Marshy areas. Reported by CLA, and reported from Buzzard Lagoon (NM) (2004).

- ◆*Nemophila heterophylla*: Style 2–4 mm; lower lvs deeply lobed, lobes similar, gen well defined, stalked. One old record: slv (1942). More common to the east.
- ◆*Nemophila menziesii* var. *atomaria*: Fls white to pale-blue. In S, “several isolated populations are not only variable as to coloration w/ some pls tending towards var. *menziesii*, but have gynodioecious components that often result in pls w/ normal-sized fls but missing some or all stamens, or w/ fls greatly reduced in size and looking more like *N. parviflora* var. *p.*” — James A. West
- ◆*Nemophila menziesii* var. *m.*: Often in “native wildflower” seed mixes but rarely persisting. Bright-blue form now extremely rare here, although some pops of *N. m.* var. *atomaria* include some individuals w/ ± solidly pale-blue fls. This may once have been a common County native wildflower.
- ◆*Nemophila pedunculata*: Lvs opp; fls small. County appears to have two, distinct segregates of the *N. p.* complex. Both have small, whitish fls and both are rare:
- 1) one form matches what has been called *N. humifusa* Kell. It has pure-white fls and is restricted to sandy areas (nc & zs); nearing extinction throughout range.
  - 2) the other form occurs in moist, semi-shaded meadow edges and has blue markings in the corolla (PV, S, sc, SLV, & sv).
- ◆*Nemophila pulchella* var. *fremontii*?: Several small colonies of an undetermined, tiny-fl'd *Nemophila* discovered in S may be this species. Study needed.
- ◆*Notholithocarpus densiflorus* var. *d.*: “Since the mid-1990s, *Phytophthora ramorum* [Sudden Oak Death] has killed millions of tan oaks and coast live oak, California black oak, Shreve oak, and canyon live oak, and caused twig and foliar diseases in numerous other spp., including California bay, Douglas-fir, and redwood. ... [T]he first *P. ramorum*-infested rhododendron nursery plants were identified in 2001 in Santa Cruz County.” — California Oak Mortality Task Force
- ◆*Nuphar polysepala*: Reported by CLA as being “10 mi east of Santa Cruz, in a lake.” Two old records: bb (1903) & Watsonville (1908). Extirpated. “William H. Brewer ... noted it grew in ‘the laguna near Watsonville.’ The pre-settlement presence of *Nuphar* implies that a boreal marsh florula might have been present locally, now of course extirpated. Plants like *Nasturtium gambelii* and *Arenaria paludicola* come to mind, among other species.” — Dr. Dean W. Taylor



- ◆*Oemleria cerasiformis*: Generally dioecious shrub; infl pendent.
- ◆*Oenothera elata* subsp. *hirsutissima*: Sepal hairs lacking red, blister-like bases (vs. ▼). Moist places, gen inland.
- ◆*Oenothera elata* subsp. *hookeri*: Sepal hairs w/ red, blister-like bases (vs. ▲). Moist, coastal (and slightly inland) areas, sandy bluffs.
- ◆*Ornithopus pinnatus*: Lflts 7–15 (vs. ▼).
- ◆*Ornithopus sativus*: Lflts 19+ (vs. ▲).
- ◆*Orobanche bulbosa*: Fls > 20, yellow-purple. TJM2: On *Adenostoma fasciculatum*.
- ◆*Orobanche californica* subsp. *c.*: Fls > 20; corolla 22+ mm, pale- to pink-purple. Only two reports: nc. Coastal bluffs. TJM2: On *Grindelia*.
- ◆*Orobanche californica* subsp. *jepsonii*: As above but corolla white, pinkish, or brownish. Only 1 old record: “sc”. TJM2: Gen on perennial or shrubby Asteraceae.

◆ *Orobanche fasciculata*: Fls 5–20; corolla 15–30 mm, pink or yellow; pedicel 3–15 cm. Fire-follower. TJM2: Gen on *Artemisia*, *Eriodictyon*, *Eriogonum*, *Galium*.

◆ *Orobanche pinorum*: Fls > 20; corolla 12–20 mm, yellow, lobes pale-purple. Only one old record: slv (1954). TJM2: On *Holodiscus*.

◆ *Orobanche uniflora*: Fls gen 1–3; corolla 12+ mm, pale-purple to yellow; pedicel 3–12 cm. TJM2: Gen on *Sedum*, Asteraceae, Saxifragaceae.

◆ *Osmorhiza berteroi*: Involucel 0 or much reduced (vs. ▼). Common.

◆ *Osmorhiza brachypoda*: Involucel conspicuous (vs. ▲). Reported by CLA from “mountains and woods,” and two records/reports: crr (1957) & nm.

◆ *Oxalis corniculata*: Bulbs 0; sts rooting at nodes; petals yellow, often w/ red spots below middle, gen < 8 mm.

◆ *Oxalis pes-caprae*: Bulbs present; pls semi-succulent; lvs in a ± basal rosette; flts often purple-spotted; petals bright-yellow; fr 0 in CA.

◆ *Oxalis pilosa*: Bulbs 0; sts densely hairy, not rooting at nodes; petals yellow, gen 8+ mm. Mostly undisturbed areas.

~P~

◆ *Panicum acuminatum* var. *fasciculatum*: Wet areas in coastal prairie.

◆ *Panicum capillare*: Basal rosette not well-developed. Local nativity uncertain.

◆ *Parentucellia viscosa*: Lvs gen opposite; corolla yellow, two-lipped.

◆ *Parietaria hespera* var. *h.*: Coastal scrub. Only recorded from BLM: Major’s Creek & Davenport. At northern edge of coastal range here.

◆ *Parnassia palustris*: Streambanks, wet meadows. Only one old record: slv (1959); record from Loma Prieta (sar?) probably over County line. Presumably extirpated.

◆ *Parthenocissus inserta*: Only known from SC (Pogonip). TJM2: May be native. (Was treated as such in TJM1.)

◆ *Paspalum dilatatum*: Cespitose; spikelets paired; floret hairy-margined (vs. ▼).

◆ *Paspalum distichum*: Creeping or cespitose; spikelets single; floret scabrous-margined (vs. ▲). Wet areas. Local nativity uncertain.

◆ *Pectocarya penicillata*: Nutlets bristled at tip to above ± middle. Sandy areas.

◆ *Pedicularis dudleyi*: Redwood forest. Apparently extirpated from County (not recorded since 1903). Extant in only a few locs in San Mateo and Monterey cos.; pls purported to be this species in San Luis Obispo Co. may be a different taxon.

◆ *Pellaea andromedifolia*: Lf segments without mucronate tip; stipe light-brown. Cooler, moister, less-exposed rocky/sandy outcrops. (vs. ▼)

◆ *Pellaea mucronata* var. *m.*: Lf segments w/ mucronate tip; stipe dark-brown to blackish. Hotter, drier, more-exposed rocky/sandy outcrops. (vs. ▲)

◆ *Penstemon rattanii* var. *kleei*: Group 4. 25–120 cm tall; infl glandular; fls blue-violet. Burned or disturbed areas in chaparral, woodland. Santa Cruz Mtns. endemic. In 2011, ca. 100 pls reported (BLM) from area cleared for fire management.

◆ *Pentachaeta alsinoides*: Ray fls 0 or < 1 mm; disk fls gen 4; corolla 3-lobed. Openings in grassland, chaparral.

- ◆ *Pentachaeta bellidiflora*: Ray fls 7–16, 3–6 mm, white. Dry, rocky slopes, grassy areas. Last record: 1955. Presumably extirpated. At southern edge of range here.
- ◆ *Pentachaeta exilis* subsp. *e.*: Ray fls 0; disk fls 6–34; corolla 5-lobed. Openings in grassland, woodland. Reported by CLA from “dry hills,” and reported from Seascape Uplands (pv) (1992) & Wilder Ranch S. P. (BLM) (1998).
- ◆ *Perideridia gairdneri* subsp. *g.*: Tuberous roots; styles long, slender (vs. ▼). Coastal prairie. Two distinct forms are present; study needed:  
 1) the more common, northern one (central Co. northward); flwg early July; and  
 2) the rare, southern one (Rio del Mar southward into Monterey Co.); known locally only from Seascape Uplands (PV); flwg August–September.
- ◆ *Perideridia kelloggii*: Thick, fibrous, clustered roots; styles short w/ thickened bases (vs. ▲).
- ◆ *Persicaria amphibia*: Rhizomatous perennial; perianth pink to red, lobes 5; styles 2; fr 2-sided.
- ◆ *Persicaria hydropiperoides*: Rhizomatous perennial; perianth pink or greenish-white, lobes 5; styles 3; fr 3-sided. TJM2: Confused w/ *P. maculosa*.
- ◆ *Persicaria lapathifolia*: Non-rhizomatous annual; perianth green-white to pink, lobes 4; fr 2-sided. Highly variable. Some forms may be native locally, some not.
- ◆ *Persicaria maculosa*: Non-rhizomatous annual; lvs often w/ dark spots adaxially; perianth pink, lobes 4–5; styles 2–3; fr 2–3-sided. TJM2: “Probably of hybrid origin, w/ *P. lapathifolia* as one parent.” Confused w/ *P. hydropiperoides*.
- ◆ *Persicaria pensylvanica*: Non-rhizomatous annual; perianth white to pink, lobes 5. TJM2: “Variable, of hybrid origin, possibly w/ *P. lapathifolia* as one parent.”
- ◆ *Persicaria punctata*: Gen rhizomatous annual or perennial; fls gland-dotted, green to white. When crushed, pl smells like green apples.
- ◆ *Petunia parviflora*: Corolla purple, tube whitish. Drying stream beds, pond edges. TJM2: Widely treated in *Calibrachoa*; perhaps a South American native.
- ◆ *Phacelia californica*: Group 1. Perennial; basal lvs gen compound (occ dissected), lflets 3–7; calyx lobes narrowly oblong to lance-ovate, 6–8 mm in fr, not overlapping; fls gen lavender; style 8+ mm. Coastal scrub, woodland; North Co.
- ◆ *Phacelia ciliata*: Group 2. Annual. Reported by CLA from “shaded moist ground,” and one old record: bb (1887). A report from s was thought to be introduced in hay, but did not persist. Presumably extirpated.
- ◆ *Phacelia distans*: Group 2. Annual. Lvs gen 1–2-compound, segments toothed.
- ◆ *Phacelia douglasii*: Group 2. Annual; sts short-hairy, glandular; infl not congested; fls light-blue to purple. Sandy areas near coast (SB) & Zayante Sandhills (ZS).
- ◆ *Phacelia imbricata* var. *i.*: [TJM2 = *P. i.* subsp. *i.*] Group 1. Perennial; basal lvs dissected, lf segments gen 7–15; outer calyx lobes narrowly ovate to ovate to obovate, often glandular, ± overlapping in fr; corolla white to lavender. Typically, occurs on edges of old coastal terraces below about 800 ft. A related *Phacelia* occurs in chaparral above ca. 3000 ft, w/ basal lf segments 3–5, and calyx lobes narrow; it may be an intergrade w/ *P. egena* [w/ basal lf segments 7–11(15) and calyx lobes linear to oblanceolate, not overlapping in fr]. Pls at Quail Hollow Ranch C. P. have lvs like *P. i.*, but calyx lobes like *P. egena*. TJM2: *P. i.* intergrades w/ *P. californica* and w/ *P. egena*, especially in SnFrB. Study needed.

- ◆ *Phacelia malvifolia* var. *m.*: [TJM2 = *P. m.*] Groups 2, 3. Annual, stiff-hairy; lvs simple distally; corolla cream-white, 5–7 mm; stamens exerted.
- ◆ *Phacelia nemoralis* var. *n.*: [TJM2 = *P. n.* subsp. *n.*] Group 1. Short-lived perennial; basal lvs gen w/ 3 lfts; corolla green- or yellow-white, 3.5–5 mm; style 6–9 mm.
- ◆ *Phacelia ramosissima*: Group 1. Perennial; lvs cauline, compound; lfts coarsely toothed or lobed; corolla white to lavender. Sandy areas. Coastal pls (SB) [formerly = *P. r.* var. *montereyensis* Munz] are distinct from Sandhills form (ZS) [formerly = *P. r.* var. *r.*]. Munz and Keck: *P. r.* var. *m.* have main sts lacking gland-tipped hairs; *P. r.* var. *r.* w/ main sts w/ some hairs gland-tipped. Both forms LR. See TJM1.
- ◆ *Phacelia rattanii*: Group 3. Annual, stiff-hairy; corolla white to blue, 3–5 mm; stamens included. Sandy areas.
- ◆ *Phacelia suaveolens*: Group 3. Annual, aromatic; corolla tube yellow, lobes lavender to purple. Burned or open, disturbed areas in chaparral, pine forest.
- ◆ *Phalaris angusta*: Annual; infl cylindric, narrow; glume keel broadly winged. Low, wet ground.
- ◆ *Phalaris aquatica*: Robust, rhizomatous or caespitose perennial (to 2 m); sts swollen at base; infl cylindric to ovate; glume keel broadly winged. Invasive.
- ◆ *Phalaris arundinacea*: Rhizomatous perennial; infl lanceolate, lobed & branched in age; glume keel wing 0. Moist habitats, woodland. Only one record: PV (2013).
- ◆ *Phalaris californica*: Caespitose perennial; sts swollen at base; infl compact, ovoid to sub-cylindric, purplish; glume keel not or narrowly winged.
- ◆ *Phalaris lemmonii*: Annual; glume keel wing 0 or tiny. Moist areas. Two old records: “sc” (1886) & Camp Evers (sv) (1944). Extirpated.
- ◆ *Phalaris paradoxa*: Vars. no longer recognized: *P. p.* var. *p.* is a much lgr pl w/ lg, gold spikes and is unlike the common weed *P. p.* var. *praemorsa* (Lam.) Coss. & Durieu. The former has been recorded in northern Monterey Co. and is likely here.
- ◆ *Pholisma arenarium*: Non-green, parasitic; corolla purple. Dunes. One 1994 report: Sand Hill Bluff (NC). TJM2: Hosts: shrubby *Asteraceae*, *Eriodictyon*, *Croton*.
- ◆ *Pholistoma auritum* var. *a.*: Fls lg, purple. Only documented from southeastern corner of County. More common to the east and south.
- ◆ *Phoradendron leucarpum* subsp. *tomentosum*: [TJM2 = *P. serotinum* subsp. *t.*] TJM2: Gen on *Quercus*, occ on *Adenostoma*, *Arctostaphylos*, and *Umbellularia*.
- ◆ *Phyla nodiflora*: Wet places. TJM2: May not be native in CA.
- ◆ *Phyllospadix scouleri*: Lvs 1–4 mm wide, flat (vs. ▼). Surf zone. Only one report: SB (2005). No doubt undercollected.
- ◆ *Phyllospadix torreyi*: Older lvs folded or cylindric (vs. ▲). Only recorded from Davenport Landing (NC) & just north of the Pajaro River mouth (sb) (1971). Surf zone.
- ◆ *Physocarpus capitatus*: Lvs palmately veined and lobed. Only recorded from San Lorenzo River at Ben Lomond (slv) (1959) & near Santa Cruz (SC) (1998).
- ◆ *Pickeringia montana* var. *m.*: Rhizomatous shrub; fls purple. Rarely sets seed.
- ◆ *Pilularia americana*: Tiny fern w/ grass-like appearance. Only one record (2010) from wet depression on UCSC campus (BLM); easily overlooked.

- ◆ *Pinus attenuata*: Lvs 3 per bundle; cones persistent; proximal scale tips prickly.
- ◆ *Pinus coulteri*: Lvs 3 per bundle, rigid; cones lg, golden-brown. Most are planted.
- ◆ *Pinus pinea*: Successfully naturalizing in one or two locations.
- ◆ *Pinus ponderosa* var. *pacifica*: Gen 3 lvs per bundle. Local form is endemic to County. Common in Sandhills (BDS & ZS) and invading grasslands in BLM. TJM2: "Some very lg-coned pls in Santa Cruz Mtns., unassigned taxonomically in this treatment, may be indistinct from var. *pacifica* (then the earlier var. *benthamiana* (Hartw.) Vasey would be correct for the unassigned pls, with var. *p.* as a synonym), or may be a distinct var. within *P. ponderosa* (then var. *b.* would be correct for the unassigned pls), or may be a distinct species (then *P. b.* Hartw. would be correct for the unassigned pls); study needed."
- ◆ *Pinus radiata*: Lvs 3 per bundle (often 4–5 in young trees); cone-scale tips rounded. Native stands limited to northwest corner of County; elsewhere planted or naturalized. Tends to be weedy. Cone morphology extremely variable, indicating introgression from *P. attenuata* in distant past. Hybrid knobcone/Monterey pines have been called *P. × attenuradiata* Stockw. & Righter.
- ◆ *Pinus sabiniana*: Lvs 3 per bundle, drooping; needles gray-green. Occurs natively near Loma Prieta ridge (SAR). The nativity of stands at Zayante School Rd. and Empire Grade near ER is doubtful.
- ◆ *Pinus torreyana* subsp. *t.*: Lvs 5 per bundle, often 3 in young trees. This southern CA endemic (w/ CRPR 1B.2) is successfully naturalizing here.
- ◆ *Piperia candida*: Sts to 6 dm; infl ± 1-sided; fls white; lip pointed down or curved ± forward; spur ca. = lip; flwg June–July. Forested interior; North County.
- ◆ *Piperia elegans* subsp. *e.*: Sts stout, to 1 m; sepals white w/ dark-green midvein; spur > 2× lip; lip and spur downcurved; flwg August. Gen coastal.
- ◆ *Piperia elongata*: Sts to 13 dm; fls green, gen clear to whitish in throat; lip V-shaped; lower sepals ± reflexed; spur > 2× lip; flwg July–August. Gen inland.
- ◆ *Piperia michaelii*: Sts stout, fistulous, to 7 dm; fls green to yellow-green, gen clear to whitish in throat; lip deltate-ovate; lower sepals spreading; spur > 2× lip; flwg June–July. Gen coastal; dry woodland, forest.
- ◆ *Piperia transversa*: Sts slender, to 6 dm; lvs gray-green; spur > 2× lip; sepals white w/ green midvein; lip ± projecting; spur ± straight, perpendicular to infl axis; flwg July. Commonest *P.* sp. here; unique spicy clove–carnation scent at dusk.
- ◆ *Piperia unalascensis*: Fls green; lip gen pointed down, tip upcurved; spur ca. = lip; flwg Apr–May. Only recorded from nc (1982) & slv. The nc population is unusual, matching only the type collection from Unalaska Island in the Aleutian Islands. Spikes are very short and dense; flwg very early (March–April).
- ◆ *Plagiobothrys bracteatus*: "Differs from occasionally sympatric *P. diffusus* in having ventral keel of nutlet not in groove and a very tiny basal-lateral attachment scar. Bracts tend to be below middle of infl." – James A. West *Plagiobothrys* spp.: Nutlet adaxially keeled distal to scar; scar gen raised (vs. *Cryptantha* spp.)
- ◆ *Plagiobothrys canescens* var. *c.*: Nutlets 3–4; round scar near middle; cross-ribs narrow; interspaces wide and flat. Open areas.
- ◆ *Plagiobothrys chorisianus* var. *c.*: Sts decumbent to erect, branching distally;

longest pedicels gen > calyx; corolla limb 6–10 mm diam. Moist depressions; coastal (vs. ▼).

◆ *Plagiobothrys chorisianus* var. *hickmanii*: Sts prostrate, branching proximally; longest pedicels gen < calyx; corolla limb 5–7 mm diam. Moist depressions; inland (vs. ▲).

◆ *Plagiobothrys collinus* var. *californicus*: Chaparral openings.

◆ *Plagiobothrys diffusus*: Found in seasonally moist, grassy areas (not wetlands) in coastal prairie, this species was presumed extinct until James A. West rediscovered it in S in the 1960s. "Mature nutlets 1–2× lgr than those of *P. bracteatus* and grayish tan, not coal-black at maturity. Bracts subtending fls reach to apex of infl." –JAW

◆ *Plagiobothrys hispidulus*?: Moist depressions. Only one record: s (1988); out of TJM2 range for species.

◆ *Plagiobothrys nothofulvus*: Distinct rosette, lvs red-staining; calyx circumcissile.

◆ *Plagiobothrys tenellus*: Distinct rosette; nutlets 4, cross-shaped.

◆ *Plagiobothrys undulatus*: Vernal pools. Two records: slv (1947) & MC/SC (2000).

◆ *Plantago elongata*: Alkaline or saline places, vernal pools. At least two local forms may be included under this epithet; study needed:

1) a small, few-fl'd form (BLM & pv) has been called *P. bigelovii* A. Gray, but may actually be an introduced species from the eastern U.S. (*P. pusilla* Nutt.). Depending on nativity, may be LR; and

2) the larger form (NC), referable to *P. elongata*, which is LR.

◆ *Plantago erecta*: Hairy annual; variable in height, lf number, and size of infl.

◆ *Plantago major*: Lf blade widely elliptic to cordate, narrowed abruptly to petiole.

◆ *Plantago subnuda*: Lf blade elliptic-ob lanceolate, tapered to wide petiole.

◆ *Platanthera dilatata* var. *leucostachys*: Marshy, coastal areas. Only one old record: pv (1929). Presumably extirpated.

◆ *Platanus racemosa*: At northern edge of coastal range here. The future of the native species is in danger due to genetic swamping from planted London plane trees (*P. × hispanica* Mill. ex Muenchh).

◆ *Platystemon californicus*: Shaggy-hairy annual; stamens > 12, free; stigmas ≥ 6; fr breaking into units; fls cream and yellow.

◆ *Plectritis ciliosa*: Corolla pink, w/ two reddish spots at juncture between upper and lower lips; spur gen ≥ 1/2 corolla tube length. Only one report: S (2007).

◆ *Plectritis congesta* subsp. *brachystemon*: Corolla to 3.5 mm, white to pale-pink; spur gen < 1/2 corolla tube length or 0; fl fragrance weak or 0.

◆ *Plectritis congesta* subsp. *c.*: Corolla 4+ mm, pale- to dark-pink; fls fragrant. In NC & S, there are "populations intermediate between subspp. *brachystemon* and *congesta*." –James A. West

◆ *Pleuricospora fimbriolata*: Non-green, fleshy perennial; lvs 0; infl a raceme; fls gen yellowish. Redwood forest.

◆ *Poa douglasii*: Long-rhizomatous perennial; dioecious; infl dense. Dunes.

◆ *Poa howellii*: Cespitose annual; lf sheath open to 1/2 length; lf blade tapered, barely prow-tipped; lemma short-hairy. Wooded areas.

- ◆ *Poa kelloggii*: Long-rhizomatous perennial; sheaths of upper st lvs open to near base; lemma glabrous to scabrous. Woodland, forest. At southern edge of range.
- ◆ *Poa secunda* subsp. s.: Cespitose perennial; lemmas rounded on back; evenly short-hairy on keel and sides across base. Rocky grassland.
- ◆ *Poa unilateralis* subsp. u.: Cespitose perennial; infl dense. Gen occurs on coastal bluffs. A small population has been documented in sv grasslands; possibly extirp.
- ◆ *Pogogyne serpylloides*: A form that has been called *P. s.* subsp. *intermedia* J. T. Howell has been reported once: UCSC mima mounds (blm) (1991). Differs from *P. s.* [subsp. s.] in its erect vs. prostrate habit and in its vernal pool habitat vs. dry, shrub margins. Occurs in similar habitats in San Benito and Monterey cos. and probably elsewhere. Presumably extirpated locally.
- ◆ *Polycarpon depressum*: Lvs opposite (vs. ▼). Sandy soil. More common to the south. Easily confused w/ *P. tetraphyllum* var. *t.*
- ◆ *Polycarpon tetraphyllum* var. *t.*: Lvs appearing to be in whorls of 4 (vs. ▲).
- ◆ *Polygonum hickmanii*: Mudstone and sandstone outcrops in grassland. This County endemic is an inconspicuous, late-flwg annual, only known from several tiny populations at the north end of SV. Discovered in 1990 by R. Morgan, the species was officially described in 1995.
- ◆ *Polygonum paronychia*: Dunes. 1 old record: sb (1922). Presumably extirpated.
- ◆ *Polypodium californicum*: Veins fused or free; lf blade deltate to ovate, often w/ an irregular outline, lwr segment pairs often  $\geq$  those above; sori gen sunken, round to ovate. More areoles per segment than *P. calirhiza*, which it resembles. A shorter, leathery form from S & NC has been called *P. c.* var. *kaulfussii* D. C. Eaton.
- ◆ *Polypodium calirhiza*: Veins fused or free; lf blade oblong-ovate and  $\pm$  regular in outline, lwr segment pairs gen  $<$  those above; sori oblong to ovate, not sunken. Often epiphytic. More common than *P. californicum* in County. "An allotetraploid, derived via hybridization from *P. californicum* and *P. glycyrrhiza*." — James A. West
- ◆ *Polypodium glycyrrhiza*: Veins free; segments linear-deltoid, elongate, attenuate-acute; sori gen round. Hybridizes w/ other *Polypodium* spp.
- ◆ *Polypodium scouleri*: Blades leathery; lf blade midrib glabrous adaxially; rhizome glaucous. Reported by CLA, and 2 records: PV (2002) & s (1980s). Only known extant population locally is on a ridgetop in the Pajaro Hills where it is epiphytic on oak and redwood.
- ◆ *Polypogon australis*: Perennial; infl lobed or interrupted; glume lobes 0, glume awn gen 4–7 mm (vs. ▼).
- ◆ *Polypogon interruptus*: Same as above but glume awn 1.5–4.5 mm.
- ◆ *Polypogon maritimus*: Annual; infl dense; glume awn 4.5+ mm; lemma awnless.
- ◆ *Polypogon monspeliensis*: Annual; infl dense; glume 2-lobed, glume awn 2–10 mm; lemma awned.
- ◆ *Polypogon viridis*: Perennial; infl often interrupted; glume awn 0.
- ◆ *Polystichum californicum*: Lvs gen 1- to partly 2-pinnate. Moist, shady areas. TJM2: Probably a hybrid between *P. dudleyi* and *P. munitum*.
- ◆ *Polystichum dudleyi*: Lvs gen 2- to rarely partly 3-pinnate. TJM2: Hybridizes w/ *P. californicum* and *P. munitum*.

- ◆ *Polystichum imbricans* subsp. *curtum*: Differs from common *P. munitum* by having scales on base of stipe lanceolate vs. ovate and indusial margins entire to short-dentate vs. ciliate. Differs from *P. i.* subsp. *imbricans* by having sori submarginal. Rocky outcrops in wooded areas.
- ◆ *Polystichum imbricans* subsp. *i.*: Sori nr midvein. 1 old record: 1881. Extirpated.
- ◆ *Populus fremontii* subsp. *f.*: Lvs deltate, margins coarsely scalloped (vs. ▼). Typically, a more inland species. Possibly native along upper Pajaro River; any other local occurrences introduced.
- ◆ *Populus trichocarpa*: Lvs narrowly to widely ovate, margins finely scalloped (vs. ▲).
- ◆ *Potamogeton illinoensis*: Submersed lvs microscopically serrate nr tip, elliptic to oblanceolate. Only old records from College & Kelly lakes (pv). Species hybridize.
- ◆ *Potamogeton natans*: Submersed lvs linear, sessile. One record from White's Lagoon (nm) (1979) & an old record from near Watsonville (pv) (1950s).
- ◆ *Potamogeton nodosus*: Submersed lvs entire, linear to lance-elliptic, tapered at both ends. Only two records: "sc" (1881) & PV (2004).
- ◆ *Potentilla anserina* subsp. *pacifica*: Lvs densely silvery-hairy abaxially; fls yellow. Coastal wetlands.
- ◆ *Potentilla rivalis*: Annual or biennial; basal lvs withering. Only recorded from lakes in Watsonville (pv); last recorded in 1976.
- ◆ *Primula clevelandii* var. *gracilis*: [TJM2 = *Dodecatheon c.* subsp. *sanctarum*] Scapes green; rice-grain root bulblets 0; lf blade length gen > 2× width; fls 5-merous. Open grassland (vs. ▼).
- ◆ *Primula hendersonii*: [TJM2 = *Dodecatheon h.*] Scapes purplish; rice-grain root bulblets present at flwg; lf blade length gen < 2× width; fls 4-5-merous. Part shade (vs. ▲). Locally, less common than *P. clevelandii* var. *gracilis*.
- ◆ *Prunella vulgaris* var. *lanceolata*: Sts decumbent to erect; cauline lf blade length gen 3× width (vs. ▼).
- ◆ *Prunella vulgaris* var. *v.*: Sts gen prostrate; cauline lf blade length gen 2× width (vs. ▲).
- ◆ *Prunus cerasifera*: Lvs deciduous; fl 1 (occ 2). *Prunus* spp.: Ovary superior; pistil 1; fr a drupe.
- ◆ *Prunus emarginata*: Lvs deciduous; infl a flat-topped raceme; fls 6-12. Coastal scrub, chaparral.
- ◆ *Prunus ilicifolia* subsp. *i.*: Lvs evergreen, margins spiny-serrate; infl an elongate raceme; fls 15+. Ridgetop chaparral, slopes. More common to east and south.
- ◆ *Prunus virginiana* var. *demissa*: Lvs deciduous, margins finely serrate; infl an elongate raceme, leafy at base; fls 18+.
- ◆ *Pseudognaphalium beneolens*: Perennial, scented or not; lvs tomentose, gen linear, lf faces similar, cauline lvs curving in age. Two foliage color-forms co-occur: silvery and jade-green. (See note for *P. californicum*.)
- ◆ *Pseudognaphalium biolettii*: Perennial, sharply scented; lvs 4-10(15) mm wide, faces strongly contrasting – adaxially bright-green, abaxially white-tomentose.

◆ *Pseudognaphalium californicum*: Perennial, strongly scented; lvs green, 5–10(20) mm wide, decurrent, lf faces similar; fl heads round. On Monterey Peninsula, fls often shell-pink; here all are typical white form.

1) An undescribed taxon often confused w/ *P. c.* – possibly of hybrid origin between *P. c.* and *P. stramineum* – is fairly common near coast. Pls have gray-woolly herbage, broad lvs, and a dense, ± pyramidal infl w/ white fls.

2) An undescribed taxon – possibly of hybrid origin between *P. beneolens* and *P. californicum* – is endemic to sand parkland in Zayante Sandhills (ZS) and grows abundantly on exposed, south-facing slopes. Pls are tall and gray w/ slender lvs and whitish fls, but shape of infl and fls are like neither putative parent.

◆ *Pseudognaphalium luteoalbum*: Annual; unscented; lvs gray-tomentose, 2–8 mm wide, faces similar; disk fls 4–10, pistillate corollas yellow- or red-tipped.

◆ *Pseudognaphalium microcephalum*: Perennial; unscented; lvs white-tomentose, 5–10 mm wide, oblanceolate, faces ± similar. Coastal scrub, grassland, chaparral.

◆ *Pseudognaphalium ramosissimum*: Biennial; scented; lvs ± green, 3–5(7) mm wide, decurrent, faces similar; involucre pink, white, or greenish; fl hds cylindric.

◆ *Pseudognaphalium stramineum*: Annual or biennial; unscented; lvs gray-tomentose, 2–5 mm wide, faces similar; disk fls gen 18+, pistillate corolla yellow. Pls on immediate coast are short and dense-headed; inland pls are taller and more diffuse. (See note for *P. californicum*.)

◆ *Pseudotsuga menziesii* var. *m.*: “This shade-tolerant species is near the southern limit of its range here, but it has been establishing in areas historically dominated by oaks due to fire suppression. In many areas throughout the County, especially on Ben Lomond Mtn., this has resulted in a depauperate herbaceous layer and an increase in horizontal fuel continuity. This change in fuel loading and structure encourages moderate-intensity ground fires to become difficult-to-control crown fires. Under a likely past fire regime, oaks would have survived relatively frequent, low-intensity ground fires with little damage. If no large, stand-replacing crown fire occurs, Douglas-fir will continue to increase in density, further suppressing the understory and eventually shading out the oaks. With current climate models predicting increasing aridity for our region, the scenario for a large-scale die-off of fir, and a resulting catastrophic wildfire, becomes even more likely.” – Tim Hyland

◆ *Psilocarphus chilensis*: Distal lvs ± appressed to heads, ovate to widely elliptic (vs. ▼). Seepy areas in North County grassland (BLM).

◆ *Psilocarphus tenellus*: Distal lvs ± spreading, spatulate to obovate (vs. ▲).

◆ *Puccinellia nuttalliana*: Perennial; previous year’s growth persisting (vs. ▼). Alkaline areas. Only 1 record: SL (2004); not recorded in surrounding counties.

◆ *Puccinellia simplex*: Annual; previous year’s growth not persisting (vs. ▲). Alkaline areas. Only recorded from SL, most recently in 2006; not recorded in surrounding counties.

◆ *Pyrola picta*: Local pls leafless; formerly called *P. p.* forma *aphylla* (Sm.) Camp.



◆ *Quercus agrifolia* var. *a.*: Evergreen tree, rounded crown; lvs widely elliptic to round, w/ margins spiny, at least some on a given tree w/ abaxial hair tufts (“hairy armpits”) in vein axils; acorns slender, pointed, maturing in 1 yr. Most

common oak here; gen ecotonal. Hybridization occurs among the four local red oaks: *Q. a.* var. *a.*, *Q. kelloggii*, *Q. parvula* var. *shrevei*, and *Q. wislizeni*. — Al Keuter

◆ ***Quercus berberidifolia***: Evergreen shrub, tree; lvs 1.5–3 cm, abaxially light-gray-green w/ very short, appressed, stellate hairs; acorns rounded at tip, maturing in 1 yr. Dry slopes, chaparral. In JHT, the name *Q. dumosa* was misapplied to local pls of this taxon (*Q. d.* occurs in Southern CA and Baja CA). Hybridization occurs among the 3 local white oaks: *Q. b.*, *Q. garryana* var. *g.*, and *Q. lobata*. — Al Keuter

◆ ***Quercus chrysolepis***: Evergreen tree; young twigs, acorns, and lvs (particularly abaxially) w/ dense, golden hairs, glabrous in age; lvs abaxially light-gray-green, margins entire or spine-toothed; acorns rounded to pointed at tip, maturing in 2 yrs, w/ thick, turban-like cups. The only intermediate (golden) oak in County. It does not hybridize w/ other local oaks. Canyons, shaded slopes, woodland, mixed-evergreen forest, chaparral, and on exposed ridges as a shrub. — Al Keuter

◆ ***Quercus garryana* var. *g.***: Deciduous tree; terminal buds densely white- or yellow-hairy; lvs moderately to deeply 5–7 lobed, lobes entire or 2-toothed, bristles 0; acorns 2–3 cm, rounded at tip, maturing in 1 yr. Infrequent along chaparral ridges. — Al Keuter

◆ ***Quercus kelloggii***: Large, deciduous tree; lvs gen w/ 6 deep lobes, each w/ 1–4, usually bristle-tipped teeth (unique among local oaks—lf projections on others are stiffer spines); acorns maturing in 2 yrs. Higher elevations.

There are two named hybrids in Co. w/ partially deciduous, lobed to entire lvs:

1) *Q.* × *chasei* McMinn et al.: [= *Q. k.* × *Q. agrifolia* var. *a.*] w/ lvs often having the abaxial vein axil hair tufts characteristic of *Q. agrifolia* var. *a.*

2) *Q.* × *morehus* Kellogg: Though often considered to be a hybrid btw *Q. k.* × *Q. wislizeni*, in our area *Q. k.* × *Q. parvula* var. *shrevei* seems more likely. — Al Keuter

◆ ***Quercus lobata***: Large, deciduous tree. Lvs with 6–10 deep, rounded lobes, gen coarsely 2–3 toothed at tip, bristles 0; acorns 3–5 cm, pointed at tip, maturing in 1 yr. Deep, rich soil on slopes, in valleys. — Al Keuter

◆ ***Quercus parvula* var. *shrevei***: Evergreen tree, < 17 m, conical crown, tree taller than wide, foliage dense; twigs glabrous to slightly pubescent; winter bud scales silky-pubescent; lvs 3–9(14) cm, gen entire to spine-toothed, abaxially glabrous, ± dull, olive-green, petiole abaxially glabrous; acorns abruptly tapered to a ± blunt tip, maturing in 2 yrs. Low-elevation woodland, margins of or openings in redwood forest. Sometimes mistaken for *Q. wislizeni*. FNANM treats this taxon as a synonym of *Q. w.* — Al Keuter

◆ ***Quercus wislizeni* var. *frutescens***: Evergreen shrub to small tree, 2–4(6) m; twigs moderately to densely pubescent; winter bud scales glabrous; lvs 1.8–4 cm, spine-toothed to entire, abaxially glabrous, ± shiny, gen yellow-green; acorns gradually tapering to a point, maturing in 2 yrs. Dry, open ridges, usually at higher elevations. Some pls identified as this taxon may be environmentally induced, scrubby *Q. w.* var. *w.*, or even *Q. parvula* var. *shrevei*. — Al Keuter

◆ ***Quercus wislizeni* var. *w.***: Similar to *Q. w.* var. *frutescens* except a tree, 10–22 m; lvs 2–5 cm. If it is indeed present here, it is to be found on interior valley slopes or ridges. Confusion exists because older County records of *Q. parvula* var. *shrevei* were called *Q. wislizeni*, and recent County records of *Q. w.* var. *wislizeni* match descriptions of *Q. parvula* var. *shrevei*. More study is needed to determine if and where *Q. wislizeni* var. *w.* occurs locally. — Al Keuter

## ~R~

- ◆ *Ranunculus aquatilis* var. *a.*: Receptacle bristly; floating lvs 0 or reniform, 3-parted, segments not linear; submersed lvs w/ linear segments (vs. ▼). Streams, ponds, other wet areas. Only two reports: BLM (2000) & PV (2011).
- ◆ *Ranunculus aquatilis* var. *diffusus*: As above but both floating and submersed lvs w/ linear segments.
- ◆ *Ranunculus arvensis*: Fr spiny.
- ◆ *Ranunculus californicus* var. *californicus*: Petals 9+ (vs. *R. occidentalis* var. *o.*); sts thin, decumbent to erect; basal lvs compound. Inland (vs. ▼).
- ◆ *Ranunculus californicus* var. *cuneatus*: Sts thick, prostrate; basal lvs simple. Coastal bluffs, hillsides (vs. ▲).
- ◆ *Ranunculus hebecarpus*: Petals to 2 mm; fr finely papillate on faces and margin, each papilla w/ hooked bristle; beak lanceolate (vs. *R. parviflorus*).
- ◆ *Ranunculus lobbii*: Receptacle glabrous. Reported by CLA from "moist places," and one old record: slv (1893). Presumably extirpated.
- ◆ *Ranunculus muricatus*: Sts stout; petals 4–10 mm, showy; fr faces very coarsely papillate, each papilla w/ hooked bristle; beak 2–2.5 mm, curved, lanceolate.
- ◆ *Ranunculus occidentalis* var. *o.*: Petals 5–6 (vs. *R. californicus*). Moist meadows. Only one 2003 report: MC. Not recorded in surrounding counties.
- ◆ *Ranunculus parviflorus*: Petals to 1.8 mm; fr finely papillate only on faces, each papilla w/ hooked bristle; beak deltate (vs. *R. hebecarpus*).
- ◆ *Ranunculus pusillus*: Lvs simple, unlobed; petals 1–3; fr smooth, beak tiny. Wet areas, clay soils in grassland. At southern edge of coastal range here.
- ◆ *Ranunculus repens*: Sts decumbent or creeping, rooting at nodes; fr smooth, beak curved. Many habitats.
- ◆ *Ranunculus sceleratus* var. *s.*: Sts erect; fr faces w/ fine wrinkles. Ponds.
- ◆ *Ranunculus uncinatus*: Petals 2–4 mm; fr faces smooth. Moist areas. Only two records/reports: nm (1989) & S (2011). At southern edge of coastal range here.
- ◆ *Raphanus raphanistrum*: Petals pale-yellow, ± white in age; fr strongly constricted between seeds, beak ± slender (vs. ▼). TJM2: Hybridizes w/ *R. sativus* to produce pls highly variable in fl color and fr constriction.
- ◆ *Raphanus sativus*: Petals pink to purple (occ white); fr not or only ± constricted between seeds, beak conic (vs. ▲).
- ◆ *Rhododendron columbianum*: Lvs thick, evergreen; fr dehisces from base upward; fls white to cream. Stream margins. At southern edge of coastal range here.
- ◆ *Rhododendron macrophyllum*: Lvs thick, evergreen; fr dehisces from top downward; fls white to pink or purple. Forested areas, acidic soils.
- ◆ *Rhododendron occidentale*: Lvs thin, deciduous; fls white to pink to salmon. Occasional populations are winter-flowering.
- ◆ *Rhus integrifolia*: "A southern CA species that was probably planted in the 1930s era of 'Conservation' plantings." –Dr. Dean W. Taylor

- ◆ *Rhynchospora californica?*: One 1990 report from a pond in Bonny Doon (blm); occurrence apparently extirpated. (ID uncertain; may have been *R. capitellata*.)
- ◆ *Ribes californicum* var. *c.*: Nodal spines 3; internodes gen glabrous; lf hairs 0 or sparse; fr spiny. Only recorded from crest of Pajaro Hills (PV). Woodland.
- ◆ *Ribes divaricatum* var. *pubiflorum*: Nodal spines 0–3; internodes bristly or not; style base hairy; fr black, glabrous. “Two forms exist in S: one with glandular lvs and one with soft-pubescent, non-glandular lvs.” — James A. West
- ◆ *Ribes malvaceum* var. *m.*: Nodal spines 0; lvs thick, tomentose abaxially; style base hairy. Flwg October–April. Chaparral.
- ◆ *Ribes menziesii* var. *m.*: Nodal spines 3; internode bristles dense; lvs glandular-hairy; style base glabrous. Two (or more) forms occur here, both no longer recognized: *R. m.* var. *leptosmum* (Coville) Jepson (w/ ovary not long, white-hairy); and *R. m.* var. *senile* (Coville) Jepson (w/ ovary long, white-hairy). The former has a wide range and is more variable; the latter is a Santa Cruz Mtns. endemic, common locally in MC & PV [JHT = *Grossularia leptosma* Coville; *G. senilis* Coville].
- ◆ *Ribes sanguineum* var. *glutinosum*: Nodal spines 0; lvs thin, not tomentose abaxially; style base glabrous. Flwg February–April. Woodland.
- ◆ *Romanzoffia californica*: Tuberous. Moist cliff faces. Only one old record: bb (1943).
- ◆ *Rorippa curvisiliqua*: Sts ascending or decumbent to prostrate; gen few from base; fr 1–2 mm wide (vs. ▼).
- ◆ *Rorippa palustris* subsp. *p.*: Sts erect, branched above; fr > 1.5 mm wide (vs. ▲).
- ◆ *Rosa californica*: Thicket-forming. Moist areas, mainly coastal. Local (i.e., coastal) pls have denser, straighter prickles than the typical form found farther inland.
- ◆ *Rosa gymnocarpa* var. *g.*: Non-rhizomatous, delicate shrub; sepals deciduous in fr; hypanthium glandless; pistils 5–10.
- ◆ *Rosa pinetorum?*: Rhizomatous shrub, gen < 1 m; sepals persistent in fr; hypanthium glandless; pistils ± 10–20. Pine woodland. Only three old records: bb/s & zs. TJM2: Hybrids of *R. gymnocarpa* and *R. spithamea* can key to this species. Study needed.
- ◆ *Rosa spithamea*: Rhizomatous shrub, gen < 5 dm; sepals persistent in fr; hypanthium stalked-glandular; pistils 10–20. Chaparral. Fire-follower.
- ◆ *Rubus armeniacus*: Sts 5-angled, prickles many; lflets gen 5, abaxially densely white-tomentose; fls pink. Hybridization btw this and *R. ursinus* occurs rarely.
- ◆ *Rubus leucodermis*: Sts not angled; lflets gen 5, abaxially densely white-tomentose; fls white. Occasional in moist, forested areas.
- ◆ *Rubus spectabilis*: Sts not angled, erect, prickles few; fls magenta. Stream edges. Only recorded in BLM & S. At southern edge of range here.
- ◆ *Rubus ulmifolius* var. *anoplothyrsus*: Sts 5-angled, glaucous, prickles 0.
- ◆ *Rubus ursinus*: Gen dioecious; sts not angled; prickles dense, straight; lflets gen 3, abaxially sparsely to densely gray-hairy; fls white. Common.
- ◆ *Rumex acetosella*: Rhizomatous, dioecious perennial; gen < 4 dm; lvs hastate. Disturbed areas; often acidic, sandy soils.

- ◆ *Rumex californicus*: Sts ± ascending; infl ± open; tubercles gen 0 (occ 1); inner perianth lobe margins gen minutely toothed. Moist areas. Only reported from S.
- ◆ *Rumex conglomeratus*: Sts erect; lvs basal and cauline; infl interrupted, leafy; inner perianth lobes 1–2 mm wide, margins entire; tubercles 3, ± equal, ± as wide as lobes. Moist areas.
- ◆ *Rumex crassus*: Sts decumbent to ascending; lvs leathery; inner perianth lobes 3–4 mm wide; tubercle 1, lg, warty. Sandy, coastal areas; marshes.
- ◆ *Rumex crispus*: Sts erect; inner perianth lobes 3–5 mm wide, margins entire to irregularly toothed; tubercles gen 3, at least 1 (occ 2) lgr, > 1 mm wide. Moist areas.
- ◆ *Rumex dentatus*: Annual; sts erect, slender, often bent, branched; inner perianth lobes 2–3 mm wide minus marginal teeth; tubercles gen 3, equal, lanceolate.
- ◆ *Rumex fueginus*: Annual; sts prostrate to erect; infl pubescent; inner perianth lobes < 1 mm wide minus marginal teeth; tubercles 3, ± equal, brown or red. Slough margins in South County.
- ◆ *Rumex obtusifolius*: Sts gen branched; inner perianth lobes 2–3.5 mm wide minus marginal teeth; tubercle 1, smooth, or 3, unequal.
- ◆ *Rumex occidentalis*: Sts gen erect; lvs leathery; tubercles 0. Wet, coastal areas.
- ◆ *Rumex pulcher*: Sts erect, slender; infl branches widely spreading, infl interrupted; inner perianth lobes 2–3 mm wide minus marginal teeth; tubercles 3, = or not, gen warty. Variable. Dry grassland.
- ◆ *Rumex salicifolius*: Sts decumbent to erect; inner perianth lobes 1.5–2.1 mm wide; tubercle 1, smooth to warty. Moist areas.
- ◆ *Rumex transitorius*: Sts ± decumbent to erect; tubercles gen 3, unequal, smooth. Wet areas in dunes, meadows. Only two records: nm (1966) & PV (2004).
- ◆ *Ruppia cirrhosa*: Only two old records: sc (1893) & sl (1953). Ponds, lakes.

~S~

- ◆ *Sagina apetala*: Annual; upper lvs minutely ciliate near base; sepals 4 (occ 5); petals gen 0.
- ◆ *Sagina decumbens* subsp. *occidentalis*: Annual; upper lvs glabrous; sepals gen 5; petals gen 5.
- ◆ *Sagina maxima* subsp. *crassicaulis*: Prostrate perennial; sts fleshy; sepals 5, ± appressed in fr. Sea cliffs. Few pops remain (NC), and these are vulnerable to erosion.
- ◆ *Sagina procumbens*: Perennial; sts spreading and rooting at nodes; sepals 4 (occ 5), spreading to ascending in fr. A common nursery weed.
- ◆ *Sagittaria cuneata*: Basal lobes of lf blades < terminal lobe. Only one report: Merk Rd. Pond (pv) (1978).
- ◆ *Sagittaria latifolia*: Basal lobes of lf blades ± = terminal lobe. Ponds, ditches. Only two old records: pv (1929) & sc (1950s).
- ◆ *Salicornia pacifica*: Subshrub. Saltmarshes, alkaline flats. Coastal except for SL.
- ◆ *Salix exigua* var. *hindsiana*: Rhizomatous shrubs forming dense clonal stands on streambeds; lvs linear. Mainly occurs on the Pajaro and San Lorenzo rivers, well

inland. An unusually short (to 2 m), very silvery, relatively broad-lvd form occurs in small ravines along the immediate coast at Natural Bridges (SC) and north of Manresa S. B. (SB). May belong to a distinct coastal race; study needed.

◆ *Salix laevigata*: Lvs glaucous abaxially, dark glossy green adaxially, young lvs glabrous or white- or white-and-rusty hairy; bud-scale margins free, overlapping, gen sharply pointed. Mostly South County, w/ some very large trees near SL.

◆ *Salix lasiandra* var. *l.*: Lvs lanceolate, attenuate; petiole w/ wart-like glands near base of blade; glandular stipules prominent; bud-scale margins fused. The second most common willow here after *S. lasiolepis*. Mostly North Coastal creeks (NC & S).

◆ *Salix lasiolepis*: Lvs variable, but gen oblanceolate, broadest at middle or above; ovary glabrous. Our commonest willow and the most tolerant of all local trees to conditions on the immediate coast.

◆ *Salix scouleriana*: Lvs obovate to oblanceolate to narrowly elliptic; ovary hairy. Gen solitary in wooded, upland habitats; conspicuous in fall when lvs turn yellow.

◆ *Salix sitchensis*: Mature lvs abaxially densely, silver-velvety (“snuggly”); stamen 1. Primarily along North Coastal creeks (NC & S).

◆ *Sambucus nigra* subsp. *caerulea*: Fr bluish-black; infl ± flat-topped (vs. ▼).

◆ *Sambucus racemosa* var. *r.*: Fr red; infl ± dome-shaped (vs. ▲). Coastal.

◆ *Sanicula bipinnatifida*: Lvs pinnate w/ central axis winged; fls purple or rarely yellow. “Oozes sap that turns milky-white when exposed to air, a characteristic it shares w/ *S. hoffmannii*.” – James A. West

◆ *Sanicula crassicaulis*: Lvs gen palmate. Variable, polyploid species w/ several chromosomal races, the most distinct of which is a recurring form reminiscent of *S. laciniata*. Hybrids w/ *S. arctopoides* have also been reported from S.

An undescribed taxon discovered by James A. West related to *S. c.* – and that has been confused w/ it – occurs in moister habitats than *S. c.* and has an acrid (vs. celery-like) fragrance. Lvs w/ deciduous, weak, white bristles vs. the shorter, persistent bristles of *S. c.* Occurs from Sonoma Co. to Santa Barbara Co. and inland to Santa Clara Co.

◆ *Sanicula hoffmannii*: Petioles w/ reddish bases and middle lf lobes free almost to point of attachment. Oak-conifer woodland and forest (PV & S). Close to northern edge of range here. “This species, along with *S. laciniata*, is a putative parent of *S. crassicaulis*. Oozes sap that turns milky-white when exposed to air, a characteristic it shares w/ *S. bipinnatifida*.” – James A. West

◆ *Sanicula laciniata*: Lf margins sharply angled; fl heads bright-yellow. Maritime chaparral and oak woodland near coast (BLM & PV).

◆ *Sceptridium multifidum*: Moist areas. Extirpated from Camp Evers (sv).

◆ *Schoenoplectus acutus* var. *occidentalis*: Sts bluish-green, cylindric. *Schoenoplectus* spp. have flwg sts w/ cauline lvs 0 (vs. *Scirpus* spp.). TJM2: Intermediates to and hybrids w/ *S. californicus* have been recorded in SnFrB & CCo.

◆ *Schoenoplectus americanus*: 0.4–2.5 m; sts 3-sided; distal lf blade < 1.5× sheath; infl head-like. Mineral-rich marshes. *Scirpus olneyi* A. Gray was combined w/ *Scirpus americanus* Pers. in TJM1. LR designation refers to the former, restricted to SL. It is taller (0.5–2.2 m) than *Scirpus americanus* (< 1 m) and much less common. See JHT.

- ◆ *Schoenoplectus californicus*: Sts blunt 3-sided throughout to cylindric near infl, dark-green; infl panicle-like.
- ◆ *Schoenoplectus pungens* var. *longispicatus*: 1–20 dm; sts 3-sided; distal lf blade 2–5× sheath; infl head-like.
- ◆ *Scirpus microcarpus*: 10–50 fls per spikelet. Wet areas. *Scirpus* spp. have flwg sts w/ 1+ cauline lvs (vs. *Schoenoplectus* spp.); infl gen > 1.
- ◆ *Scribneria bolanderi*: Annual; infl straight, purplish. Only old records: Jamison Creek (slv) (1953 & 1960). TJM2: “Inconspicuous and easily overlooked.”
- ◆ *Scrophularia californica*: A yellow-fl'd form is occasional.
- ◆ *Sedum radiatum*: Lvs widest near base. Only recorded from bare sandstone outcrops at Lucille’s Court Meadow (SLV).
- ◆ *Senecio aronicoides*: Heads discoid or radiate. Open areas in chaparral.
- ◆ *Senecio glomeratus*: Lvs pinnately lobed (vs. *S. minimus*).
- ◆ *Senecio hydrophilus*: Only one old record: s (1912). Marshes. Possibly extirpated.
- ◆ *Senecio minimus*: Lvs evenly fine-dentate (vs. *S. glomeratus*).
- ◆ *Senecio sylvaticus*: Sts densely curly-hairy (vs. ▼). Sandhills.
- ◆ *Senecio vulgaris*: Sts glabrous or sparsely hairy (vs. ▲).
- ◆ *Sequoia sempervirens*: Occ individuals have been found w/ “albino” suckers. Extreme variation between individuals, w/ many forms, named cultivars, etc.
- ◆ *Setaria parviflora*: An apparent case of taxonomic confusion. Said to be a native of moist habitats, but local version is an urban weed formerly recognized as *S. geniculata* (Willd.) P. Beauv. Now best referable to *S. gracilis* Kunth.
- ◆ *Sherardia arvensis*: Calyx 6-lobed; fls blue (vs. calyx 0; fls white in *Galium* spp.).
- ◆ *Sidalcea malachroides*: Perennial or subshrub; bractlets usually 0; infl head-like; calyx often purple; petals usually white or pale-purple. Open areas in coastal woodland. Two old records from “sc,” and one 1992 record from nm.
- ◆ *Sidalcea malviflora* subsp. *laciniata*: Lvs halfway up st deeply lobed; inland (vs. ▼). TJM2: Intergrades w/ *S. m.* subsp. *malviflora*.
- ◆ *Sidalcea malviflora* subsp. *m.*: Lvs halfway up st not as deeply lobed as above; coastal. TJM2: Intergrades w/ *S. m.* subsp. *laciniata*.
- ◆ *Silene lemmonii*: Only two old records: slv (1939 & 1950). Woodland, forest.
- ◆ *Silene verecunda*: TJM2 no longer recognizes the two very distinct, local forms of this taxon (see TJM1)—formerly referred to as subsp. *platyota* (S. Watson) C. L. Hitchc. & Maguire and subsp. *verecunda*. The former has a much wider range and, locally, is fairly common in the Sandhills (BDS & ZS). The latter (w/ CRPR 1B.2) is much more robust and has more numerous and darker fls; it occurs on exposed mudstone in NC & S and ranges north to San Francisco.
- ◆ *Sisyrinchium bellum*: Fls white to powder-blue to purple; stamens appressed.
- ◆ *Sisyrinchium californicum*: Fls yellow; stamens spreading. Reported by CLA from “wet places.” Extirpated from Camp Evers (sv) and UCSC campus, but as of 2013, still extant in one pondside location in Bonny Doon (BLM).

- ◆ *Solanum americanum*: Anthers < 2.5 mm; glandular hairs 0 (vs. *S. nigrum*).
- ◆ *Solanum douglasii*: Anthers gen 2.5+ mm.
- ◆ *Solanum nigrum*: Anthers < 2.5 mm; some hairs glandular (vs. *S. americanum*).
- ◆ *Solanum umbelliferum*: Upper st hairs branched; corolla lavender to blue-purple, petals w/ two greenish spots at base.
- ◆ *Solanum xanti?*: Upper st hairs 0 or gen simple. One old record: "sc" (1881). Presumably extirpated if ID was correct. TJM2: Can hybridize w/ *S. umbelliferum*.
- ◆ *Solidago spathulata*: Pls in a wet meadow in Marshall Field (BLM) seem to correspond to this taxon though not in normal habitat (dunes, headlands).
- ◆ *Sonchus asper* subsp. *a.*: Lf auricles rounded; ligule < corolla tube (vs. ▼).
- ◆ *Sonchus oleraceus*: Lf auricles pointed; ligule ± = corolla tube (vs. ▲).
- ◆ *Sparganium eurycarpum* var. *e.*: Stigmas 2(+) on 60+% of pistillate fls (vs. ▼). It is not known which var(s) is/are present here, and vars. intergrade. Study needed.
- ◆ *Sparganium eurycarpum* var. *greenei*: Stigmas 2 on < 50% of pistillate fls (vs. ▲).
- ◆ *Spergularia arvensis*: Lvs opposite but appearing whorled.
- ◆ *Spergularia bocconi*: Annual; stipules gen deltate, dull, white to tan, gen inconspicuous, tip acute to short-acuminate; petals white or pink (vs. *S. rubra*). Salt marshes, alkaline areas.
- ◆ *Spergularia macrotheca* var. *leucantha*: Fleshy perennial; calyx lobes 4.5+ mm; petals white. Alkaline areas. Only documented from SL.
- ◆ *Spergularia macrotheca* var. *m.*: As above, but petals pink or blue.
- ◆ *Spergularia marina*: Annual; stamens 2-5; petals white or pink. At SL, two different forms occur (see JHT). These have been called *S. m.* var. *tenuis* (E. Greene) R. Rossbach and *S. m.* var. *m.* The latter is more common and larger; infl is crowded in former and lax, not crowded in latter. Both forms at least LR, and *S. m.* var. *t.* may be rare, period.
- ◆ *Spergularia rubra*: Annual; stipules gen lanceolate, shiny, white, conspicuous, tip ± long-acuminate; petals pink (vs. *S. bocconi*). Disturbed areas.
- ◆ *Spergularia villosa*: ± non-fleshy perennial; calyx lobes to 4 mm; petals white.
- ◆ *Spiranthes porrifolia*: Fls spiraled; upper sepal and lateral petals gen spreading, not forming hood (vs. ▼). Wet meadows. Much reduced in recent decades.
- ◆ *Spiranthes romanzoffiana*: As above but upper sepal and lateral petals forming hood. Predominantly coastal grasslands. Much reduced in recent decades.
- ◆ *Spirodela polyrhiza*: Roots 5-16. Freshwater. 2 records/reports: pv (1928) & SLV. Has been confused w/ *Landoltia punctata* (w/ roots gen 2-7).
- ◆ *Stachys ajugoides*: Lf blade gen oblong, silky-hairy, base wedge-shaped; mature infl elongated, many bracts visible; corolla white (occ pink); sweetly scented. Sunny, seasonally wet depressions. Hybridizes w/ *S. rigida* var. *quercetorum*.
- ◆ *Stachys bullata*: Lf blade ± ovate; ring of hairs inside corolla tube < 2 mm from base, perpendicular to tube; corolla tube base pouch 0. Intermediates between this and *S. rigida* have been reported from S.

- ◆ *Stachys chamissonis*: Corolla tube > 15 mm long. Marshy areas, gen coastal.
- ◆ *Stachys pycnantha*: Mature infl compact, gen < 5 cm, gen only two lowest bracts visible; ring of hairs inside corolla tube > 2 mm from base, oblique. Moist areas.
- ◆ *Stachys rigida* var. *quercetorum*: Pl gen 0.6–1 m; lf blade ovate, base cordate; mature infl elongated, many bracts visible; basal ring of hairs inside corolla tube strongly oblique, tube base pouched. Pls approaching *S. r.* var. *rigida* (pls gen 1 m; lf blade lanceolate to oblong, base rounded or cordate) have been reported from S.
- ◆ *Stebbinsoseris decipiens*: Coastal grassland. At least 20 extant populations in NC & S, as of 2013. TJM2: Derived from hybridization between *Microseris bigelovii* and *Uropappus lindleyi*. *Stebbinsoseris* spp.: Fl heads not strongly nodding in bud.
- ◆ *Stebbinsoseris heterocarpa*: Grassland. Somewhat variable. TJM2: Derived from hybridization between *Microseris douglasii* and *Uropappus lindleyi*.
- ◆ *Stephanomeria elata*: Outer phyllaries gen reflexed; pappus bristles wholly plumose; fr face smooth to tubercled, grooved. Study needed on local *Stephanomeria* spp. TJM2: *S. e.* “[d]erived from hybridization between *S. exigua* and *S. virgata*.”
- ◆ *Stephanomeria exigua* subsp. *coronaria*: Outer phyllaries appressed; pappus bristles plumose on distal 60–85%; fr w/ long groove on each face.
- ◆ *Stephanomeria virgata* subsp. *pleurocarpa*: Outer phyllaries appressed; pappus bristles wholly plumose; fr without long groove on each face.
- ◆ *Stipa cernua*: Floret 4–9 mm; lemma body in age glabrous in distal 3/4 except on veins; lemma awn 50–100 mm, diameter 0.2–0.4 mm. Denser, w/ more flwg sts per clump than *S. pulchra*; spikelets thinner and awns longer, less rigid, and more flexible. Sparse, sandy grasslands. Only recorded in mc & PV.
- ◆ *Stipa lepida*: Floret 4–7 mm; lemma hairy throughout when young, hairy on veins in age; lemma awn 12–55 mm, diameter ± 0.1 mm. Normally, found along shrub margins, but one BLM form grows in open grassland w/ *S. pulchra*.
- ◆ *Stipa pulchra*: Floret 7.5+ mm; lemma body hairy throughout in age; lemma awn 38–100 mm, diameter 0.2–0.4 mm. Open grassland w/ relatively heavy soil (but generally on well-drained slopes).
- ◆ *Stipa tenuissima*: Frequently used in landscaping, this species has displayed a potential for spreading. TJM2: First naturalized location in CA in PV (2003).
- ◆ *Stuckenia pectinata*: Infl submersed (vs. *Potamogeton* w/ infl floating, emergent).
- ◆ *Stylocline gnaphaloides*: Open areas in Sandhills (BDS & ZS).
- ◆ *Suaeda calceoliformis*: Alkaline areas. Recorded in SL, most recently in 2004.
- ◆ *Symphoricarpos albus* var. *laevigatus*: Pl erect, 6+ dm high; infl w/ 8+ fls (vs. ▼).
- ◆ *Symphoricarpos mollis*: Pl sprawling, to 6 dm high; infl w/ 2–8 fls (vs. ▲).
- ◆ *Symphotrichum chilense*: Rhizomatous perennial; outer phyllaries obtuse. “Variable as to phenology, stature, foliar morphology, & fl color.” –James A. West
- ◆ *Symphotrichum subspicatum*: Rhizomatous perennial; outer phyllaries ± acute. TJM2: Highly variable; grading into *S. chilense*.
- ◆ *Symphotrichum subulatum* var. *parviflorum*: Annual; ray fls 27–40; corolla gen 2–3 mm, white to pink. Marshes. Only two records: pv/sl (1908) & PV (2004).

## ~T~

◆ *Tanacetum bipinnatum*: Pls here w/ fl heads disciform (ray fls 0). Coastal bluffs, dunes. Thought to be extirpated here until a single colony was rediscovered in 2007 in NC. At southern edge of range here.

◆ *Taraxia ovata*: Two forms often occur together: one w/ red lf ribs and the other w/ green ones. "What appear to be peduncles are actually the sterile tips of the ovary, which are buried deep within the basal rosette of lvs." —James A. West

◆ *Tauschia hartwegii*: Chaparral, oak/pine woodland. Reported by CLA from "hills," and two records/reports: CRR (1996) & PV (2010).

◆ *Tellima grandiflora*: Petals 3–7 mm, lobes ± 5–7, linear, greenish-white becoming red; stamens 10.

◆ *Thermopsis californica* var. *c.*: Local pls formerly referred to *T. macrophylla*. "Pls from 2 pops in BLM do not key well to *T. c.* var. *c.*, reaching over 2+ m. (vs. < 1 m)." —Kevin Bryant This may be due to their growing in seasonally moist areas vs. dry grassland. Several other differences, e.g., in lf-vein count and st pubescence, may or may not be related to the larger size of the pls. Study needed.

◆ *Thysanocarpus curvipes* subsp. *c.*: [*TJM2* = *T. c.*] Cauline lvs lanceolate, bases lobed, clasping.

◆ *Thysanocarpus laciniatus*: [*TJM2* = *T. l.* var. *l.*] Cauline lvs linear to narrowly elliptic, bases wedge-shaped, ± lobed or not, ± not clasping. Grassy slopes (S).

◆ *Tiarella trifoliata* var. *unifoliata*: Petals thread-like; stamens 10; fr scooplike.

◆ *Tolmiea diplomenziesii*: Petals thread-like, brown-purple; stamens 3. Moist streambanks. Only two records: slv (1933 & 1966). At southern edge of range here.

◆ *Tonella tenella*: Slender, erect annual; lvs opp; fls white proximally, blue or violet distally, often w/ purple spots. Moist, shady areas. Only documented from Castle Rock S. P. Towards southern edge of range here.

◆ *Torilis arvensis*: Pl erect; umbel open (vs. ▼). Common.

◆ *Torilis nodosa*: Pl spreading; umbel dense, headlike (vs. ▲).

◆ *Torreya californica*: Lvs bristle-tipped, aromatic; aril green w/ purple streaks. Most common in forest, but also occurs in chaparral in Loma Prieta area.

◆ *Torreyochloa pallida* var. *pauciflora*: Marshes, pond margins. Two records: nr Camp Evers (sv) (1952), occurrence extirpated, & NM (2004).

◆ *Toxicoscordion fontanum*: Perianth ± bell-shaped; infl narrow (vs. ▼). Coastal prairie. Only recorded from two locations in UCSC grasslands (BLM).

◆ *Toxicoscordion fremontii*: Perianth rotate; infl wide (vs. ▲). *Zigadenus* f. (*Torr.*) S. Watson var. *minor* (*Hook. & Arn.*) Jepson is not currently recognized (see JHT). Occurring in several locations in coastal prairie (BLM), it differs from typical *T. f.* [= *Z. f.*] in its short stature (< 3 dm); infl a raceme (vs. panicle); very early flwg (January–March vs. March–May); and grassland vs. woodland/chaparral habitat. LR designation refers to this taxon; deserves CRPR 1B listing.

◆ *Trifolium albopurpureum*: Involucre 0; corolla 5–8 mm, purple w/ white tips. Variable; confused w/ *T. dichotomum* (w/ corolla 7–12 mm; showy), *T. macraei* (w/ heads nearly sessile), and *T. olivaceum* (w/ corolla 4–7 mm). *T. d.* & *T. o.* not in Co.

- ◆ *Trifolium angustifolium*: Involucre 0; elongated prickly heads. Has spread rapidly after its fairly recent introduction. Infls irritating to grazing animals.
- ◆ *Trifolium barbigerum*: Involucre bowl-shaped; corolla 5–10 mm; fls purple w/ white tips; banner base inflated in fr. An undescribed taxon resembling *T. b.* was discovered ca. 1980 by James A. West in nc & s. (both populations possibly extirpated). Endemic to nw Santa Cruz and w San Mateo cos, it differs from *T. b.* in its white fls, glabrous involucre, and short and relatively unbranched calyx lobes. (A pink-fl'd form of this taxon is common north of the San Francisco Bay, where it has always been referred to as *T. b.*, but *T. b.* sensu stricto occurs normally only south of the San Francisco Bay). Its closest relative appears to be *T. physanthum* Hook. & Arn., a Chilean species no doubt derived from this taxon, rather than vice versa. Once published, deserving of CRPR 1B listing.
- ◆ *Trifolium bifidum* var. *b.*: Involucre 0; calyx lobes w/ some hairs; corolla pink-purple; fls reflexing. Differences between two vars. may not warrant taxonomic recognition since they are based on minor characters (lfl length/width and depth of lfl notch) and are identical in genetic (ITS) signature. This deeply-cleft lfl variant is relatively uncommon and limited in range compared w/ var. *decipiens*.
- ◆ *Trifolium bifidum* var. *decipiens*: See note ▲.
- ◆ *Trifolium buckwestiorum*: Involucre bowl-shaped, irregularly cut; stipules w/ bristle-tipped teeth; corolla pale-pink or white. First fl heads much reduced, sessile, appearing cleistogamous. Grassland, woodland edges. Discovered by James A. West in the late 1950s in S, published in 1991, and later found in Sonoma, Monterey, Santa Clara, and Mendocino cos. Monterey Co. populations are a distinct, miniature version. *T. b.* is most closely related to the *T. variegatum* complex.
- ◆ *Trifolium campestre*: Involucre 0; infl gen > 20-fl'd; corolla bright-yellow, striate. Much less common but showier than *T. dubium*.
- ◆ *Trifolium cernuum*: Involucre 0; pl glabrous; infl axillary; fls reflexing; corolla pink, banner tip notched. First seen here in the mid-1990s and spreading rapidly.
- ◆ *Trifolium ciliolatum*: Involucre 0; calyx lobes ciliate. This plus *T. bifidum*, *T. gracilentum*, and *T. palmeri* of the Channel Islands and Baja California, comprise the most “primitive” group of CA native annual clovers, w/ fls deflexing after anthesis. *T. c.* is the tallest, most robust member of the clan. The local species tend to occur more in wooded areas than in grasslands.
- ◆ *Trifolium depauperatum* var. *amplectens*: Involucre bract margins widely scarious; banner slightly inflated in fr; ovules 4–6. Only one population known here, at edge of grassland near Moore Creek Preserve (BLM). Fls all-white, unlike next two vars., which have a strong purple wing-spot, even in white-fl'd variants. Behaves as a good biological species, not as a var. of *T. depauperatum*.
- ◆ *Trifolium depauperatum* var. *d.*: Involucre vestigial, ring-like; banner inflated in fr. Earliest-fl'wg native clover, locally. Our few populations (SV to coast) are the only known locations of this taxon in the Coast Ranges south of San Francisco Bay. According to DNA evidence, there are two distinct races of *T. d.* The form north of San Francisco Bay is very uniform in morphology. However, the southern race, to which our pls belong [= *T. d.* var. *laciniatum* (E. Greene) Jepson], can be extremely variable w/ regard to fl color, lf shape, and lf markings, particularly in the San Joaquin Valley and East Bay, though along the coast pls are more uniform.

◆ *Trifolium depauperatum* var. *truncatum*: Involucre margins ± membranous; banner inflated in fr; ovules 2. Like “var.” *amplectens*, should be treated as a full species, and like “var.” *depauperatum* has regional varieties of its own. Its correct name is *T. stenophyllum* Nutt. The typical form occurs mainly in coastal counties and has small, deep-purple fls. It is the commonest and most strongly inflated “depauperoid” here and throughout the southern half of CA. Often misidentified as *T. d.* var. *amplectens*.

◆ *Trifolium dubium*: Involucre 0; infl 5–10 fld; corolla bright-yellow, weakly striate (vs. *T. campestre*). Much more common than *T. campestre*.

◆ *Trifolium fragiferum*: Glabrous, creeping perennial; corolla pink; calyx hairy, inflated in fr. Planted in lawns, etc. and naturalizing to a limited extent.

◆ *Trifolium fucatum*: Involucral bracts ± free; corolla white to yellowish w/ a purple tinge; banner inflated in fr. A number of distinct taxa have been lumped under this name. However, all County occurrences are *T. fucatum* sensu stricto (which occurs locally only on coastal headlands; NC & sc) except:

1) *T. flavulum* E. Greene (not currently recognized), w/ small, self-pollinating fls and other differences. Locally, it has only been reported in SL but is more common in the Bay Area; and

2) possibly a Boulder Creek (SLV) specimen reported as *T. gambelii* Nutt. (not currently recognized). (This entity could not be true *T. g.*, which is a Channel Island species, but may be a similar-looking, still-undescribed East Bay species.)

◆ *Trifolium glanduliferum*: A non-invasive, erosion-control substitute for *T. hirtum*.

◆ *Trifolium glomeratum*: Involucre 0; pl ± glabrous, decumbent; infl sessile, head-like; corolla pink. First seen here in the mid-1990s and spreading rapidly.

◆ *Trifolium gracilentum*: Involucre 0; calyx lobes glabrous; fls reflexing; corolla pink to pink-purple (occ purple). Like many native annual clovers, quite variable.

◆ *Trifolium grayi*: Involucre bowl-shaped; corolla 8–16 mm, > calyx, purple gen w/ white tips; banner inflated in fr. Grassland, meadows. There are approximately 10 regional races of this showy clover, all endemic to CA and all but one or two rare. Three of these undescribed vars. are present here, each represented by a few, small, surviving populations (the first two are County endemics):

1) one form is endemic to SV and is only subtly different from

2) a second form endemic to the upper SLV and adjacent parts of BB & S; while

3) the third, particularly showy, form occurs along the coast in Santa Cruz (NC & S) and San Mateo cos.

◆ *Trifolium hirtum*: Involucre-like stipules; pl hairy; calyx lobes densely plumose; corolla pink. Widely seeded and often becoming an aggressive weed; one of the principal components of Santa Cruz erosion-control mix.

◆ *Trifolium hybridum*: Involucre 0; fls pink, reflexing. Not persisting here.

◆ *Trifolium hydrophilum*: Involucre bracts tiny, basally fused; pl gen fleshy; calyx striate; fls dull-pink. Prefers alkaline habitats. Only local population in SL. Elevated to species status in *TJM2*, as the other two *depauperatum* vars. should have been.

◆ *Trifolium incarnatum*: Involucre 0; corolla gen crimson. Seeded for erosion control, but not persisting like *T. hirtum*, and therefore a much better choice.

◆ *Trifolium macraei*: Involucre 0; infl gen paired. Coastal bluffs. A member of the

*T. albopurpureum* complex. Appears to intergrade w/ *T. a.*, w/ some individuals having relatively long peduncles like those of *T. a.*; also, fl-head size quite variable.

◆*Trifolium michelianum* var. *m.*: Involucre 0. Possibly a new record for CA. A coarse, white-fl'd European annual related to *T. hybridum* found twice as single pls (MC & SV).

◆*Trifolium microcephalum*: Involucre bowl-shaped; pl w/ fine, wavy hairs; calyx lobes > 1/2 tube, prickly; corolla pink to lavender. This and *T. willdenovii* are our commonest native clovers. Both tolerate dry habitats.

◆*Trifolium microdon*: Involucre cup-shaped; pl inconspicuously puberulent; calyx lobes < 1/2 tube, not bristle-tipped. Inhabits moister sites than *T. microcephalum*.

◆*Trifolium obtusiflorum*: Involucre cut < 1/2 to base; pl glandular, especially infl; fl margins broader and conspicuously bristly vs. *T. willdenovii*.

An undescribed, Santa Cruz Mtns. endemic form differs considerably in its genotype from typical *T. o.*; in its habitat (springs & moist areas along logging roads vs. streamsides); in its much smaller fl heads; and in its tendency to occur in mixed colonies w/ *T. w.*, its close relative. Once published, may qualify for CRPR 1B listing.

◆*Trifolium oliganthum*: Involucre wheel-shaped; infl 6–10 mm wide, 5–15 fld. In the late 1990s, an undescribed var. of *T. willdenovii* was discovered along moist, forested roadsides in Bonny Doon (BLM) that can be difficult to distinguish from *T. oliganthum*. It has prostrate sts and gen 4+ heads per st (vs. gen erect sts and few heads per st in *T. o.*). (Genetic evidence places it closest to *T. w.*)

◆*Trifolium polyodon*: Involucre wheel-shaped, cut to middle; calyx tubular, lobes often 2–3-parted. Moist meadows. Until discovery of County pops in 1999 (BLM & SLV), believed to be endemic to northern Monterey Co. A closely related, unpublished var. was discovered in SV grasslands and was later found near Boulder Creek (SLV), Petaluma, and Pt. Reyes in Marin Co. These pls key to *T. variegatum* var. *v.* in *TJM2*, but (in living pls) the fl color resembles that of *T. polyodon*. Differs from typical *T. p.* in having calyx lobes simple, rather than forked.

◆*Trifolium pratense*: Records may represent intentional seeding; not persisting.

◆*Trifolium repens*: Involucre 0; fls white. The main lawn clover, in several forms, and often with 4 lflts.

◆*Trifolium resupinatum*: Very showy annual. Seeded with related *T. fragiferum*.

◆*Trifolium striatum*: Involucre 0; infl axillary, sessile, short-cylindric; calyx 10-nerved; corolla pink. A recent weedy introduction; still uncommon locally.

◆*Trifolium subterraneum*: Involucre 0; pl hairy, prostrate or creeping; calyx stalk-like. Originally seeded in pastures, now very abundant. Usually disfigured by a foliar disease, which spreads to *T. dubium* and others growing w/ it.

◆*Trifolium variegatum* vars.: Involucre wheel-shaped; corolla lavender to purple, tips gen white. The *T. v.* complex has been badly confused in recent decades – the reason being that the various taxa look so much alike in the herbarium, even though they are clearly distinct genetically and geographically. When two taxa co-occur, as they often do, they do not seem to hybridize. The *TJM1* & *TJM2* treatments are artificial, the latter based on fl size alone (large, medium, & small), such that some taxa could key to all 3 vars., and some vars. include > 1 taxon.

Real, biological taxa within this complex occurring here include:

1) the common, widespread *T. v.* var. *v.*, which in *TJM2* would key to *T. v.* var. *geminiflorum* during its early stages of growth and to var. *v.* at its later stages. (The real var. *g.* is only found at higher elevations in the Sierra Nevada.);

2) a form corresponding to *T. rostratum* E. Greene (not currently recognized) that keys to *T. v.* var. *major* in *TJM2*. This relatively large-fl'd form is easily distinguishable from *T. v.* var. *major* by its prominently beaked keel (the real *T. v.* var. *major* [= *T. melananthum* Hook. & Arn.] grows inland). This form occurs on coastal grasslands (BLM) and ranges from the Monterey Peninsula to Pt. Reyes, Marin Co., where its larger-fl'd relative, *T. appendiculatum* Lojacono (not currently recognized) reaches its southern range limit. *T. r.* has formerly been included w/ *T. a.* [*T. a.* var. *rostratum* (E. Greene) Jepson], but DNA evidence shows these are two separate entities. Occasionally found w/ other members of the *T. v.* complex, though not hybridizing. This is the only large-headed member of the *T. v.* complex locally. LR designation, location, and *TJM1* synonym(s) apply to this form;

3) an undescribed, relatively large form that has been recorded from one marsh near S. In *TJM2* it would key to *T. v.* var. *v.*; and

4) *T. polyodon*, which in *TJM2* is recognized again as a separate species.

◆ ***Trifolium vesiculosum***: Involucre 0. Large, coarse annual; white fls turning pink following pollination.

◆ ***Trifolium willdenovii***: Involucre wheel-shaped; calyx glabrous. W/ *T. microcephalum*, our most common native clover. An extremely variable complex that needs study. Although the many regional forms may differ greatly from each other in appearance, they differ only minimally in DNA signature and are probably not separable at the species level (in contrast to members of the *T. variegatum* complex). At least two forms occur here: one is widespread w/ linear lvs; and the other, in the SV grasslands, belongs to a broader-lvd, interior race.

◆ ***Trifolium wormskioldii***: Locally, our only perennial native clover. Involucre wheel-shaped; rhizomatous; fls showy. Moist, marshy areas.

◆ ***Triglochin striata***: Mat-forming perennial; infl an aerial raceme. Marshes, springs. Only two old records: "sc" (1903) & nm.

◆ ***Trillium albidum?***: Fls sessile, corolla white to pinkish (vs. ▼). Pls that would fit better into *T. albidum* than into *T. chloropetalum* occur w/ *T. c.* along Waddell Creek in a few places; they are white or cream w/ yellow stamens. Similar pls are more common a few miles north of the San Mateo Co. line.

◆ ***Trillium chloropetalum***: Fls sessile; corolla yellow, pink, or dark-purple. Extremely variable locally both as to fl color and scent, especially in North County. (See Ray Collett's photos of many local color forms at [wildwestpix.com](http://wildwestpix.com).)

◆ ***Trillium ovatum* subsp. o.**: Fls stalked; corolla white-aging-pink (vs. ▲).

◆ ***Triodanis biflora***: Fls sessile, axillary; corolla 5+ mm, rotate, deep-blue or violet.

◆ ***Triphysaria eriantha* subsp. e.**: Pl puberulent, at least distally; corolla yellow, > bract; pouches 3+ mm deep; beak dark-purple. Grassland. Only recorded from Watsonville Airport (PV).

◆ ***Triphysaria eriantha* subsp. rosea**: As above but corolla white-aging-pink. Most colonies contain a few individuals ascribable to subsp. *eriantha*. All colonies of subsp. *rosea* are in coastal grassland vs. typical subsp. *eriantha*, which is more inland. Hybridizes w/ *T. pusilla*.

- ◆ *Triphysaria micrantha*: Like *T. eriantha*, but w/ corolla yellow, = bract; pouches 1–2 mm deep. Only recorded once: s (1984), from a small area in coastal prairie.
- ◆ *Triphysaria pusilla*: Corolla 4–7 mm, beak hooked, purple (occ greenish-yellow).
- ◆ *Triphysaria versicolor* **subsp. v.**: Pl gen glabrous; beak yellowish; corolla white-aging-pink.
- ◆ *Trisetum canescens*?: Lower infl branches ascending to erect; florets gen to base of panicle branches; lower glume 3–5 mm (vs. ▼). Local pls fairly consistent in morphology, but do not key well to *T. canescens* or *T. cernuum*. Study needed.
- ◆ *Trisetum cernuum*?: Lower infl branches gen spreading; florets only at tips of panicle branches; lower glume < 3 mm (vs. ▲). Local pls fairly consistent in morphology, but do not key well to *T. cernuum* or *T. canescens*. Study needed.
- ◆ *Triteleia hyacinthina*: Fls white (occ lilac); stamens 6 at 2 levels, equal.
- ◆ *Triteleia ixioides* **subsp. i.**: Fls yellow; stamens 6 at 1 level, unequal.
- ◆ *Triteleia laxa*: Fls pale-blue to violet-purple; stamens 6. A difficult complex that needs study. At least 2 forms occur locally: 1) w/ filaments all short; anthers blue-aging-brown; corolla often smaller, darker; and 2) w/ upper filaments short, lower filaments long, upcurved; anthers white-aging-bluish; corolla often larger, paler.
- ◆ *Tropidocarpum gracile*: Annual; infl bracted; fls yellow; fr linear. Grassy areas, waste places. Only two old records: mc (1908) & s (1912). Presumably extirpated.
- ◆ *Typha angustifolia*: Lvs to 15 mm wide; gap btw male and female parts of infl; female spike dark-brown. *TJM2*: May not be native to CA; species hybridize.
- ◆ *Typha domingensis*: Lvs to 18 mm wide; gap btw male and female parts of infl; female spike medium-brown.
- ◆ *Typha latifolia*: Lvs 10–29 mm wide; no gap btw male and female parts of infl.

## ~U~

- ◆ *Uropappus lindleyi*: Fl heads erect in bud; outer phyllaries not < 1/4 inner; pappus scale w/ evenly notched scale tip. Two forms exist locally: 1) one referable to what has been called *Microseris linearifolia* (Nutt.) Schultz-Bip. (see JHT), w/ silvery-scarious, deciduous pappus and black cypselae; 2) the other is less common, w/ tawny, persistent pappus and brown cypselae.
- ◆ *Urtica dioica* **subsp. gracilis**: Sts green, densely hairy or not; lvs gen wide-ovate; abaxial lf veins w/ appressed hairs (vs. ▼). Intermediates w/ **subsp. holosericea** occ.
- ◆ *Urtica dioica* **subsp. holosericea**: Sts gray-green, densely hairy; lvs narrowly lanceolate to wide-ovate; abaxial lf veins w/ erect hairs (vs. ▲). *TJM2*: Pls growing in shade approach *U. d.* **subsp. gracilis** in appearance.

## ~V~

- ◆ *Vaccinium ovatum*: Lvs evergreen, thick, margins toothed; fr blue-black (vs. ▼).
- ◆ *Vaccinium parvifolium*: Lvs deciduous, thin, margins entire; fr red (vs. ▲). Only two old records: bb (1895 & 1925). At southern edge of coastal range here.
- ◆ *Vancouveria hexandra*?: Lvs deciduous; pedicel glabrous (vs. ▼). Reported by CLA from “redwoods,” and two old records: “scm” (1928) & bb (1929). County out of *TJM2* range for species.

- ◆ *Vancouveria planipetala*: Lvs persistent in fr; lower 1/3 of pedicel short-glandular-hairy (vs. ▲).
- ◆ *Verbascum blattaria*: Lvs glabrous; proximal pedicels 10+ mm.
- ◆ *Verbascum speciosum*: Lvs densely tomentose; infl not dense, branched.
- ◆ *Verbascum thapsus*: Lvs densely tomentose; infl dense, unbranched.
- ◆ *Verbascum virgatum*: Lvs ± hairy; proximal pedicels < 10 mm.
- ◆ *Verbena lasiostachys* var. *scabrida*?: Only one old record: sl (1908). Presumably extirpated if ID was correct. Difficult to distinguish from common var. *lasiostachys*.
- ◆ *Veronica americana*: Glabrous, rhizomatous perennial; racemes axillary; lvs petioled; corolla violet-blue.
- ◆ *Veronica anagallis-aquatica*: As above but lvs ± sessile, elliptic to ovate; corolla blue to lavender.
- ◆ *Veronica arvensis*: Hairy annual; racemes terminal; sepals not =; fls blue-violet.
- ◆ *Veronica catenata*: Glabrous, rhizomatous perennial; racemes axillary; lvs sessile, lanceolate; corolla pink.
- ◆ *Veronica peregrina* subsp. *xalapensis*: Glandular-hairy annual; racemes terminal; sepals equal; corolla white.
- ◆ *Veronica persica*: Hairy annual; lvs lobed; racemes terminal, open; pedicel gen > calyx; corolla blue, w/ white center.
- ◆ *Veronica serpyllifolia* subsp. *humifusa*: ± hairy, rhizomatous perennial; racemes terminal; sepals equal; corolla bright-blue.
- ◆ *Vicia americana* subsp. *a.*: Lvs rarely > 1 dm; stipules gen sharply lobed; fls 3–9, corolla blue-purple to lavender, 15–25 mm. *Vicia* spp. (vs. *Lathyrus* spp.) have lflts folded in bud; styles puberulent at tip, especially abaxially, gen not ± flat.
- ◆ *Vicia benghalensis*: Infl gen ± = subtending lf; fls 3–12, gen on 1 side of axis.
- ◆ *Vicia disperma*: Lflts ± 12–20; fls 2–6; seeds 2.
- ◆ *Vicia gigantea*: Lvs gen 1–1.5 dm; corolla gen red-purple, 12–14 mm; fls 6–15.
- ◆ *Vicia hassei*: Infl 1–2-fl'd, peduncled; fls lavender to white. Coastal scrub, oak woodland, chaparral. 3 records: S & slv. TJM2: Confused w/ *V. ludoviciana*.
- ◆ *Vicia lutea*: Corolla yellow.
- ◆ *Vicia sativa* subsp. *nigra*: Lvs linear to lance-oblong; calyx tube 4.5–5.5 mm; corolla to 18 mm long (vs. ▼).
- ◆ *Vicia sativa* subsp. *s.*: Lvs wedge-shaped to oblong; calyx tube 6+ mm (vs. ▲).
- ◆ *Vicia villosa* subsp. *varia*: Sts and lvs sparsely hairy or glabrous; infl gen > subtending lf, gen 10–20-fl'd, fls gen on 1 side of axis; fr sparsely short-hairy (vs. ▼).
- ◆ *Vicia villosa* subsp. *v.*: Same as above but w/ conspicuous, spreading hairs on upper sts and lvs; infl gen > 19-fl'd, fls considerably showier; fr glabrous.
- ◆ *Viola adunca* subsp. *a.*: Petals light- to dark-violet. Variable. Moist meadows. Reported by CLA, and two old records: blm (1902) & slv (1935).
- ◆ *Viola glabella*: Petals yellow, lower three w/ deep-purple veins; sts erect; lvs thin-textured, disappearing after flwg. Moist to wet, shady areas.

- ◆ *Viola ocellata*: Petals white w/ purple spots on two petals. Woodland, forest.
- ◆ *Viola odorata*: “Both violet and white-fl’d, scented cultivars have persisted as garden escapes along Bear and Laguna creeks since at least the 1960s. There is a 1975 record from Henry Cowell Redwoods S. P.” — Linda Willis
- ◆ *Viola pedunculata*: Petals golden, upper two red-brown abaxially. Grassland.
- ◆ *Viola purpurea* subsp. *quercetorum*: Petals lemon-yellow, upper two purple-brown abaxially; lvs gray-green, occ purple-tinted abaxially. Woodland, chaparral. Reported by CLA from “hillsides nr Felton.” Not documented since the 1950s.
- ◆ *Viola sempervirens*: Petals all-yellow; sts creeping, rooting at nodes.
- ◆ *Vitis californica*?: ID and nativity of local pls in doubt. Pure *V. c.* may not be in County; easily confused w/ naturalized *V. vinifera* and hybrids. Not in JHT.

## ~W~

- ◆ *Wolffiella lingulata*?: Roots 0; pl body flat. Pond margins. *TJM2*: Small pls can be confused w/ *W. oblonga*.
- ◆ *Wyethia angustifolia*: Phyllaries gen not lf-like; lvs narrow. Coastal grassland.
- ◆ *Wyethia glabra*: Phyllaries lf-like, glabrous or glandular; pl shiny-green. Grassy slopes. The population in S was apparently extirpated during 2009 Lockheed Fire.
- ◆ *Wyethia helenioides*: Phyllaries lf-like, persistently tomentose; pl densely tomentose, becoming glabrous. Grassy slopes. *TJM2*: Hybridizes w/ *W. angustifolia* in SnFrB.

## ~X~

- ◆ *Xanthium spinosum*: Annual; nodal spines present (vs. ▼). *TJM2*: CA Nativity status uncertain. Behaves as a weed locally.
- ◆ *Xanthium strumarium*: Annual; nodal spines 0 (vs. ▲). Locally, can form monocultures in seasonal wetlands. *TJM2*: Highly variable; found worldwide.
- ◆ *Xerophyllum tenax*: Lvs grasslike, tough, scabrous, 3+ long; perianth parts free, white to cream. Dry ridges. Stimulated to bloom by fire — a fine display followed the 2008 Martin Rd. fire.

## ~Y~

- ◆ *Yabea microcarpa*: Slender, hairy annual; fr bristly, compressed side-to-side. Under shrubs in coastal scrub. Known locally only in S.

## ~Z~

- ◆ *Zannichellia palustris*: Pond and lake margins, ditches, creeks (PV).
- ◆ *Zeltnera davyi*: Keeled calyx lobes unique in genus; gen pink fl’d. White-fl’d pls occur at Pogonip (SC) & S, and occasionally tannish-lilac intermediates occur. A collection of dwarf pls from Marshall Field (BLM) may belong to this species.
- ◆ *Zeltnera muehlenbergii*?: Stigmas 2, wide-fan-shaped. Variable. Can be mistaken for *Centaurium tenuiflorum*. Study needed.
- ◆ *Zeltnera trichantha*: Stigma 1; lobes ± 2, wedge-shaped. Only one old report: Bear Creek Canyon (slv) (1950s).
- ◆ *Zostera pacifica*: Subtidal waters. Only one old record — undercollected. ❖

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**T~**

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*Tribulus* 61  
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**Z~**

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