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

\begin{center}
\includegraphics[width=0.2\textwidth]{floral.png}
\end{center}

\textit{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.}

\textit{– Georgia O’Keeffe}
“True science teaches, above all, to doubt and be ignorant.”
—MIGUEL DE UNAMUNO
~ACKNOWLEDGMENTS~

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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to occur in Santa Cruz County, including those that have been more recently documented and those that still remain unpublished.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.
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 unflaggingly 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
“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 subshrubs 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 “*”].
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 SnFrR 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!
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
• (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

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

*ISOTACEAE — Quillwort Family*

*Isoetes nuttallii* +
(BLM, NM, sc, SLV)  
Nuttall’s quillwort

*Isoetes orcuttii* +
(BLM, slv)  
Orcutt’s quillwort

**FERNS**

*AZOLLACEAE — Mosquito Fern Family*

*Azolla filiculoides*  
Pacific mosquito fern

*Azolla microphylla* + x
[A. mexicana] (sv-x)  
Mexican mosquito fern

*BLECHNACEAE — Deer Fern Family*

*Blechnum spicant* +
(> 5 regions)  
deer fern

*Woodwardia fimbriata*  
giant chain fern

**DENNSTAEDIACEAE — 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, crr, 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**

*Marsilea* americana +
(BLM)

American pillwort

**OPHIOGLOSSACEAE — Adder’s-tongue Family**

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

leather grape-fern

**POLYPODIACEAE — Polypody Family**

*Polypodium californicum +
*Polypodium calirhiza +
*Polypodium glycyrrhiza +
*Polypodium scouleri +
(PV, s)

California polypody
nested polypody
licorice fern
leather-leaf fern

**PTERIDACEAE — Brake Family**

*Adiantum aleuticum
*Adiantum jordanii
*Aspidotis californica +
(BLM, S, SLV)

five-finger fern
California maidenhair
California lace fern

*Cheilanthes cooperae +
(SLV)

Cooper’s lip fern

*Pellaea andromedifolia +
*Pellaea mucronata var. m. +
*Pentagramma triangularis subsp. t.

coffee fern
bird’s-foot fern
goldback fern

*C. cretica

Cretan brake

**WOODSIACEAE — Cliff Fern Family**

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

western lady fern
fragile fern

**CUPRESSACEAE — Cypress Family**

*Hesperocyparis abramsiana var. a. +
[Cupressus a.] (BDS, ER, SLV) ★FE/CE/1B.2

Santa Cruz cypress

(*)*Hesperocyparis macrocarpa +
[Cupressus m.]

Monterey cypress

*Sequoia sempervirens +

redwood

**GYMNO SPERM S**

[![Image](image_url)]
**PINACEAE — Pine Family**

- *Pinus attenuata* +  
  knobcone pine

- [*] *Pinus coulteri* +  
  Coulter pine

- *Pinus pinea*  
  Italian stone pine

- *Pinus ponderosa var. pacifica* +  
  Pacific ponderosa pine

- *Pinus radiata* +  
  Monterey pine

- (BB, NC, S) ★1B.1

- *Pinus sabiniana* +  
  gray pine, foothill pine

- [*] *Pinus torreyana subsp. t.* +  
  Torrey pine

- *Pseudotsuga menziesii var. m.* +  
  Douglas-fir

**TAXACEAE — Yew Family**

- *Torreya californica* +  
  California nutmeg

**NYMPHAEALES**

**NYMPHAEACEAE — Waterlily Family**

- *Nuphar polysepala* + x  
  yellow pond-lily

  [N. lutea subsp. polysepalum] (bb-x, pv-x)

**MAGNOLIIDS**

**ARISTOLOCHIACEAE — Pipevine Family**

- *Asarum caudatum*  
  wild ginger

**LAURACEAE — Laurel Family**

- *Umbellularia californica*  
  California bay

**CERATOXYLLALES**

**CERATOPHYLLACEAE — Hornwort Family**

- *Ceratophyllum demersum*  
  hornwort

**EUDICOTS**

**ADOXACEAE — Muskroot Family**

- *Sambucus nigra subsp. caerulea* +  
  blue elderberry

  [S. mexicana, misappl.]

- *Sambucus racemosa var. r.* +  
  red elderberry
**Aizoaceae—Fig-marigold Family**

* Carpobrotus chilensis +
  sea fig
* Carpobrotus edulis + ☯
  highway iceplant
* Conicosia pugioniformis
  narrowleaf iceplant
* Cypselaea 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 +
  Toxicodendron diversilobum
  lemonade berry
  poison oak

**Apiaceae—Carrot Family**

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

*Foeniculum vulgare ☺

Heracleum maximum
[†H. lanatum]

Ligusticum apiifolium +
(S)

Lomatium carifolium var. c. +
(BLM, S, SV)

Lomatium dasycarpum subsp. d. +
(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-veneris

Tauschia hartwegii +
(CRR, PV)

*Torilis arvensis +

*Torilis nodosa + ▼

Yabea microcarpa +
(S)

ApoecynaCeae — Dogbane Family

Apocynum androsaemifolium +
(BLM, mc, sc)

Apocynum cannabinum +
(MC, PV, SB, slv)

Asclepias fascicularis +
(NM, PV, SLV)

*Vinca major ☺

<table>
<thead>
<tr>
<th>Plant</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foeniculum vulgare</td>
<td>Fennel</td>
</tr>
<tr>
<td>Heracleum maximum</td>
<td>Cow parsnip</td>
</tr>
<tr>
<td>Ligusticum apiifolium</td>
<td>Celery-leaved licorice-root</td>
</tr>
<tr>
<td>Lomatium carifolium var. c.</td>
<td>Caraway-leaved lomatium</td>
</tr>
<tr>
<td>Lomatium dasycarpum subsp. d.</td>
<td>Woolly fruited lomatium</td>
</tr>
<tr>
<td>Lomatium parvifolium</td>
<td>Small-leaved lomatium</td>
</tr>
<tr>
<td>Lomatium utriculatum</td>
<td>Spring-gold lomatium</td>
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<tr>
<td>Oenanthe sarmentosa</td>
<td>Pacific oenanthe</td>
</tr>
<tr>
<td>Osmorhiza berteroi</td>
<td>Mountain sweet-cicely</td>
</tr>
<tr>
<td>Osmorhiza brachypoda</td>
<td>California sweet-cicely</td>
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<tr>
<td>Pastinaca sativa</td>
<td>Parsnip</td>
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<tr>
<td>Perideridia gairdneri subsp. g.</td>
<td>Gairdner’s yampah</td>
</tr>
<tr>
<td>Perideridia kelloggii</td>
<td>Kellogg’s yampah</td>
</tr>
<tr>
<td>Sanicula arctopoides</td>
<td>Footsteps-of-spring</td>
</tr>
<tr>
<td>Sanicula bipinnatifida</td>
<td>Purple sanicle</td>
</tr>
<tr>
<td>Sanicula crassicaulis</td>
<td>Pacific sanicle, gambleweed</td>
</tr>
<tr>
<td>Sanicula hoffmannii</td>
<td>Hoffmann’s sanicle</td>
</tr>
<tr>
<td>Sanicula laciniata</td>
<td>Coast sanicle</td>
</tr>
<tr>
<td>Scandix pecten-veneris</td>
<td>Venus’s needle</td>
</tr>
<tr>
<td>Tauschia hartwegii</td>
<td>Hartweg’s tauschia</td>
</tr>
<tr>
<td>Torilis arvensis</td>
<td>Tall sock-destroyer</td>
</tr>
<tr>
<td>Torilis nodosa</td>
<td>Short sock-destroyer</td>
</tr>
<tr>
<td>Yabea microcarpa</td>
<td>California hedge-parsley</td>
</tr>
</tbody>
</table>

* Apoeynacea — Dogbane Family

Apocynum androsaemifolium | Bitter dogbane |
Apocynum cannabinum | Indian hemp |
Asclepias fascicularis | Narrow-leaf milkweed |
*Vinca major ☺ | 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
* *Achyrachaena mollis*  
  blow-wives
* *Adenocaulon bicolor*  
  trail plant
* *Ageratina adenophora + ☉*  
  eupatorium, crofton weed
  *Agoseris argaroides var. a. +*  
  (mc-x, NC, pv-x)
  *Agoseris grandiflora var. g.*  
  [A. g.]
  *Agoseris heterophylla var. cryptopleura +*  
  [A. h.] (crr, slv, sv)
  *Agoseris heterophylla var. h. +*  
  [A. h.] (er, S, slv)
  *Agoseris hirsuta +*  
  (blm, mc, slv, sv)
* *Ambrosia chamissonis*  
  beach bur-sage
* *Ambrosia confertiflora +*  
  weak-leaved bur-sage
* *Ambrosia psilostachya*  
  western ragweed
* *Anaphalis margaritacea +*  
  pearly everlasting
* *Anisocarpus madioides*  
  [Madia m.]
  * *Anthemis cotula*  
  mayweed
* *Arctium minus*  
  lesser burdock
* *Arctotheca calendula +*  
  capeweed
  *Arctotheca prostrata +*  
  [A. calendula, in part, misappl.]
  *Arnica discoidea*  
  rayless arnica
* *Artemisia biennis*  
  biennial wormwood
* *Artemisia californica*  
  California sagebrush
* *Artemisia douglasiana*  
  mugwort
* *Artemisia dracunculus*  
  tarragon
* *Artemisia pycnocephala +*  
  coastal sagewort
Asteraceae (cont’d.)

Baccharis glutinosa
[B. douglasii]
marsh baccharis

Baccharis pilularis subsp. consanguinea +
Baccharis pilularis subsp. p. +
Baccharis salicifolia subsp. s. +
[B. s. (pv, slv)]
coyote brush
prostrate coyote brush
mule fat

*Bellis perennis

Bidens frondosa +
(SC, SLV)

Bidens laevis +

*Bidens pilosa +
[B. p. var. p.]

Blepharizonia laxa + x
[B. plumosa subsp. viscosa] (pv-x)

*Calendula arvensis

*Calendula officinalis

*Carduus pycnocephalus subsp. p. + ☺
[C. p.]

*Carduus tenuiflorus +

*Centaurea benedicta
[Cnicus benedictus]
blessed thistle

*Centaurea calcitrapa

*Centaurea cineraria

*Centaurea cyanus

*Centaurea melitensis

*Centaurea solstitialis

*Centaurea sulphurea ▼

Centromadia fitchii +
[Hemizonia f.] (MC, nm)

Centromadia parryi subsp. congdonii +
[Hemizonia p. subsp. c.] (PV) ★1B.1/Sen

Centromadia pungens subsp. p. +
[Hemizonia p. subsp. maritima/p.] (PV?, SL, SLV?)

*Cichorium intybus

*Cirsium arvense ▼

Cirsium brevistylum

Cirsium douglasii var. d. +
(blm-x, pv-x, S, slv-x, sv-x)

Cirsium occidentale var. o. +
(s?, sb)

Cirsium occidentale var. venustum +
Cirsium quercetorum +
(NC, S)

chicory
Canada thistle
Indian thistle
swamp thistle
cobwebby thistle
Venus thistle
brownie thistle
Asteraceae (cont’d.)

* Cirsium vulgare
  * Coreopsis lanceolata
  * Coreopsis tinctoria

Corethrogynne filaginifolia ~ +
  [Lessingia f. vars. californica/f.] (SL)

* Cotula australis
  * Cotula coronopifolia
  * Crepis capillaris +
  * Crepis setosa +

*Crepis vesicaria subsp. taraxacifolia +
  Deinandra corymbosa
  [Hemizonia c. subsp. c.]

Deinandra kelloggii + ▼
  [Hemizonia k.] (pv)

* Delairea odorata ⊗
  [Senecio mikanioides]

* Dimorphotheca sinuata
* Ditrichia graveolens + ⊗
  Ericameria arborescens +
  Ericameria ericoides +

* Erigeron bonariensis +
  [Coneza b.]

Erigeron canadensis +
  [Coneza c.]
  Erigeron foliosus var. franciscensis +
  Erigeron glaucus

* Erigeron karvinskianus

Erigeron petrophilus var. p. +
  (CRR, ER)

[Erigeron philadelphicus var. p. +
  [E. p.] (PV, SAR)

* Erigeron sumatrensis +
  [Coneza bilboana, misappl. (= C. bilboana); C. floribunda]

Eriophyllum confertiflorum var. c. +

Eriophyllum lanatum var. achilleoides + ▼
  [E. l. var. achilleoides, orth. var.] (SAR)

Eriophyllum staechadifolium +
  Eurybia radulina
  [Aster radulinus]
  Euthamia occidentalis

* Galinsoga parviflora var. p.
* Gamochaeta calviceps +
Asteraceae (cont’d.)

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

* Lagophylla ramosissima
  [L. r. subsp. r.]
  common hareleaf

* Lapsana communis
  * Lapsana communis 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 gaillardioides +**
  (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.)

**Micropus californicus** var. c. +
slender cottonweed

**Micropus californicus** var. **subv.** +
**subv.** green cottonweed

**Microseris acuminata** +
Sierra Foothills microseris

**Microseris bigelovii** +
Bigelow’s microseris

**Microseris douglasii** **subsp.** **tenella** +
Douglas’s microseris

**Microseris paludosa** +
marsh microseris

**Monolopia gracilens** +
woodland woolly threads

**Pentachaeta alsinoides** +
tiny pentachaeta

**Pentachaeta bellidiflora** + x
white-rayed pentachaeta

**Pentachaeta exilis** **subsp.** **e**. + ▼
meager pentachaeta

**Petasites frigidus** var. **palmatus**
western coltsfoot

**Pseudognaphalium beneolens** +
fragrant everlasting

**Pseudognaphalium bioletti** +
Bioletti’s cudweed

**Pseudognaphalium californicum** +
California cudweed

**Pseudognaphalium luteoalbum** +
weedy cudweed

**Pseudognaphalium microcephalum** +
white everlasting

**Pseudognaphalium ramosissimum** +
pink everlasting

**Psilocarphus chilensis** +
cotton-batting plant

**Psilocarphus tenellus** +
round woolly marbles

**Rafinesquia californica**
California chicory

**Senecio aronicoides** +
rayless ragwort

**Senecio elegans**
red-purple ragwort

**Senecio glomeratus** +
cut-leaved fireweed
**Asteraceae (cont’d.)**

*Senecio hydrophilus* +  
(s)  
alkali-marsh ragwort  

*Senecio jacobaea*  
tansy ragwort  

*Senecio minimus* +  
[Erechtites minima]  
toothed fireweed  

*Senecio sylvaticus* +  
woodland ragwort  

*Senecio vulgaris* +  
common groundsel  

*Silybum marianum*  
milk thistle  

*Solidago elongata*  
Canada goldenrod  

[S. canadensis subsp. e.]  

coast goldenrod  

*Solidago spathulata* +  
California goldenrod  

[S. s. subsp. s.] (BLM)  

*Solidago velutina subsp. californica*  
common soliva  

[S. californica]  

prickly sow thistle  

*Sonchus asper subsp. a.* +  
small stephanomeria  

*Sonchus oleraceus* +  
virgate stephanomeria  

*Stebbinsoseris decipiens* +  
everlasting neststraw  

(BLM, NC, S) ★1B.2  

*Stebbinsoseris heterocarpa* +  
grassland silverpuffs  

(SLV, SV)  

Santa Cruz microseris  

*Stephanomeria elata* +  
Santa Barbara wire lettuce  

*Stephanomeria exigua subsp. coronaria* +  
small stephanomeria  

*Stephanomeria virgata subsp. pleurocarpa* +  
virgate stephanomeria  

*Stylocline gnaphaloides* +  
California aster  

(BDS, ZS)  

Douglas’s aster  

*Symphyotrichum chilense* +  
annual saltmarsh aster  

[Aster chilensis]  

[Stylocline subulatum var. parviflorum] +  
Annual saltmarsh aster  

[Aster subulatus var. ligulatus, not in CA] (PV, sl)  

*Tanacetum bipinnatum* +  
dune tansy  

[T. camphoratum] (NC)  

feverfew  

*Tanacetum parthenium*  
common dandelion  

*Taraxacum officinale*  
yellow salsify  

*Tragopogon dubius*  
purple salsify  

*Tragopogon porrifolius*  
silverpuffs  

Uropappus lindleyi +  
narrow-leaved mule’s-ears  

*Wyethia angustifolia* +  
Coast Range mule’s-ears  

(BLM, MC, NC, PV)  

*Wyethia glabra* +  
(BLM, CRR, S-x, slv)
**ASTERACEAE (cont’d.)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
</tr>
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<tbody>
<tr>
<td>Wyethia helenioides + (SV, slv)</td>
<td>gray mule’s-ears</td>
</tr>
<tr>
<td>*Xanthium spinosum + Xanthium strumarium +</td>
<td>spiny cocklebur cocklebur</td>
</tr>
</tbody>
</table>

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

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<tbody>
<tr>
<td>*Impatiens balfourii</td>
<td>Kashmir balsam</td>
</tr>
</tbody>
</table>

**BERBERIDACEAE — Barberry Family**

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<thead>
<tr>
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<tr>
<td>[*Berberis aquifolium var. a. + Berberis nervosa + (BB, BLM, s, slv) Berberis pinnata subsp. p. + (BLM, NC, S, sar, slv) Vancouveria hexandra ? + Vancouveria planipetala +</td>
<td>Oregon grape Cascades barberry coast barberry northern inside-out flower redwood ivy</td>
</tr>
</tbody>
</table>

**BETULACEAE — Birch Family**

<table>
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<tr>
<td>Alnus rhombifolia + Alnus rubra +</td>
<td>white alder red alder</td>
</tr>
<tr>
<td>Corylus cornuta subsp. californica [C. cornuta var. californica]</td>
<td>California hazelnut</td>
</tr>
</tbody>
</table>

**BORAGINACEAE — Borage or Waterleaf Family**

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amsinckia intermedia + [A. menziesii var. i.]</td>
<td>common fiddleneck</td>
</tr>
<tr>
<td>Amsinckia lunaris + (NC, S) ★1B.2/Sen Amsinckia lycopsoides ? + Amsinckia menziesii + [A. m. var. m.]</td>
<td>bent-flowered fiddleneck bugloss-flwd fiddleneck small-flowered fiddleneck</td>
</tr>
<tr>
<td>Amsinckia spectabilis var. s.</td>
<td>seaside fiddleneck</td>
</tr>
<tr>
<td>*Borago officinalis</td>
<td>borage</td>
</tr>
<tr>
<td>Cryptantha clevelandii var. florosa + [C. c.]</td>
<td>coastal cryptantha</td>
</tr>
<tr>
<td>Cryptantha flaccida + (er, S, sar?, slv)</td>
<td>nievitas</td>
</tr>
<tr>
<td>Cryptantha leiocarpa + (SB)</td>
<td>beach cryptantha</td>
</tr>
<tr>
<td>Cryptantha micromeres +</td>
<td>minute-flowered cryptantha</td>
</tr>
</tbody>
</table>
Boraginaeae (cont’d.)

*Cryptantha microstachys + (er, mc, slv, sv)  
Tejon cryptantha

*Cryptantha muricata var. jonesii + [C. m.] (bb, blm, sar?, slv)  
Jones’s cryptantha

*Cryptantha torreyana var. pumila + [C. t.] (blm, cr, s, slv)  
dwarf cryptantha

*Cynoglossum grande  
Pacific hound’s-tongue

*Echium candicans  
pride-of-Madeira

*Echium pininana  
tower-of-jewels

Emmenanthe penduliflora var. p. +  
California bells

Eriodictyon californicum +  
alkali or seaside heliotrope

*Myosotis discolor  
changing forget-me-not

*Myosotis latifolia ⊗  
common forget-me-not

*Myosotis micrantha ▼  
small-fld forget-me-not

Nemophila heterophylla + (slv)  
variable-leaved nemophila

Nemophila menziesii var. atomaria +  
white baby blue-eyes

Nemophila menziesii var. m. + (crr, pv, s, slv, sv)  
baby blue-eyes

Nemophila parviflora var. p.  
small-flowered nemophila

Nemophila pedunculata + (nc, zs) & (PV, S, sc, SLV, sv)  
meadow nemophila

Nemophila pulchella var. fremontii ? + (S)  
Fremont’s nemophila

Pectocarya penicillata +  
northern pectocarya

Phacelia californica +  
California phacelia

Phacelia ciliata + X (bb-x, s-x)  
Great Valley phacelia

Phacelia distans +  
common phacelia

Phacelia douglasii + (SB, ZS)  
Douglas’s phacelia

Phacelia imbricata var. i. +  
imbricate phacelia

[TJM2 = P. i. subsp. i., sensu TJM2, in part]

Phacelia malvifolia var. m. +  
stinging phacelia

[TJM2 = P. m., sensu TJM2, in part]

Phacelia nemoralis var. n. +  
shade phacelia

[TJM2 = P. n. subsp. n.]

Phacelia ramosissima +  
branched phacelia

[P. r. var. montereyensis/r.] (SB) & (ZS)

Phacelia rattanii + (blm, SLV, ZS)  
Rattan’s phacelia
Boraginaceae (cont’d.)

**Phacelia suaveolens** +  
[P. *s.* var. *s.*] (BDS, BLM, er, S, sar?)  
sweet-scented phacelia

**Pholisma arenarium** + ▼  
(NC)  
dune food

**Pholistoma auritum var. *a.* +**  
(PV/SL)  
fiesta flower

**Plagiobothrys bracteatus** +  
(BLM, PV, S)  
bracted popcornflower

**Plagiobothrys canescens var. *c.* +**  
[P. *c.*] (mc, PV, SB, zs)  
valley popcornflower

**Plagiobothrys chorisianus var. *c.* +**  
(> 5 regions) ★1B.2  
Choris’s popcornflower

**P. chorisianus var. hickmanii +**  
(> 5 regions) ★4.2  
Hickman’s popcornflower

**P. collinus var. californicus +**  
(ER, MC, PV)  
California popcornflower

**Plagiobothrys diffusus** +  
(BLM, MC, S, SC, SV) ★CE/1B.1  
San Francisco p-flower

**Plagiobothrys hispidulus ? +**  
harsh popcornflower

**Plagiobothrys nothofulvus +**  
rusty popcornflower

**Plagiobothrys tenellus +**  
Pacific popcornflower

**Plagiobothrys undulatus +**  
(MC/SC, slv)  
wavy-stemmed p-flower

**Romanzoffia californica +**  
(bb)  
California mistmaiden

*Symphytum officinale*  
comfrey

**BRASSICACEAE—Mustard Family**

**Arabis blepharophylla** +  
(BB, er, slv) ★4.3  
coast rockcress

**Athysanus pusillus** +  
(err, S, slv)  
dwarf athysanus

**Barbarea orthoceras** +

**Barbarea verna** +  
American winter cress

**Brassica nigra** +  
early winter cress

**Brassica rapa** +  
black mustard

**Cakile edentula** +  
California sea rocket

**Cakile maritima** +  
European sea rocket

**Capsella bursa-pastoris**  
shepherd’s purse

**Cardamine californica** ~ +  
[C. *c.* vars *c.*./cuneata/integrifolia] (S, SV)  
California milk-maids

*Cardamine flexuosa* +  
flexuous popweed

**Cardamine oligosperma** +  
popweed
**Brassicaceae (cont’d.)**

*Caulanthus lasiophyllus* ~ +  
*Guillenia lasiophylla* (S)  
California mustard

*Descurainia sophia*  
tansy mustard

*Diplotaxis tenuifolia*  
wall rocket

*Erysimum ammophilum* +  
(SB) ★1B.2/Sen  
sand-loving wallflower

*Erysimum capitatum* var. c. +  
[E. c. subsp. c.] (crr, sar?, slv)  
western wallflower

*Erysimum franciscanum* +  
(NC) ★4.2  
San Francisco wallflower

*Erysimum teretifolium* +  
(BDS, ZS) ★FE/CE/1B.1  
Santa Cruz wallflower

*Hesperis matronalis* ▼  
dame’s rocket

*Hirschfeldia incana* +  
summer mustard

*Lepidium campestre*  
field pepperweed

*Lepidium chalepense*  
_lens-podded hoary cress_

*Lepidium didymum* +  
[Coronopus didymus]  
lesser swine cress

*Lepidium draba*  
[Cardaria d.]  
heart-podded hoary cress

*Lepidium latifolium*  
perennial pepperweed

*Lepidium nitidum* +  
[L. n. var. n.]  
shining peppergrass

*Lepidium oblongum*  
[L. o. var. o.]  
oblong peppergrass

*Lepidium oxycarpum* +  
(SL)  
sharp-fruited peppergrass

*Lepidium pinnatifidum*  
feather-leaf peppergrass

*Lepidium strictum* +  
wayside peppergrass

*Lepidium virginicum* subsp. *menziesii* +  
[L. v. var. pubescens]  
Virginia peppergrass

*Lobularia maritima*  
sweet alyssum

*Lunaria annua*  
money plant

*Matthiola incana*  
stock

*Nasturtium officinale* +  
[ *Rorippa nasturtium-aquaticum*]  
watercress

*Raphanus raphanistrum* +  
jointed charlock

*Raphanus sativus* +  
radiish

*Rorippa curvisiliqua* +  
western yellow cress

*Rorippa palustris* subsp. *p.* +  
[R. p. var. occidentalis]  
bog yellow cress

*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

Thysanocarpus curvipes subsp. c. + hairy fringe pod
[TJM2 = T. c., sensu TJM2, in part]

Thysanocarpus laciniatus + narrow-leaved fringe pod
[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.]

C ACTACEAE — 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 blue cup
(sv-x)

Githopsis specularioides + common blue cup
(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.)

Cardionema ramosissimum

Cerastium arvense subsp. strictum + ▼

[C. a.]

*Cerastium fontanum subsp. vulgare +

*Cerastium glomeratum +

*Herniaria hirsuta var. cinerea

[H. h. subsp. c.]

Loeflingia squarrosa +

[L. s. var. s. ] (zs)

*Lychnis coronaria

Minuartia californica +

(SV) & (SLV, ZS)

Minuartia douglasii +

*Petrophagia dubia ▼

Polycarpon depressum +

(nm, PV, SB)

*Polycarpon tetraphyllum var. t. +

[P. t.]

*Sagina apetala +

Sagina decumbens subsp. occidentalis +

Sagina maxima subsp. crassicaulis +

(mc, NC, sc)

*Sagina procumbens + ▼

Silene antirrhina

*Silene coniflora ▼

[S. multinervia ?]

*Silene gallica

Silene lemomnii +

(slv)

Silene verecunda +

[S. v. subsp. platyota/v.] [S. v. subsp. v. ♀ 1B.2 (NC, S)]

*Spergula arvensis +

[S. a. subsp. a.]

*Spergularia bocconi +

[S. bocconii, orth. var.]

Spergularia macrotheca var. leucantha +

(SL)

Spergularia macrotheca var. m. +

Spergularia marina +

(SL)

*Spergularia rubra +

*Spergularia villosa

*Stellaria media

Stellaria nitens

sandmat

field mouse-ear chickweed

common m-ear chickweed

sticky m-ear chickweed

gray herniaria

spreading pygmyleaf

rose campion

California sandwort

Douglas’s sandwort

childing pink

California polycarp

four-leaved allseed

dwarf pearlwort

western pearlwort

thick-stemmed pearlwort

matted pearlwort

sleepy catchfly

multinerved catchfly

windmill pink

Lemmon’s catchfly

San Francisco campion

stickwort

Boccone’s sand-spurrey

white-fld sticky sand-sp.

sticky sand-spurrey

saltmarsh sand-spurrey

red sand-spurrey

hairy sand-spurrey

common chickweed

shining chickweed
**CELASTRACEAE — Staff-tree Family**

_Euonymus occidentalis_ var. _o._
western burning bush

**CHENOPODIACEAE — Goosefoot Family**

_Atriplex lentiformis_ +
[ _A. l. subsp. l._ ] (PV)
big saltbush

_Atriplex leucophylla_ +
(BLM, NC, NM)
beach saltbush

_Atriplex patula_ +
[ _A. p. var. p._ ] (SB, sc-x)
spear orach

* _Atriplex prostrata_ +
[ _A. triangularis_ ]
fat-hen

* _Atriplex semibaccata_ + ▼
_Atriplex serenana_ var. _s._ +
(pv)
Australian saltbush
bractscale

* _Chenopodium album_
lamb’s quarters

_Chenopodium berlandieri_ var(s). +
[ _C. b._ ]
pitseed goosefoot

_Chenopodium californicum_
California goosefoot

* _Chenopodium macrocarpum_
[ _C. m. var. halophilum_ ]
large-seed goosefoot

* _Chenopodium murale_
nettle-leaved goosefoot

_Chenopodium rubrum_ var. _humile_ +
[ _C. r._ ]
coast-blite goosefoot

* _Chenopodium strictum_ var. _glaucophyllum_
upright goosefoot

* _Dysphania ambrosioides_
[Mexican tea]

* _Dysphania anthelmintica_
wormseed

* _Dysphania chilensis_
Chilean wormseed

* _Dysphania pumilio_
Tasmanian goosefoot

_Extriplex californica_ +
[TJM2 = _Atriplex c._ ] (NC, SB, sc-x)
California orach

_Monolepis nuttalliana_ +
(SL)
Nutall’s poverty weed

_Salicornia pacifica_ +
[ _S. virginica, misappl._ ]
saltmarsh pickleweed

* _Salsola tragus_
Russian thistle, tumbleweed

_Suaeda calceoliformis_ +
(SL)
horned seablite

**CISTACEAE — Rock-rose Family**

* _Cistus incanus_ ▼
[ _C. creticus_ ]
rock-rose
CISTACEAE (cont’d.)

*CrocAnthumum scoparium var. vulgare +  rush-rose

[TJM2 = Helianthemum s., sensu TJM2, 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  Cairo morning-glory

*Ipomoea hederacea  ivy morning-glory

[CA pls previously misid. as I. nil]

*Ipomoea indica  ocean-blue morning-glory

[I. acuminata; I. mutabilis]

*Ipomoea lacunosa  whitestar

*Ipomoea purpurea  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* +
Dudleya caespitosa +
**Dudleya cymosa** subsp. c. +
(ER, SAR, slv)
Dudleya lanceolata/palmeri +
*Sedum praealtum*
**Sedum radiatum** +
(SLV)
**Sedum spathulifolium**

**Cucurbitaceae — Gourd Family**

*Marah fabacea* +
[M. fabaeus, orth. var.]
*Marah oregana* +
[M. oreganus, orth. var.] (crr, nm, slv)

**Datisca Family**

*Datisca glomerata*

**Dipsacaceae — Teasel Family**

*Dipsacus fullonum* +
*Dipsacus sativus* +
*Scabiosa atropurpurea*

**Elatinaceae — Waterwort Family**

*Elatine brachysperma* +
(er, NM, pv)

**Ericaceae — Heath Family**

*Arbutus menziesii*

*Arctostaphylos andersonii* +
(> 5 regions) ★1B.2
*Arctostaphylos canescens** subsp. c. +
(SAR)
Arctostaphylos crustacea subsp. crinita +
[A. tomentosa subsp. crinita]
Arctostaphylos crustacea subsp. c. +
[A. tomentosa subsp. crustacea]
Arctostaphylos glutinosa +
(S) ★1B.2

moss pygmy-weed
sea lettuce
canyon liveforever
lance-leaved dudleya
green cockscomb
Coast Range stonecrop
broadleaf stonecrop
California man-root
coast man-root
Durango root
wild teasel
fuller’s teasel
pincushion flower
short-seeded waterwort
Pacific madrone, madroño
Anderson’s manzanita
hoary manzanita
crinite manzanita
brittle-leaved manzanita
Schreiber’s manzanita
**ERICACEAE (cont’d.)**

*Arctostaphylos hookeri subsp. h.* +
(PV) ★1B.2/Sen

*Arctostaphylos ohloneana* +
(S) ★1B.1

*Arctostaphylos pajaroeomens ? + x*
(pv-x) ★1B.1/Sen

*Arctostaphylos sensitiva* +
[A. nummularia]

*Arctostaphylos silvicola* +
(BDS, ZS) ★1B.2

*Erica lusitanica*  
Spanish heather

*Gaultheria shallon*  
salal

*Hemitomes congestum* +
(bb, SLV)

*Pleuricospora fimbriolata* +
(bb, s?, slv)

*Pyrola picta* +
(BB, blm, CRR, SLV)

*Rhododendron columbianum* +
[Ledum glandulosum] (BDS, slv)

*Rhododendron macrophyllum* +
(BB/S, BDS, s, sv)

*Rhododendron occidentale* +

*Vaccinium ovatum* +

*Vaccinium parvifolium* +
(bb)

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**EUPHORBIACEAE — Spurge Family**

*Croton setiger*  
[TJM2 = C. setigerus; TJM1 = Eremocarpus setigerus]

*Euphorbia crenulata* +

*Euphorbia helioscopia* +

*Euphorbia lathyris* +

*Euphorbia maculata* +
[TJM2 = Chamaesyce m.]

*Euphorbia oblongata* + ☠

*Euphorbia peplus* +

*Euphorbia prostrata* +
[TJM2 = Chamaesyce p.]

*Euphorbia serpens* +
[TJM2 = Chamaesyce s.]

*Euphorbia serpyllifolia subsp. s.* +
[TJM2 = Chamaesyce s. subsp. s.]

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Hooker’s manzanita  
Ohlone manzanita  
Pajaro manzanita  
sensitive manzanita  
Bonny Doon manzanita  
Spanish heather  
salal  
gnome plant  
fringed pinesap  
white-veined wintergreen  
western Labrador tea  
California rose-bay  
California azalea  
California huckleberry  
red huckleberry  
turkey-mullein, dove-weed  
Chinese caps  
wartweed  
caper spurge, gopher plant  
spotted spurge  
oblong spurge  
petty spurge  
prostrate spurge  
serpent spurge  
thyme-leaved spurge
**Euphorbiaceae (cont’d.)**

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

**Fabaceae — Legume Family**

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

Glycyrrhiza lepidota + ▼
(pv)

Hoita macrostachya +

Hoita orbicularis +
(BLM, er, NM, SB)

Hoita strobilina ? + X
(sar? ★1B.1

Hosackia crassifolia var. c. +
[Lotus crassifolius var. c.] (ER, crr)

Hosackia gracilis +
[Lotus formosissimus] (> 5 regions) ★4.2

Hosackia oblongifolia var. o. +
[Lotus oblongifolius var. o.] (BLM, s, slv/zs)

Hosackia pinnata + X
[Lotus pinnatus] (“sc”)

Hosackia stipularis var. s. +
[Lotus s. var. s.]

*Lathyrus angulatus

*Lathyrus cicera

*Lathyrus hirsutus

*Lathyrus latifolius

Lathyrus littoralis +
(SB, NC)

*Lathyrus odoratus

*Lathyrus tingitanus

Lathyrus torreyi

Lathyrus vestitus var. v. ~ +
(CRR, NM)

*Lotus corniculatus

Lupinus affinis +
(mc)

Lupinus albifrons var. a. +

Lupinus arboreus +

Lupinus bicolor +

Lupinus chamissonis +

Lupinus formosus var. f. +
(mc, S, SC, slv, sv)

Lupinus hirsutissimus

Lupinus latifolius var. dudleyi +
(er, s, slv)

Lupinus latifolius var. l. +

Lupinus microcarpus var. m. +
(pv-x, SL)

wild licorice

California hemp

round-leaved hoita

Loma Prieta hoita

broad-leaved trefoil

harlequin lotus

marsh trefoil

bog trefoil

stipulate trefoil

angled pea

red pea

caley pea

perennial sweet pea

beach pea

sweet pea

Tangier pea

redwood pea

Pacific pea

bird’s-foot trefoil

fleshy lupine

silver bush lupine

yellow bush lupine

miniature lupine

blue beach lupine

summer lupine

stinging lupine

Dudley’s broad-leaved l.

broad-leaved lupine

chick lupine
**Fabaceae (cont’d.)**

*Lupinus nanus* +

*Lupinus polyphyllus* var. *p* +
(BLM, SLV, sv-x)

*Lupinus succulentus*

*Lupinus truncatus*

*Lupinus variicolor* +

*Medicago arabica* +

*Medicago lupulina* +

*Medicago minima* +

*Medicago polymorpha* +

*Medicago sativa*

*Melilotus albus* +
[M. *alba*, orth. var.]

*Melilotus indicus* +
[M. *indica*, orth. var.]

*Ornithopus pinnatus* +

*Ornithopus sativus* +

*Pickeringia montana* var. *m* +

*Pisum sativum* ▼

*Robinia pseudoacacia*

*Rupertia physodes* +

*Spartium junceum* ⊗

*Thermopsis californica* var. *c* +
[T. *macrophylla* var. *m.*, Southern CA endemic]

*Trifolium albopurpureum* +
[T. *a.* var. *a.*]

*Trifolium angustifolium* + ⊗

*Trifolium barbigerum* +
[T. *b.* var. *b.*]

*Trifolium bifidum* var. *b* +

*Trifolium bifidum* var. *decipiens* +

*Trifolium buckwestiorum* +
(> 5 regions) ★1B.1/Sen

*Trifolium campestre* +

*Trifolium cernuum* +

*Trifolium ciliolatum* +

*Trifolium depauperatum* var. *amplectens* +
(BLM)

*Trifolium depauperatum* var. *d* +

*Trifolium depauperatum* var. *truncatum* +

*Trifolium dubium* +

*Trifolium fragiferum* +

sky lupine

large-leaved lupine

arroyo lupine

Nuttall’s annual lupine

Lindley’s varied lupine

spotted burclover

black medick

burclover

California burclover

alfalfa

white sweetclover

sourclover

yellow birdsfoot

common birdsfoot

chaparral pea

garden pea

black locust

California tea

Spanish broom

false lupine

rancheria clover

prickly clover

bearded clover

notch-leaved clover

pinole clover

Santa Cruz clover

hop clover

nodding clover

foothill clover

pale sack clover

dwarf sack clover

truncate sack clover

little hop clover, shamrock

strawberry clover
**Fabaceae (cont’d.)**

*Trifolium fucatum* +
(NC, sc-x) & (SL) & (SLV)

*Trifolium glanduliferum + ▼

*Trifolium glomeratum +
Trifolium gracilentum +
[T. g. var. g.]

*Trifolium grayi +
[T. barbigerum var. andrewsii]
(SV) & (BB, S, SLV) & (NC, S)

*Trifolium hirtum +

*Trifolium hybridum +

*Trifolium hydrophilum + ▼
[T. depauperatum var. h.] (SL) ★1B.2

*Trifolium incarnatum +

*Trifolium macraei +

*Trifolium michelianum var. m. + ▼
Trifolium microcephalum +
Trifolium microdon +

*Trifolium obtusiflorum +
(BLM, CRR, S, SLV)

*Trifolium oliganthum +

*Trifolium polyodon +
[T. variegatum, phase 4] (BLM, SLV) &
[T. variegatum, phase 1 or 2] (SLV, SV)
★CR/1B.1/Sen

*Trifolium pratense +

*Trifolium repens +

*Trifolium resupinatum + W

*Trifolium striatum +

*Trifolium subterraneum + ⊘

*Trifolium variegatum vars. ~ +
[T. variegatum, phase 2 (& occ. phases 1 & 3)] (BLM)

*Trifolium vesiculosum +

*Trifolium willdenovii +

*Trifolium wormskioldii +
(blm, s, sc-x, sv-x)

*Ulex europaeus
[U. europaea, orth. var.]

*Vicia americana subsp. a. +
[V. a. var. a.]

*Vicia benghalensis +

*Vicia disperma + W

*Vicia gigantea +

globe clover

clustered clover

pinpoint clover

Gray’s clover

rose clover

alsike clover

saline clover

crimson clover

Macrae’s clover

big-flowered clover

small-headed clover

thimble clover

clammy clover

few-flowered clover

Pacific Grove clover

red clover

white clover

reversed clover

knotted clover

subterranean clover

variegated clover

arrowleaf clover

tomcat clover

cow clover

gorse

American vetch

purple vetch

two-seeded vetch

giant vetch
**FABACEAE (cont’d.)**

*Vicia hassei* +  
(S, slv)  
slender vetch

*Vicia hirsuta*  
tiny vetch

*Vicia lutea* +  
yellow vetch

*Vicia sativa* subsp. *nigra* +  
narrow-leaved vetch

*Vicia sativa* subsp. *s.* +  
spring vetch

*Vicia tetrasperma*  
sparrow vetch

*Vicia villosa* subsp. *varia* +  
winter vetch

*Vicia villosa* subsp. *v.* +  
hairy vetch

**FAGACEAE — Oak Family**

Chrysolepis chrysophylla var. *minor* +  
golden chinquapin

Notholithocarpus densiflorus var. *d.*  
tan oak

[ *Lithocarpus d. var. d.* ]

Quercus agrifolia var. *a.* +  
coast live oak, encina

Quercus berberidifolia + ▼  
scrub oak

Quercus chrysolepis +  
canyon live oak, maul oak

**Quercus garryana** var. *g.* + ▼  
(CRR, mc)  
Oregon oak

Quercus kelloggii +  
California black oak

Quercus lobata +  
valley oak, roble

Quercus parvula var. *shrevei* +  
Shreve oak

Quercus wislizeni var. *frutescens* +  
[chaparral live oak

[ *Q. wislizenii* var. *f.*, orth. var. ]

Quercus wislizeni var. *w.* ? +  
interior live oak

[ *Q. wislizenii* var. *w.*, orth. var. ]

**FRANKENIACEAE — Frankenia Family**

Frankenia salina  
alkali heath

**GARRYACEAE — Silk Tassel Family**

Garrya elliptica +  
silk tassel

Garrya flavescens +  
( *sar* )  
ashy silk tassel

Garrya fremontii +  
(NM/SAR, SAR)  
bear brush

**GENTIANACEAE — Gentian Family**

*Centaurium tenuiflorum* +  
slender centaury

Cicendia quadrangularis  
timwort
GENTIANACEAE (cont’d.)

Zeltnera davyi + [Centaurium d.]
   Davy’s centaury
Zeltnera muehlenbergii ? + [Centaurium m.]
   Monterey centaury
Zeltnera trichantha + ▼ [Centaurium trichanthum] (slv)
   alkali centaury

*GERANIACEAE — Geranium Family

*Erodium botrys +
*Erodium brachycarpum +
*Erodium cicutarium +
*Erodium moschatum +
Geranium bicknellii ? +
   Bicknell’s geranium
Geranium carolinianum
   Carolina geranium
*Geranium core-core
   [G. retrorsum, misid.]
   New Zealand geranium
*Geranium dissectum +
*Geranium molle +
*Geranium palmatum W
   [G. anemonifolium, illeg.]
   Canary Island geranium
*Geranium potentilloides
*Geranium purpureum
*Geranium pusillum
*Geranium robertianum
*Geranium rotundifolium
*Pelargonium grossularioides ▼
   gooseberry geranium

*GROSSULARIACEAE — Gooseberry Family

Ribes californicum var. c. + (PV)
   hillside gooseberry
Ribes divaricatum var. pubiflorum +
Ribes malvaceum var. m. +
Ribes menziesii var. m. + [R. m.]
Ribes sanguineum var. glutinosum +
   pink-flowering currant

*HALORAGACEAE—Water-milfoil Family

*Myriophyllum aquaticum
   parrot’s feather

*HYDRANGEACEAE — Hydrangea Family

Whipplea modesta
   modesty
**HYPERICACEAE — St. John’s Wort Family**

- *Hypericum anagalloides*  
  tinker’s penny
- *Hypericum androsaemum*  
  tutsan
- *Hypericum calycinum*  
  Aaron’s beard
- *Hypericum canariense*  
  Canary Island St. Johnswort
- *Hypericum perforatum* subsp. *p.*  
  Klamathweed
  
  **Hypericum scouleri** ? + X  
  Scouler’s hypericum

**JUGLANDACEAE — Walnut Family**

- [*Juglans hindsii* +]  
  Northern CA black walnut
- [*Juglans nigra* +]  
  eastern black walnut
- [*Juglans regia* +]  
  Persian or English walnut

**LAMIACEAE — Mint Family**

- *Cedronella canariensis*  
  canary balm
- *Clinopodium douglasii*  
  yerba buena
- *Glechoma hederacea*  
  ground ivy
- *Lamiastrum galeobdolon*  
  yellow archangel
- *Lamium amplexicaule*  
  henbit
- *Lamium purpureum*  
  dead nettle
- *Lavandula stoechas*  
  Spanish lavender
- *Lepechinia calycina*  
  pitcher sage
- *Marrubium vulgare*  
  horehound
- *Melissa officinalis*  
  lemon balm
- *Mentha aquatica*  
  water mint
- *Mentha arvensis*  
  field mint
- *Mentha canadensis* +  
  American corn mint
  
  **Mentha × piperita**  
  peppermint
- *Mentha pulegium*  
  pennyroyal
- *Mentha spicata*  
  spearmint
  
  **Mentha suaveolens**  
  pineapple mint

- *Monardella simiata* subsp. *nigrescens* +  
  northern curly-lvd m-della
- *Monardella villosa* subsp. *franciscana* +  
  Franciscan coyote mint
**LAMINACEAE** (cont’d.)

*Monardella villosa* subsp. *v. +

*Origanum vulgare* subsp. *hirtum [O. v.]*

*Pogogyne serpyloides ~ + ▼ (blm-x)

*Prunella vulgaris var. *lanceolata +

*Prunella vulgaris* var. *v. +

*Salvia columbariae*

*Salvia mellifera*

*Salvia microphylla Ⅰ*

*Scutellaria tuberosa*

*Stachys ajugoides + [S. a. var. a.]*

*Stachys arvensis Ⅰ*

*Stachys bullata +

*Stachys chamissonis + (MC, NC, S)*

*Stachys pycnantha + (CRR, nm, SAR, slv)*

*Stachys rigida* var. *quercetorum + [S. ajugoides var. r., in part]*

*Trichostema lanceolatum*

—Meadowfoam Family

*Limnanthes douglasii* subsp. *nivea + (blm-x, SLV)*

—Flax Family

*Linum bienne*

*Linum usitatissimum*

—Loasa Family

*Mentzelia micrantha + (crr, sar?, slv)*

—Loosestrife Family

*Ammannia coccinea + (mc, SLV)*

*Lythrum hyssopifolia + [L. hyssopifolium, orth. var.]*

*Lythrum salicaria + ▼

# LIMNANTHACEAE

**Douglas’s meadowfoam**

# LINACEAE

**Narrow-leaved flax**

**Common flax**

# LOASACEAE

**Small-flowered stickleaf**

# LYTHRACEAE

**Long-leaved ammannia**

**Hyssop loosestrife**

**Purple loosestrife**
MALVACEAE — Mallow Family

*Abutilon theophrasti*  
*Fremontodendron californicum*  
*M. fasciculatus var. nuttallii*  
*Malva arborea*  
*Malva nicaensis*  
*Malva parviflora*  
*Malva pseudolavatera*  
*Malva verticillata var. crispa*  
*Malvella leprosa*  
*Modiola caroliniana*  
*Sidalcea malachroides*  
*S. malviflora subsp. laciniata*  
*S. malviflora subsp. m.*  
*S. malviflora subsp. laciniata*  
*S. malviflora subsp. m.*  
*S. malviflora subsp. m.*  
*S. malviflora subsp. m.*  
*S. malviflora subsp. m.*  
*S. rubra subsp. depressa*  

velvet-leaf  
California flannelbush  
arcuate bush-mallow  
tree mallow  
bull mallow  
cheeseweed  
Cretan mallow  
crisped mallow  
alkali mallow  
modiola  
maple-lvd checkerbloo  
geranium-lvd checkerbloo  
checkerbloo

MARTYNIACEAE — Unicorn-plant Family

*Proboscidea louisianica* subsp. *l.*  

unicorn plant

MONTIACEAE — Miner’s Lettuce Family

Calandrinia breweri  
Calandrinia ciliata  
Calyptridium monandrum  
Calyptridium monospermum  
Calyptridium parryi var. hesseae  
Claytonia exigua subsp. *e.*  
Claytonia parviflora subsp. *p.*  
Claytonia parviflora subsp. *viridis*  
Claytonia perfoliata subsp. *mexicana*  
Claytonia perfoliata subsp. *p.*  
Claytonia rubra subsp. *depressa*  

Brewer’s calandrinia  
red-maids  
sandcress pussypaws  
one-seeded pussypaws  
SC Mtns. pussypaws  
little spring beauty  
small-flowered claytonia  
green spring beauty  
clasp-lvd miner’s lettuce  
minder’s lettuce  
red miner’s lettuce
Montiaceae (cont’d.)

*Claytonia rubra* subsp. *r.* +
(CRR, slv, zs)  red miner’s lettuce

*Claytonia sibirica* +
(PV, S, slv, SV) candy flower

*Montia fontana* +
blinks

*Montia parvifolia* +
small-leaved montia

**Myricaceae — Wax Myrtle Family**

*Morella californica* [Myrica c.] wax myrtle

**Myrsinaceae — Myrsine Family**

*Anagallis arvensis* + scarlet pimpernel

*Anagallis minima* +
[Centunculus minimus] chaffweed

*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* +
(NC, SB) yellow sand-verbena

*Abronia umbellata* var. *u.* +
[A. *u.* subsp. *u.*] (NC, SB, SC) pink sand-verbena

*Mirabilis jalapa* var. *j.*
common four o’clock

**Oleaceae — Olive Family**

*Ligustrum vulgare* ▼ European privet

**Onagraceae — Evening-primrose Family**

*Camissonia campestris* subsp. *c.* ? + x
(“scm”) Mojave sun cup

*Camissonia contorta* +
contorted primrose

*Camissonia strigulosa* +
hairy primrose

*Camissoniopsis cheiranthifolia* subsp. *c.* +
[Camissonia *c.* subsp. *c.*) beach evening-primrose
Camissoniopsis hirtella +
[Camissonia h.]
small-haired primrose

Camissoniopsis intermedia +
[Camissonia i.] (sar)
intermediate primrose

Camissoniopsis micrantha
[Camissonia m.]
small-flowered primrose

Circea alpina subsp. pacifica +
(SLV)
enchanter’s nightshade

Clarkia breweri ? + X
(sar?, “scm”) ★ 4.2
Brewer’s clarkia

Clarkia concinna subsp. automixa + X
(crr-x, sar?, “scm”) ★ 4.3
Santa Clara red ribbons

Clarkia davyi ? +
(BLM, NC, S) & (NC, S)
Davy’s clarkia

Clarkia purpurea subsp. p. +
(NC, S)
godetia

Clarkia purpurea subsp. quadrivulnera +
four-spotted godetia

Clarkia purpurea subsp. viminea +
large godetia

Clarkia rhomboidea +
(mc, “sc”)
rhomboid clarkia

Clarkia rubicunda +
farewell-to-spring

Clarkia unguiculata +
elegant clarkia

Epilobium brachycarpum +
panicled willow herb

Epilobium canum subsp. c.
CA Fuchsia, zauschneria

Epilobium ciliatum subsp. c. +
common willow herb

Epilobium ciliatum subsp. watsonii +
Watson’s willow herb

Epilobium densiflorum
dense-flowered willow herb

Epilobium foliosum
foliose willow herb

Epilobium hallianum +
[E. halleanum, orth. var.] (nm, S, sv-x)
Hall’s willow herb

Epilobium minutum
minute willow herb

Epilobium torreyi
narrow-leaved willow herb

Ludwigia palustris +
(BLM, nm, SV)
Pacific marsh purslane

*Ludwigia peploides subsp. p. +
yellow water primrose

*Oenothera biennis ▼
common evening-primrose

Oenothera elata subsp. hirsutissima +
hairy evening-primrose

Oenothera elata subsp. hookeri +
Hooker’s evening-primrose

*Oenothera glazioviana ▼
red-sepaled evening-p-rose

*Oenothera sinuosa
wavy-leaved gaura

[Gaura sinuata]
**ONAGRACEAE (cont’d.)**

*Oenothera speciosa*  
showy evening-primrose

*Oenothera stricta* subsp. s. *W*  
Chilean evening-primrose

*Oenothera xenogaura*  
[ *Gaura drummondii*]

*Taraxia ovata* +  
[ *Camissonia o.*]  
Drummond’s gaura

**OROBANCHACEAE — Broomrape Family**

*Bellardia trixago* +  
Mediterranean linseed

*Castilleja affinis* subsp. *a.* +  
Indian paintbrush

*Castilleja ambiguа subsp. *a.* +  
( BLM) ★4.2

*Castilleja attenuaуa* +  
( BDS, PV, S, slv)

*Castilleja densiflora subsp. *d.* ~ +  
( NC, S, sc-x)

*Castilleja exsertа subsp. *e.* +  
escobita

*Castilleja exsertа subsp. *latifolia* +  
( NC, SB?)

*Castilleja foliolosa* +  
wolly paintbrush

*Castilleja latifolia* +  
( SB) ★4.3

*Castilleja minor subsp. *spiralis* + X  
Marsh paintbrush

*C. rubicundula subsp. *lithospermoides* + X  
Cream sacs

(pv-x, “sc”)  

*Castilleja subinclusа subsp. *franciscana* +  
( s)

*Castilleja wightii* +  
Wight’s paintbrush

*Cordylanthuѕ rigidus* subsp. *r.*  
Stiff bird’s-beak

*Kopsiopsis strobilacea* +  
[ *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—Orobanche Family**

- *Orobanche uniflora + (bb, BDS, er)*
- *Parentucellia viscosa + ▼
- *Pedicularis densiflora*
- *Pedicularis dudleyi + x (nm-x, slv-x) ★ CR/1B.2*
- *Triphysaria eriantha subsp. e. + (PV)*
- *Triphysaria eriantha subsp. rosea +*
- *Triphysaria micrantha + (s)*
- *Triphysaria pusilla +*
- *Triphysaria versicolor subsp. v. +*

**OXALIDACEAE—Oxalis Family**

- *Oxalis corniculata +*
- *Oxalis incarnata*
- *Oxalis latifolia □*
- *Oxalis oregana*
- *Oxalis pes-caprae +*
- *Oxalis pilosa + [O. albicans subsp. p.]*
- *Oxalis purpurea ▲*

**PAPAVERACEAE—Poppy Family**

- *Dendromecon rigida*
- *Dicentra formosa*
- *Ehrendorferia chrysantha + [Dicentra c.] (crr, sar?, slv)*
- *Eschscholzia californica +*
- *Fumaria capreolata*
- *Fumaria officinalis*
- *Fumaria parviflora*
- *Hesperomecon linearis + [Meconella l.] (ZS)*
- *Meconella californica + (bb, SLV)*
- *Platystemon californicus +*

**PARNASSIACEAE—Grass-of-Parnassus Family**

- *Parnassia palustris + x [P. californica] (sar?, slv-x)*
**Phrymaceae—Lopseed Family**

*Diplacus aurantiacus* +

[TJM2 = *Mimulus a. var. a.; TJM1 = *M. a.*] sticky monkeyflower

*Diplacus congodonii* +

[TJM2 = *Mimulus c.*] (slv) Congdon’s monkeyflower

*Diplacus douglasii* +

[TJM2 = *Mimulus d.*] (SLV) purple mouse-ears

*Diplacus rattanii* +

[TJM2 = *Mimulus r.*] (BDS, SAR, ZS) [M. r. subsp. decurtatus] sc county monkeyflower

*Erythranthe androsacea* +

[TJM2 = *Mimulus androsacus*] (ZS) androsace monkeyflower

*Erythranthe arvensis* ~ +

[TJM2 = *Mimulus guttatus*] blunt-calyxed m-flower

*Erythranthe cardinalis* +

[TJM2 = *Mimulus c.*] scarlet monkeyflower

*Erythranthe floribunda* +

[TJM2 = *Mimulus floribundus*] floriferous monkeyflower

*Erythranthe grandis* +

[TJM2 = *Mimulus guttatus*] coast monkeyflower

*Erythranthe guttata ? +

[TJM2 = *Mimulus guttatus*] common monkeyflower

*Erythranthe moschata* +

[TJM2 = *Mimulus moschatus*] musk monkeyflower

*Erythranthe nasuta* +

[TJM2 = *Mimulus guttatus*] snout-nosed monkeyflower

*Mimetanthe pilosa* +

[TJM2 = *Mimulus pilosus*] (blm, er, s, slv) downy monkeyflower

**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 vexilocalyculatum subsp. v.* +

[A. v-c. subsp. v-c., orth. var.] (b, crr, sar?, slv) wiry snapdragon

*Callitriche heterophylla var. bolanderi* +

Bolander’s water-starwort

*Callitriche marginata* +

California water-starwort

*Callitriche palustris* +

[Ch. verna] vernal water-starwort

*Collinsia bartsiiifolia var. b.* +

(ZS) white Chinese houses
Platanaceae (cont’d.)

Collinsia heterophylla var. h. +
[Collinsia heterophylla] Chinese houses

Collinsia multicolor +
(NC, S) San Francisco collinsia

*Cymbalaria muralis ▼

*Digitalis purpurea kenilworth ivy
digitalis

Gratiola ebracteata + ▼
bractless hedge-hyssop

Hippuris vulgaris +
(S) mare’s-tail

Keckiella corymbosa +
(ER, SAR) redwood penstemon

*Kickxia elatine +

*Kickxia spuria +

*Linaria dalmatica subsp. d. ▼
[L. genistifolia subsp. d.] sharp-leaved fluellin

*Linaria maroccana round-leaved fluellin

*Linaria pinifolia

*Linaria purpurea purple toadflax

Linaria dalmatica [L. genistifolia] (pv)

Linaria maroccana

Linaria pinifolia

Linaria purpurea purple toadflax

Lindernia dubia +
[L. d. var. anagallidea] (pv) false pimpernel

Nuttallanthus texanus blue toadflax

[Linaria canadensis, in part, misappl.]

Penstemon rattanii var. kleei +
(BLM, er, NM, s, sar?) SC Mtns. Beardtongue

*Plantago arenaria
[P. indica, nom. superfl.] sand plantain

*Plantago coronopus

Plantago elongata +
(BLM, pv) & (NC) California coast plantain

Plantago erecta +

*Plantago lanceolata

*Plantago major +

Plantago maritima common seaside plantain

Plantago subnuda +

Tonella tenella +
(crr) Mexican plantain

Veronica americana +

*Veronica anagallis-aquatica +

*Veronica arvensis +

*Veronica catenata +

*Veronica filiformis

*Veronica hederifolia

Veronica americana American brooklime

*Veronica anagallis-aquatica water speedwell

*Veronica arvensis common speedwell

*Veronica catenata chain speedwell

*Veronica filiformis thread-stalked speedwell

*Veronica hederifolia 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. 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

**POLEMONIACAEA—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 + × 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 + × serpentine leptosiphon

[Linanthus a.] (slv-x) ★ 4.2

Leptosiphon androsaceus + common leptosiphon

[Linanthus a.]

Leptosiphon bicolor + × bicolored leptosiphon

[Linanthus b.] (bb-x, crr-x s-x, slv-x)
POLEMONIACEAE (cont’d.)

Leptosiphon ciliatus + \( \star \)
\[ \text{Linanthus c.} \] (crr-x)  
whisker brush

Leptosiphon grandiflorus + \( \star \)4.2
\[ \text{Linanthus g.} \] (BLM, mc-x, nm-x)  
large-flowered leptosiphon

Leptosiphon parviflorus +
\[ \text{Linanthus p.} \] (> 5 regions)  
small-flowered leptosiphon

Leptosiphon pygmaeus subsp. continentalis +
\[ \text{Linanthus p. subsp. c.} \] (blm, ER, MC)  
pygmy leptosiphon

Linanthus dichotomus subsp. d. + \( \star \)
\[ \text{L. d.} \] (slv-x)  
evening snow

Microsteris gracilis +
\[ \text{Phlox g.} \] (blm, CRR)  
slender phlox

Navarretia atractyloides +
holly-leaved navarretia

Navarretia hamata subsp. parviloba +
\[ \text{BDS, PV, ZS} \]  
sandhill navarretia

Navarretia mellita +
honey-scented navarretia

Navarretia squarrosa +  
skunkweed

Navarretia viscidula + \( \star \)
\( \text{NM} \)  
sticky navarretia

POLYGALACEAE — Milkwort Family

Polygala californica  
California milkwort

POLYGONACEAE — Buckwheat Family

Chorizanthe cuspidata var. c. ? + \( \star \)
\[ \text{C. c.} \] (sb-x) \( \star \)1B.2  
San Francisco Bay s-flower

Chorizanthe diffusa +
diffuse spineflower

Chorizanthe douglasii ? + \( \star \)
\( \text{“scm”} \) \( \star \)4.3  
Douglas’s spineflower

Chorizanthe membranacea + \( \star \)
\( \text{crr-x} \)  
pink spineflower

Chorizanthe pungens var. hartwegiana +
\[ \text{C. p.} \] (> 5 regions) \( \star \)FE/1B.1  
Ben Lomond spineflower

Chorizanthe pungens var. p. +
\[ \text{C. p.} \] (PV, SB) \( \star \)FT/1B.2  
Monterey spineflower

Chorizanthe robusta var. hartwegii +
\[ \text{C. r.} \] (SV) \( \star \)FE/1B.1  
Scotts Valley spineflower

Chorizanthe robusta var. r. +
\[ \text{C. r.} \] (> 5 regions) \( \star \)FE/1B.1  
robust spineflower

\(*\)Eriogonum arborescens +  
Santa Cruz Island b-wheat

Eriogonum fasciculatum var. f. +
\( \text{PV} \)  
coastal CA buckwheat

\(*\)Eriogonum fasciculatum var. foliolosum +  
leafy California buckwheat
**Polygonaceae (cont’d.)**

- *Eriogonum gracile var. g.* +
  (crr, pv, ZS)  
  slender buckwheat

- *Eriogonum hirtiflorum* +
  (blm, er?)  
  hairy-flowered buckwheat

- *Eriogonum latifolium* +

- *Eriogonum luteolum var. l.* +
  (SAR)  
  golden-carpet buckwheat

- *Eriogonum nudum var. auriculatum* +

- *Eriogonum nudum var. decurrens* +
  (BDS, ZS)  
  Ben Lomond buckwheat

- *[Fallopia convolvulus]*
  
  - [Polygonum c.]
  
  - *Fallopia japonica*
    
    - [Polygonum cuspidatum]
  
  - *Fallopia sachalinensis*
    
    - [Polygonum sachalinense]

- *Lastarriaea coriacea* +
  (PV, “sc”)  
  leather spineflower

- *Muehlenbeckia complexa*

- *Persicaria amphibia* +
  
  - [Polygonum amphibium var. emersum]

- *Persicaria hydropiperoides* +
  
  - [Polygonum h.]

- *Persicaria lapathifolia* +
  
  - [Polygonum lapathifolium]

- *Persicaria maculosa* +
  
  - [Polygonum persicaria]

- *Persicaria pensylvanica* + ▼
  
  - [Polygonum pensylvanicum]

- *Persicaria punctata* +
  
  - [Polygonum punctatum]

- *Persicaria wallichii*
  
  - [Polygonum polystachyum]

- *Polygonum aviculare subsp. depressum*
  
  - [P. arenastrum]

- *Polygonum hickmanii* +
  
  - (SV)  
  - [FE/CE/1B.1]

- *Polygonum paronychia* + X
  
  - (sb-x)

- *Pterostegia drymariooides*

- *Rumex acetosella* +

- *Rumex californicus* + ▼
  
  - [R. salicifolius var. denticulatus]  
  - (S)  
  - woodland threadstem

  - sheep sorrel

  - California dock
**Polygonaceae (cont’d.)**

* *Rumex conglomeratus +*  
  whorled dock

* *Rumex crassus +*  
  [R. salicifolius var. c.]  
  leatherleaf dock

* *Rumex crispus +*  
  curly dock

* *Rumex dentatus +*  
  toothed dock

* *Rumex fueginus +*  
  [R. maritimus, misappl.] (nm, PV, SB)  
  golden dock

* *Rumex obtusifolius +*  
  bitter dock

* *Rumex occidentalis +*  
  western dock

* *Rumex pulcher +*  
  fiddle dock

* *Rumex salicifolius +*  
  willow-leaved dock

* *Rumex transitorius +*  
  willow dock

  [R. salicifolius var. t.] (nm, PV)

**Portulacaceae—Purslane Family**

* *Portulaca oleracea*  
  purslane

**Primulaceae—Primrose Family**

* Primula clevelandii var. gracilis +  
  [TJM2 = Dodecatheon c. subsp. sanctarum]  
  Padre’s shooting star

* Primula hendersonii +  
  [TJM2 = Dodecatheon h.]  
  mosquito bills

**Proteaceae—Protea Family**

* *Grevillea spp.*  
  grevillea

**Ranunculaceae—Buttercup Family**

* *Actaea rubra*  
  baneberry

* *Anemone grayi +*  
  [A. oregana, misappl. to our pls]  
  windflower

* *Aquilegia formosa*  
  crimson columbine

* *Clematis lasiantha +*  
  (NM, S, SAR)  
  pipestems, chaparral clem.

* *Clematis ligusticifolia +*  
  (PV, SLV)  
  western virgin’s bower

* *Clematis vitalba ▼*  
  old-man’s beard

* *Consolida ajacis*  
  [C. ambigua, misappl.]  
  doubtful knights-spur

* *Delphinium californicum subsp. c. +*  
  (NC, PV, S)  
  California larkspur
Ranunculaceae (cont’d.)

Delphinium decorum subsp. d. + (blm, NC)
Delphinium hesperium subsp. h. + (> 5 regions)
Delphinium nudicaule
Delphinium parryi subsp. p. + (ZS)
Delphinium patens subsp. p. +
Enemion occidentale + [Isopyrum o.] (bb)

Myosurus minimus + (s)
Ranunculus aquatilis var. a. + ▼ [R. aquatilis var. hispidulus] (BLM, PV)
Ranunculus aquatilis var. diffusus + [R. aquatilis var. capillaceus]
*Ranunculus arvensis
Ranunculus californicus var. c. +
Ranunculus californicus var. cuneatus + [R. c.] (nc)
Ranunculus hebecarpus
Ranunculus lobbi + x (slv-x) ★4.2
*Ranunculus muricatus
Ranunculus occidentalis var. o. + ▼ [R. o.] (MC)
*Ranunculus parviflorus
Ranunculus pusillus + (MC/SC, PV )
*Ranunculus repens
*Ranunculus sceleratus var. s.
Ranunculus uncinatus + (nm, S)
Thalictrum fendleri var. polycarpum

Rhhamnaceae – Buckthorn Family

Ceanothus cuneatus var. c. + buck brush
Ceanothus cuneatus var. ramulosus + coast ceanothus
Ceanothus dentatus + crop-leaf ceanothus
Ceanothus foliosus var. f. + (SAR) wavy-leaf ceanothus
Ceanothus incanus + coast whitethorn
**Rhamnaceae (cont’d.)**

*Ceanothus integerrimus var. i.* +
[C. i.] (BLM, slv)  deer brush

*Ceanothus oliganthus var. sorediatus* +
(bb, crr?, sar, slv)  Jim brush

*Ceanothus papillosus* +
[C. p. vars. p./roveanus]  warty-leaf ceanothus

*Ceanothus rigidus* + x
[C. cuneatus var. r.] (pv-x) ★4.2  Monterey ceanothus

*Ceanothus thyrsiflorus var. t.* +
[C. t.]  blue blossom

*Ceanothus velutinus* ? +
[C. v. var. hookeri, illeg.] (s)  tobacco brush

*Frangula californica* subsp. c. +
[Rhamnus c. subsp. c.]  California coffeeberry

*Frangula californica* subsp. tomentella ? +
[Rhamnus t. subsp. t.]  hoary coffeeberry

**Rosaceae—Rose Family**

*Acaena novae-zelandiae*  biddy-biddy

*Acaena pinnatifida var. californica*  California acaena

*Adenostoma fasciculatum var. f.*
[A. f.]  chamise

*Amelanchier utahensis* +
(NC, slv)  Utah service-berry

*Aphanes occidentalis*  western lady’s-mantle

*Cercocarpus betuloides var. b.* +
(bb, er, sar?)  birch-lvd mtn. mahogany

*Amelanchier utahensis* +
(NC, slv)  Utah service-berry

*Heteromeles arbutifolia*  toyon

*Holodiscus discolor var. d.*  oceanspray

*Horkelia californica* var. c. +
[H. c. subsp. c.]  California horkelia

*Horkelia californica* var. frondosa + ▼
[H. c. subsp. f.] (sv)  California horkelia

*Crataegus monogyna*  one-seeded hawthorn

*Drymocallis glandulosa var. wrangelliana* +
[Potentilla g.]  sticky cinquefoil

*Duchesnea indica var. i.*

*Fragaria chiloensis* +  mock strawberry

*Fragaria vesca* +  beach strawberry

*Heteromeles arbutifolia*  wood strawberry

*Holodiscus discolor var. d.*  toyon

*Horkelia californica* var. c. +
[H. c. subsp. c.]  California horkelia

*Horkelia californica* var. frondosa + ▼
[H. c. subsp. f.] (sv)  California horkelia
**ROSACEAE (cont’d.)**

Horkelia cuneata var. c. +
   [H. c. subsp. c.]  
   wedge-leaved horkelia

Horkelia cuneata var. sericea ? +
   [H. c. subsp. s.] (NC, PV, zs) ★1B.1
   Kellogg’s horkelia

Horkelia marinensis +
   (BDS, BLM, nc, S) ★1B.2
   Point Reyes horkelia

Oemleria cerasiformis +
   oso berry

Physocarpus capitatus +
   (SC, slv)
   ninebark

Potentilla anserina subsp. pacifica +
   Pacific silverweed

Potentilla rivalis +
   (pv)
   river cinquefoil

*Poterium sanguisorba
   [Sanguisorba minor subsp. muricata]
   garden burnet

*Prunus cerasifera +
   cherry plum

Prunus emarginata +
   (crr?, PV, S, sar?, SLV)
   bitter cherry

Prunus ilicifolia subsp. i. +
   (crr, sar?, sl)
   holly-leaved cherry

Prunus virginiana var. demissa +
   western choke cherry

*Pyracantha angustifolia ▼
   slender firethorn

Rosa californica +
   California rose

*Rosa canina ▼
   dog rose

Rosa gymnocarpa var. g. +
   [R. g.]
   wood rose

Rosa pinetorum ? +
   (bb/s, zs) ★1B.2
   pine rose

Rosa spithamea +
   coast ground rose

*Rubus armeniacus + ☀
   [R. discolor, misappl.]
   Himalayan blackberry

Rubus leucoderminus +
   whitebark raspberry

Rubus parviflorus
   thimbleberry

Rubus spectabilis +
   (BLM, S)
   salmonberry

*Rubus ulmifolius var. anoplothyrsus + ☀▼
   [R. u. var. inermis]
   thornless blackberry

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 +
Galium porsigens var. p. +
Galium tricornutum +
**Galium trifidum subsp. columbianum +**
  [G. t. var. pacificum] (NM, pv, S, sv-x)
Galium triflorum +
*Sherardia arvensis +

**Rutaceae — Rue Family**

*Ruta chalepensis
*Ruta graveolens

**Salicaceae — Willow Family**

*Populus fremontii subsp. f. +
(Pv, sl)
Populus trichocarpa +
[P. balsamifera subsp. t.]
**Salix exigua var. hindsiana +**
[S. e.] (PV, SB, SC, SLV)
Salix laevigata +
Salix lasiandra var. l. +
[S. lucida subsp. lasiandra]
Salix lasiolepis +
Salix scouleriana +
Salix sitchensis +

**Sapindaceae — Soapberry Family**

*Acer macrophyllum +
Acer negundo +
[A. n. var. californicum]
Aesculus californica

**Saxifragaceae — Saxifrage Family**

*Boykinia occidentalis +
Heuchera micrantha +
**Heuchera pilosissima ? +**
(slv)
Lithophragma affine +
Lithophragma heterophyllum +
Micranthes californica
[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. subspp. 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)

*Lykopersicon 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
(“sc”)
chaparral nightshade

**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 soleirolii
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 +
pale plectritis

[P. brachystemon]

*Plectritis congesta subsp. c. +
sea blush

[П. c.]

**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 +
Viola ocellata +
* Viola odorata
Viola pedunculata +
Viola purpurea subsp. quercetorum +
  (blm, sar, zs)
Viola sempervirens +

**VISCAEAE — Mistletoe Family**

Arceuthobium campylopodum +
  (BLM, sar)
Phoradendron leucarpum subsp. tomentosum +
  [TJM2 = P. serotinum subsp. t.; TJM1 = P. villosa]

**VITACEAE — Grape Family**

* Parthenocissus inserta +
  [P. vitacea]
Vitis californica ? +
* Vitis vinifera

**ZINGIBERACEAE — Ginger Family**

* Hedychium flavescens ♀

**ZYGOHYLLACEAE — Caltrop Family**

* Tribulus terrestris

MONOCOTS

**AGAVACEAE — Century Plant Family**

Chlorogalum pomeridianum var. divaricatum +
Chlorogalum pomeridianum var. p. +

**ALISMATAEAE — Water-plantain Family**

Alisma triviale
  [A. plantago-aquatica, misappl.]
Sagittaria cuneata + ▼
  (pv)
Sagittaria latifolia +
  (pv, sc)
**ALLIACEAE—Onion or Garlic Family**

*Allium neapolitanum*  
Neapolitan onion  

*Allium paniculatum var. p.*  
panicled 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](NM, pv)  

*Lemna gibba +*  
gibbous duckweed  

*Lemna minor*  
smaller duckweed  

*Lemna minuta*  
least duckweed  

*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  

[Wolfiella lingulata ? +*  
[mud-midget](NM, pv)  

*Zantedeschia aethiopica*  
calla lily  

**ASPARAGACEAE—Asparagus Family**

*Asparagus asparagoides ▼*  
bridal creeper  

**ASPHEDELACEAE—Asphodel Family**

*Kniphofia uvaria*  
red-hot poker  

**COMMELINACEAE—Spiderwort Family**

*Tradescantia fluminensis*  
spiderwort
**Cyperaceae — Sedge Family**

*Bolboschoenus fluviatilis* +
[Scirpus f.] (pv)
river bulrush

*B. maritimus* subsp. *paludosus* +
[Scirpus m.] (sb, sc, pv)
saltmarsh bulrush

*Bolboschoenus robustus* +
[Scirpus r.]
seacoast bulrush

*Carex amplifolia* +
big-leaf sedge

*Carex aquatilis var. dives* +
(slv)
Sitka sedge

*Carex barbarae* +
Santa Barbara sedge

*Carex bolanderi* +
Bolander’s sedge

*Carex brevicaulis* +
short-stemmed sedge

*Carex comosa* +
(bristly sedge)
(NM) 2B.1

*Carex cusickii* +
(Cusick’s sedge)
(NM/PV, slv, sv-x)

*Carex densa* +
dense sedge

*Carex divulsa* subsp. *d.* +
(gray or Berkeley sedge)

*Carex echinata* subsp. *phyllomanica* + x
(coastal star sedge)
(sv-x)

*Carex exsiccata* +
(western inflated sedge)
[C. vesicaria var. major] (bb, nm, s, SLV, sv-x)

*Carex globosa* +
(round-fruited sedge)
(slv)

*Carex gracilior* +
(slender sedge)
(pv, s, sv-x)

*Carex gynodynama* +
Wonder Woman sedge

*Carex harfordii* +
Harford’s sedge

*Carex hassei* + x
(Hasse’s sedge)
(sv-x)

*Carex hendersonii* +
(Henderson’s sedge)
(PV, slv)

*Carex leptopoda* +
(slender-footed sedge)
[C. deweyana subsp. l.] (bb, SLV)

*Carex luzulina* +
(woodrush sedge)
[C. l. var. l.] (slv)

*Carex nudata* +
torrent sedge

*Carex obnupta* +
slough sedge

*Carex pachystachya* ? +
(starry broomsedge)
(slv)

*Carex pellita* +
(woolly sedge)
[C. lanuginosa, misappl.] (slv)

*Carex praegracilis* +
(black creeper sedge)
(SB, SLV, sv-x)
Cyperaceae (cont’d.)

*Carex saliniformis* +
(BLM, sv-x) ★ 1B.2
deceiving sedge

*Carex schottii* +
(pv)
Schott’s sedge

*Carex serratodens* +
(BDS, NM)
saw-toothed sedge

*Carex simulata* +
(SLV, sv-x)
short-beaked sedge

*Carex spissa* + ▼
(SLV)
San Diego sedge

Carex subbracteata +
small-bracted sedge

Carex subfusca +
rusty sedge

Carex tumulicola +
foothill sedge

*Carex utriculata* + X
(sv-x)
southern beaked sedge

*Cyperus difformis* +
variable flat sedge

*Cyperus eragrostis* +
umbrella sedge

*Cyperus erythrorhizos* +
red-rooted cyperus

*Cyperus esculentus* var. *leptostachyus* +
chufa

*Cyperus involucratus* +
umbrella plant

*Cyperus laevigatus* + X
(sl-x)
smooth cyperus

*Cyperus niger* +
(PV, SLV, sv-x)
brown cyperus

*Cyperus squarrosus* +
(PV, “sc”)
squarrose nutsedge

*Cyperus strigosus* +
(NC, slv)
false nutsedge

Eleocharis acicularis var. a. +
needle spikerush

Eleocharis engelmannii var. e. +
Engelmann’s spikerush

[Eleocharis obtusa var. e.] (pv)

Eleocharis macrostachya +
common spikerush

Eleocharis montevidensis +
(blm, PV)
Dombey’s spikerush

Eleocharis ovata +
(blue)
blunt spikerush

Eleocharis parishii +
(PV)
Parish’s spikerush

Eleocharis radicans +
(PV)
rooted spikerush

Eleocharis rostellata +
(PV, sv-x)
walking sedge

Isolepis carinata +
dwarf club rush

[Scirpus koiolepis] (BLM, MC/SC, S, slv)
Cyperaceae–Iridaceae (cont’d.)

**Isolepis cernua** ~ +
[Scirpus cernuus] (BLM, S)

*Kyllinga brevifolia*

**Rhynchospora californica** ? + ▼
(blm-x) ★1B.1/Sen

**Schoenoplectus acutus** var. *occidentalis* +
[Scirpus a. var. o.]

**Schoenoplectus americanus** ~ +
[Scirpus a.] (SL)

**Schoenoplectus californicus** +
[Scirpus c.]

**Schoenoplectus pungens** var. *longispicatus* +
[Scirpus p., in part]

**Scirpus microcarpus** +

---

**Hydrocharitaceae—Waterweed Family**

*Egeria densa*
Brazilian waterweed

*Elodea canadensis*
common waterweed

*Limnobium spongia* ▼
American frogbit

**Najas guadalupensis** subsp. *g.* +
[N. g.] (PV)
common water-nymph

**Najas marina** +
(pv)
holly-leaved water-nymph

---

**Iridaceae—Iris Family**

*Chasmanthe floribunda* ▼
South African cornflag

*Crococsmia × crocosmiiflora*

*Iris douglasiana* +

*Iris fernaldii* +

*Iris foetidissima*

*Iris germanica* ▼

**Iris longipetala** +
(sv) ★4.2

*Iris pseudacorus* ▼
yellow iris

*Iris spuria* ▼
Dutch iris

*Moraea collina* +

*Romulea rosea* var. *australis*

*Sisyrinchium bellum* +

*Sisyrinchium californicum* +
(BLM, sv-x)

*Watsonia meriana* ▼

[W. bulbillifera]
watsonia
**JUNCAEAE—Juncus Family**

*Juncus acuminatus* +
(s)

*Juncus balticus* subsp. *ater* +
[J. b.]

*Juncus bufonius* var. *b. +

*Juncus capitatus* +

*Juncus effusus* subsp. *pacificus* +
[J. e. var. *p.*]

*Juncus falcatus* subsp. *f. +
[J. *f. var. f.*]

*Juncus hesperius* +
[J. *effusus var. brunneus*]

*Juncus kelloggii* +
[BLM, sc, slv]

*Juncus lescurii* +
[J. *lesueurii*, orth. var.]

*Juncus mexicanus* +

*Juncus occidentalis* +

*Juncus patens* +

*Juncus phaeocephalus* var. *paniculatus* +

*Juncus phaeocephalus* var. *phaecephalus* +

*Juncus xiphiooides* +

*Luzula comosa* var. *c. +*
[L. *c.]*

*Luzula subsessilis* +
(NC/S)

**JUNCAGINACEAE—Arrow-grass Family**

*Triglochin scilloides*
[Lilaea s.]

*Triglochin striata* +
(nm, “sc”)

**LILIACEAE—Lily Family**

*Calochortus albus* +

*Calochortus luteus* +

*Calochortus tolmiei*

*Calochortus uniflorus* +
[BLM, MC, SC] ★4.2

*Calochortus venustus* + X
(slv/zs-x)

*Clintonia andrewsiana*

sharp-fruit rush

Baltic rush
toad rush
clustered toad rush
dwarf rush
Pacific rush
sickle-leaved rush
bog rush
Kellogg’s rush
San Francisco rush
Mexican rush
western rush
common rush
brown-headed rush
brown-headed rush
iris-leaved rush
common wood rush
short-stalked wood rush

flowering quillwort
three-ribbed arrow-grass

fairy lantern
yellow mariposa lily
pussy ears
large-flowered mariposa lily
butterfly mariposa lily
red clintonia
LILIACEAE (cont’d.)

Fritillaria affinis +
[F. a. var. a.] checker lily

Fritillaria agrestis + x stinkbells
(mc-x, “sc”) ★ 4.2

Lilium pardalinum subsp. p. leopard lily

Lilium rubescens ? + x redwood lily
(“scm”) ★ 4.2

*Ornithogalum umbellatum i
Proseartes hookeri Hooker’s fairy bells
[Disporum h.]

Scoliopus bigelovii fetid adder’s-tongue

MELANTIACEAE – False-hellebore Family

Toxicoscordion fontanum + marsh zigadenus
[Zigadenus micranthus var. fontanus] (BLM) ★ 4.2

Toxicoscordion fremontii ~ + Fremont’s star lily
[Zigadenus f.] (BLM)

Trillium albidum ? + ▼ white trillium
(S)

Trillium chloropetalum + giant trillium

Trillium ovatum subsp. o. + wake robin

Xerophyllum tenax +
(bb/er, BDS, S, SAR, slv)

bear-grass

ORCHIDACEAE – Orchid Family

Calypso bulbosa var. occidentalis + calypso orchid
[C. b.] (bb, BLM, S, sv)

Cephalanthera austiniae + phantom orchid
(bb)

Corallorhiza maculata var. m. + spotted coralroot

Corallorhiza maculata var. occidentalis + (un)spotted coralroot

Corallorhiza striata + striped coralroot

Cypripedium fasciculatum + x clustered lady’s-slipper
(sar?, slv-x) ★ 4.2/Sen

Cypripedium montanum + x mountain lady’s-slipper
(sc-x) ★ 4.2/Sen

Epipactis gigantea + ▼ stream orchid
(BLM, SC/SLV)

*Epipactis helleborine broad-leaved helleborine

Goodyera oblongifolia + rattlesnake plantain
(BB, BLM, NM, slv)

Piperia candida + white-flowered rein orchid
(BB, slv) ★ 1B.2/Sen
Orchidaceae (cont’d.)

*Piperia elegans* subsp. *e.* +

*Piperia elongata* +

*Piperia michaelii* +

(bb, BLM, NC, s) ★ 4.2

*Piperia transversa* +

(nc, slv)

*Platanthera dilatata* var. *leucostachys* + *x*

[P. *leucostachys*] (pv-x)

*Piperia unalascensis* +

coast piperia

wood rein orchid

Michael’s rein orchid

transverse rein orchid

Alaska rein orchid

white-flowered bog orchid

western lady’s-tresses

hooded lady’s-tresses

Poaceae – Grass Family

*Aegilops triuncialis* ▼

*Agrostis avenacea*

*Agrostis blasdalei* +

(NC, S) ★ 1B.2/Sen

*Agrostis capillaris*

*Agrostis densiflora* +

(NC)

*Agrostis exarata* ~ +

(BLM, nm, PV, S)

*Agrostis hallii* +

*Agrostis microphylla* +

(NC, S, slv)

*Agrostis pallens* +

*Agrostis scabra* +

(BLM, s, slv)

*Agrostis stolonifera*

*Aira caryophyllea*

*Aira praecox* ▼

*Alopecurus pratensis*

*Alopecurus saccatus* +

(NM, pv-x, sv-x)

*Amphithema arenaria* ⊙

*Anthoxanthum occidentale* [Hierochloe occidentalis]

*Anthoxanthum odoratum*

*Apera spica-venti* ▼

*Aristida ternipes* var. *gentilis* +

[A. t. var. *hamulosa*, illeg.]

barbed goat grass

Pacific bent grass

Blasdale’s bent grass

colonial bent grass

California bent grass

spike bent grass

Hall’s bent grass

small-leaf bent grass

leafy bent grass

rough bent grass

creeping bent grass

silver hair grass

early hair grass

meadow foxtail

Pacific meadow foxtail

European beachgrass

vanilla grass

sweet vernal grass

loose silkybent

hook three-awn
*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

*Brachypodium distachyon* ⊗ ▼  
chlorotypes

*Briza maxima* ⊗  
rattlesnake grass

*Briza minor*  
small quaking grass

*Bromus arenarius* +  
Australian chess

*Bromus berteroanus*  
Chilean chess

*Bromus carinatus* var. c. +  
California brome

*Bromus carinatus* var. marginatus +  
mountain brome

*Bromus catharticus* var. c. +  
rescue grass

*Bromus catharticus* var. elatus +  
Chilean brome

*Bromus commutatus* +  
hairy brome

*Bromus diandrus* ⊗  
rip gut brome

*Bromus grandis* +  
tall brome

*Bromus hordeaceus* + ⊗  
soft chess

*Bromus inermis* + ▼  
Hungarian brome

*Bromus japonicus* +  
Japanese brome

*Bromus laevipes* +  
Chinook brome

*Bromus madritensis* subsp. m. + ▼  
foxtail brome

*Bromus madritensis* subsp. rubens +  
red brome

*Bromus maritimus* + ▼  
maritime brome

[B. carinatus var. m.] (NC)  
woodland brome

*Bromus pseudolaevipes* +  
smooth brome

*Bromus racemosus* +  
poverty brome

*Bromus sterilis* +  
cheat grass

*Bromus tectorum* +  
nodding brome

*Bromus vulgaris* +  
tufted pine grass

*Calamagrostis koelerioides* +  
Pacific reed grass

*Calamagrostis nutkaensis* +  
pine reed grass

*Calamagrostis rubescens* +  
long-spined sandbur

*Cenchrus longispinus*
**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

**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 medusa head
  [Taeniatherum c.-m.]

**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 quack grass
  [Elytrigia r.]

**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
  *Eragrostis hypnoides +
  (pv)
*Eragrostis lehmanniana
  Eragrostis mexicana subsp. virescens
  Eragrostis pectinacea var. p. +
*Festuca arundinacea +
*Festuca bromoides +
  [Vulpia b.]
  Festuca californica
  Festuca elmeri +
  (> 5 regions)
*Festuca idahoensis +
  (blm, er, NC, PV, SV)
*Festuca microstachys +
  [Vulpia m. vars. ciliata/confusa/m./pauciflora]
*Festuca myuros ☹
  [Vulpia m. vars. hirsuta/m.]
  Festuca occidentalis +
  Festuca octoflora +
  [Vulpia o. vars. hirtella/o.]
*Festuca perennis + ☹
  [Lolium multiflorum; L. perenne]
*Festuca pratensis
  Festuca rubra +
  Festuca subulata +
  (s, SLV)
  Festuca subuliflora +
  (BLM, NC, NM, S, SLV)
*Festuca temulenta +
  [Lolium temulentum]
*Gastridium phleoides +
  [G. ventricosum, misappl.]
*Glyceria declinata +
*Hainardia cylindrica
*Holcus lanatus ☹
  Hordeum brachyantherum subsp. b. +
  Hordeum b. subsp. californicum +
  (sv)
  Hordeum depressum +
  (SL)
  Hordeum jubatum subsp. j. +
  [H. j.] (crr)

weeping love grass
creeping love grass
Lehmann’s love grass
Mexican love grass
Carolina love grass
tall fescue
six-weeks fescue
California fescue
Elmer’s fescue
Idaho fescue
hair fescue
rattail fescue
western fescue
eight-flowered fescue
rye grass
meadow fescue
red fescue
bearded fescue
crinkle-awn fescue
darnel
nit grass
low manna grass
one-glumed hard grass
velvet grass
northern barley
California barley
low barley
foxtail barley
POACEAE (cont’d.)

*Hordeum marinum subsp. gussoneanum + Mediterranean barley
*Hordeum marinum subsp. glaucum + smooth barley
*Hordeum marinum subsp. leporinum + hare barley
*Hordeum vulgare + w barley
Koeleria macrantha + June grass
*Lagurus ovatus ▼ hare’s-tail grass
*Lamarckia aurea goldentop
Leersia oryzoides + rice cutgrass
*Leptochloa fusca subsp. fascicularis + bearded sprangletop
[L. fascicularis]
Melica californica + California melic
Melica geyeri + Geyer’s onion grass
(bb, crr)
Melica harfordii + Harford’s melic
Melica imperfecta + small-flowered melic
Melica subulata + Alaskan onion grass
Melica torreyana + Torrey’s melic

*Panicum acuminatum var. fasciculatum + Pacific panic grass
[P. a. var. a., not in CA] (BDS, BLM, nm, sc, SLV)
Panicum capillare + witch grass
*Panicum dichotomiflorum subsp. d. fall panic grass
[P. d.]
*Panicum miliaceum subsp. m. broom corn millet
[P. m.]
*Parapholis incurva sickle grass
*Paspalum dilatatum + dallis grass
Paspalum distichum + knot grass
*Pennisetum clandestinum + Kikuyu grass
*Pennisetum villosum feathertop
Phalaris angusta + timothy canary grass
(pv, S, sc-x)
*Phalaris aquatica ☺ harding grass
Phalaris arundinacea + reed canary grass
(PV)
Phalaris californica + California canary grass
*Phalaris canariensis canary grass
*Phalaris caroliniana Carolina canary grass
Phalaris lemmoneii + x Lemmon’s canary grass
(“sc”, sv-x)
*Phalaris minor little-seeded canary grass
*Phalaris paradoxa + hood canary grass
*Phleum pratense cultivated timothy
*Poa annua annual bluegrass
Poaceae (cont’d.)

* Poa bulbosa subsp. vivipara ▼
  [P. b.]
  bulbous bluegrass

* Poa compressa
  Poa douglasii +
  (NC, SB)
  Canada bluegrass
  sand-dune bluegrass

Poa howellii +
  Poa kelloggii +
  (BLM, NM, SLV)
  Howell’s bluegrass
  Kellogg’s bluegrass

* Poa pratensis subsp. p.
  Poa secunda subsp. s. +
  Kentucky bluegrass
  one-sided bluegrass
  rough bluegrass
  San Francisco bluegrass

* Poa trivialis
  Poa unilateralis subsp. u. +
  [P. u.] (NC, sc-x, sv)
  Chilean beard grass
  ditch beard grass
  Mediterranean beard grass
  rabbitfoot grass
  water beard grass

  Pelopogon australis +
  Pelopogon interruptus +
  Pelopogon maritimus +
  Pelopogon monspeliensis +
  Pelopogon viridis +
  [Agrostis v.]
  Chilean beard grass
  ditch beard grass
  Mediterranean beard grass
  rabbitfoot grass
  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
  Setaria parviflora +
  [S. gracilis]
  rye
  knotroot bristle grass

  * Setaria pumila subsp. p.
    [S. p.]
  yellow bristle grass

  * Sorghum bicolor
  * Sorghum halepense
  * Stenotaphrum secundatum
  * Stipa brachychaeta ▼
    [Achnatherum brachychaetum]
  sorghum
  Johnson grass
  Saint Augustine grass
  puna needlegrass

  Stipa cernua +
  [Nassella c.] (mc, PV)
  noding needle grass
  foothill needlegrass

  Stipa lepida +
  [Nassella l.]
  smilo grass

  * Stipa miliacea var. m.
    [Piptatherum miliaceum subsp. m.]
**POACEAE (cont’d.)**

*Stipa pulchra +
[Nassella p.]*

*Stipa tenuissima +
Torreyochloa pallida var. pauciflora +
(NM, sv-x)*

Trisetum canescens ? +
Trisetum cernuum ? +
*Triticum aestivum*

**PONTEDERIACEAE — Pickerel-weed Family**

*Eichhornia crassipes*  
water hyacinth

**POTamogetonaceae — Pondweed Family**

*Potamogeton illinoensis +
(pv)*

*Potamogeton natans +
(nm, pv)*

*Potamogeton nodosus +
(PV, “sc”)*

Stuckenia pectinata  
[Potamogeton pectinatus]

**RUPPIACEAE — Ditch-grass Family**

*Ruppia cirrhosa +*

**RUSCACEAE — Butcher’s-broom Family**

*Maianthemum racemosum +
[Smilacina racemosa]*

*Maianthemum stellatum +
[Smilacina stellata]*

**THEMIDACEAE — Brodiaea Family**

*Brodiaea elegans subsp. e. +*
harvest brodiaea

*Brodiaea terrestris subsp. t. +*
dwarf brodiaea

* Dichelostemma capitatum subsp. c. +
blue dicks

*Dichelostemma congestum +
(mc, slv)*

*Dichelostemma multiflorum + x*
(wild hyacinth)
The midaceae (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.* +  
[S. *e.* subsp. *e.*]  
broad-fruited bur-reed

*Sparganium eurycarpum* var. *greenei* +  
[S. *erectum* subsp. *stoloniferum*]  
Greene’s bur-fruited bur-reed

*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* + ▼  
(SB)  
Scouler’s surf-grass

*Phyllospadix torreyi* +  
(NC, sb)  
Torrey’s surf-grass

*Zostera pacifica* +  
(“sc”)  
Pacific eel-grass
**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.

<table>
<thead>
<tr>
<th>Rarity Codes</th>
<th>Description</th>
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<tr>
<td>FE</td>
<td>Federally listed, threatened</td>
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<tr>
<td>FT</td>
<td>Federally listed, endangered</td>
</tr>
<tr>
<td>CE</td>
<td>State-listed, rare</td>
</tr>
<tr>
<td>CT</td>
<td>State-listed, threatened</td>
</tr>
<tr>
<td>CR</td>
<td>State-listed, endangered</td>
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<td>Sen</td>
<td>Bureau of Land Management</td>
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<td>Sensitive Species</td>
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<td>Rare, threatened, or endangered in CA and elsewhere</td>
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<tr>
<td>2B</td>
<td>Rare, threatened, or endangered in CA, more common elsewhere</td>
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<tr>
<td>3</td>
<td>More information needed—a review list</td>
</tr>
<tr>
<td>4</td>
<td>Limited distribution—a watch list</td>
</tr>
</tbody>
</table>

**Threat Ranks**

0.1 Seriously threatened in CA
0.2 Moderately threatened in CA
0.3 Not very threatened in CA

### Agrostis blasdalei
Blasdale’s bent grass 1B.2/Sen

### Amsinckia lunaris
bent-flowered fiddleneck 1B.2/Sen

### Arabis blepharophylla
cost rockcress 4.3

### Arctostaphylos andersonii
Anderson’s manzanita 1B.2

### A. canescens subsp. sonomensis
Sonoma canescent manzanita 1B.2/Sen

### Arctostaphylos glutinosa
Schreiber’s manzanita 1B.2

### Arctostaphylos hookeri subsp. h.
Hooker’s manzanita 1B.2/Sen

### Arctostaphylos ohloneana
Ohlone manzanita 1B.1

### Arctostaphylos pajaroensis
Pajaro manzanita 1B.1/Sen X

### Arctostaphylos silvicola
Bonny Doon manzanita 1B.2

### Arenaria paludicola
marsh sandwort FE/CE/1B.1 X

### Azolla microphylla
Mexican mosquito fern 4.2 X

### Calandrinia breweri
Brewer’s calandrinia 4.2

### Calochortus uniflorus
large-flowered mariposa lily 4.2

### Calyptridium parryi var. hesseae
Santa Cruz Mtns. pussypaws 1B.1/Sen

### Campanula californica
swamp harebell 1B.2/Sen X

### Carex comosa
bristly sedge 2B.1

### Carex saliniformis
deceiving sedge 1B.2

### Castilleja ambigu a subsp. a.
Johnny-nip 4.2

### Castilleja latifolia
Monterey coast paintbrush 4.3

### Ceanothus rigidus
Monterey ceanothus 4.2 X

### Centromadia parryi subsp. congdonii
Congdon’s tarplant 1B.1/Sen

### Chorizanthe cuspidata var. c. ?
San Francisco Bay spineflower 1B.2 X

### Chorizanthe douglasii ?
Douglas’s spineflower 4.3 X

### Chorizanthe pungens var. hartwegiana
Ben Lomond spineflower FE/1B.1

### Chorizanthe pungens var. p.
Monterey spineflower FT/1B.2

### Chorizanthe robusta var. hartwegii
Scotts Valley spineflower FE/1B.1

### Chorizanthe robusta var. r.
robust spineflower FE/1B.1

### Cicuta maculata var. bolanderi
Bolander’s water hemlock 2B.1

### Clarkia breweri ?
Brewer’s Clarkia 4.2 X

### Clarkia concinna subsp. automixa
Santa Clara red ribbons 4.3 X

### Collinsia multicolor
San Francisco collinsia 1B.2
Corethrogyne leucophylla ?
[C. filaginifolia]
Cypripedium fasciculatum
Cypripedium montanum
Elymus californicus
Eriogonum nudum var. decurrens
Erysimum amnophilum
Erysimum franciscanum
Erysimum tereftolium
Fritillaria agrestis
Gilia tenuiflora subsp. arenaria
Hesperocyparis abramsiana var. a.
Hormita strobilina
[Hoita strobilina ?]
Horkelia cuneata var. sericea ?
Horkelia marinensis
Hosackia gracilis
Iris longipetala
Leptosiphon ambiguus
Leptosiphon grandiflorus
Lilium rubescens ?
Lomatium parvifolium
Malacothamnus arcuatus
[M. fasciculatus var. nutallii]
Micropus amphibolus
Microseris paludosa
Mimulus rattanii subsp. decurtatus
[Diplotaxis r.; TJM2 = M. r.]
Monardella sinuata var. nigrescens
Monopelia gracilens
Pedicularis dudleyi
Penstemon rattanii var. kleei
Pentachaeta bellidiflora
Perideridia gairdneri subsp. g.
Pinus radiata
Piperia candida
Piperia michaelii
Plagiobothrys chorisianus var. c.
Plagiobothrys c. var. hickmanii
Plagiobothrys diffusus
Polygonum hickmanii
Ranunculus lobii
Rhynchospora californica ?
Rosa pinetorum ?
Sanicula hoffmannii
Sidalcea malachroides
Silene verecunda subsp. v.
[S. v.]
Stebbinsoseris decipiens
Toxicoserdion fontanum
Trifolium buckwestorum
Trifolium hydrophilum
Trifolium polyodon
branching beach aster 3.2
clustered lady’s-slipper 4.2/Sen X
mountain lady’s-slipper 4.2/Sen X
California bottle-brush grass 4.3
Ben Lomond buckwheat 1B.1
sand-loving wallflower 1B.2/Sen
San Francisco wallflower 4.2
Santa Cruz wallflower FE/CE/1B.1
stinkbells 4.2 X
Monterey gia X
short-leaved evax 1B.2/Sen
Santa Cruz cypress FE/CE/1B.2
Loma Prieta hoita 1B.1 X
Santa Cruz tarplant FT/CE/1B.1
Kellogg’s herkalia 1B.1
Point Reyes herkalia 1B.2
harlequin lotus 4.2
cost iris 4.2
serpentine leptosiphon 4.2 X
large-flowered leptosiphon 4.2
redwood lily 4.2 X
small-leaved lomatium 4.2
arcale bush-mallow 1B.2
northern curly-leaved m-della 4.2
woodland woolly threads 1B.2
Dudley’s loosewort CR/1B.2 X
Santa Cruz Mtns. beartongue 1B.2
white-rayed pentachaeta FE/CE/1B.1 X
Gairdner’s yampah 4.2
Monterey pine 1B.1
white-flowered rein orchid 1B.2/Sen
Michael’s rein orchid 4.2
Choris’s popcorn-flower 1B.2
Hickman’s popcorn-flower 4.2
San Francisco popcorn-flower CE/1B.1
Scotts Valley polygonum FE/CE/1B.1
Lobb’s aquatic buttercup 4.2 X
California beaked rush 1B.1/Sen X
pine rose 1B.2
Hoffmann’s sanicle 4.3
maple-leaved checkerbloom 4.2
San Francisco campion 1B.2
marsh microseris 1B.2
SC Co. Monkeyflower 4.2
Santa Cruz microseris 1B.2
marsh zigadenus 4.2
Santa Cruz clover 1B.1/Sen
saline clover 1B.2
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. lithosperoides
- 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 —★
- Dicholostemma multiflorum
- Fritillaria agrestis —★
- Gilia angelsonis
- 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 lemmoneii — Ev
- Platanthera dilatata var. leucostachys
- Pogogyne serpylloides subsp. intermedia — NCR [P. s.]
- Polygonon paronychia
- Polystichum imbricans subsp. i.
- Ranunculus lobii —★
- 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) 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.*]
- **Corethogyne 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* (Burtt Davy) Gould [*E. g. subsp. g.*]
- **Epilobium paniculatum** Torrey & A. Gray forma *adenocladon* Hausskn.; *E. p. forma laevicaule* (Ryd.) St. John; *E. p. var. jucundum* (Ryd.) Trel.; *E. p. var. p.* [*E. brachycarpum*]
- **Erigeron bilbaoanus** (E. J. Rémy) Cabrera [= Conyza bilbaana] 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 roemeri** (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. echoides*]
- **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. decuratus (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. noctinus (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 × attenuata Stockw. & Righter [see P. radiata]
• Plantago bigelovii A. Gray ? [P. elongata]
• Polypogon 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. leptosmus (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 var.]
• Trifolium stenophyllum Nutt. [T. depauperatum var. truncatum]
• Zigadenus fremontii (Torrey) S. Watson var. minor (Hook. & Arn.) Jepson [Toxicoscordion f.]

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**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. \( \text{X} = \) 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
APENDIX 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 [calweedmapper.calflora.org](http://calweedmapper.calflora.org). For information on eradication, see Ken Moore’s Wildland Restoration Team website: [www.wildwork.org](http://www.wildwork.org). To participate in local habitat-restoration activities, see [www.cruznps.org/habitat_restoration.html](http://www.cruznps.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. anoplothyrsus*  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
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** subsp. *cushingiana/glandulosa* – mis-id
- **Arctostaphylos glauca** – mis-id; intergrades occur on Santa Clara Co. line
- **Arctostaphylos monereyensis** – mis-id
- **Arctostaphylos pumila** – mis-id
- **Arctostaphylos regismontana** – mis-id of *A. andersonii*
- **Arctostaphylos tomentosa** subsp. – local records = *A. crustacea* subsp.
- **Artemisia ludoviciana** – waif
- **Berberis vulgaris** – waif
- **Calochortus umbellatus** – mis-id
- **Calycadenia multiglandulosa** – over County line in Santa Clara Co.
- **Calyptridium umbellatum** – local records = *C. monospernum*
- **Calystegia macrostegia** subsp. *cyclostegia* – can intergrade w/ local *C. purpurata*
- **Calystegia occidentalis** subsp. o. – local records = *C. purpurata* subsp. *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 thyrsiflorus** var. *griseus* – can intergrade w/ local *C. t.* var. *t.*
- **Chenopodium chrysophylla** var. c. – mis-id; see note for *C. c.* var. *minor*
- **Clarkia affinis** – mis-id
- **Clarkia amoena** subsp. amoena/huntiana – mis-id
- **Cordylanthus pilosus** subsp. *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** subsp. *t.* – unverified report
- **Epilobium campestrae** – 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

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#### Codes, Symbols, & Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLA</strong></td>
<td>C. L. Anderson’s two 1892 plant lists — see Introduction</td>
</tr>
<tr>
<td><strong>CRPR</strong></td>
<td>California Rare Plant Rank — see “Rarity Codes” (inside back cover)</td>
</tr>
<tr>
<td><strong>FNANM</strong></td>
<td>Flora of North America North of Mexico</td>
</tr>
<tr>
<td><strong>JHT</strong></td>
<td>J. H. Thomas’s Flora of the Santa Cruz Mountains of CA (1961)</td>
</tr>
<tr>
<td><strong>LR</strong></td>
<td>Locally rare — see p. 10</td>
</tr>
<tr>
<td><strong>Sen</strong></td>
<td>Bureau of Land Management Sensitive Species</td>
</tr>
<tr>
<td><strong>record</strong></td>
<td>Vouchered specimen; “old” record = pre-1961</td>
</tr>
<tr>
<td><strong>report</strong></td>
<td>Observation by a qualified botanist; “old” report = pre-1961</td>
</tr>
<tr>
<td><strong>sensu lato</strong></td>
<td>In the broad sense; broad circumscription of a taxon</td>
</tr>
<tr>
<td><strong>sensu stricto</strong></td>
<td>In the narrow sense; narrow circumscription of a taxon</td>
</tr>
</tbody>
</table>

**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”).

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~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, lflts 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-flwg 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, lflts 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. FNANM: 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. *pacific 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.


♦ *Amsinckia intermedia*: Corolla orange w/ red spots, 7–11 mm (vs. *A. menziesii*).

♦ *Amsinckia lunaris*: Corolla bilaterally symmetrical, often heterostylos. 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.*: 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, clasp- ing. 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* subspp., *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, If 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 if 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 if 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, ifw/ at least one month ahead of other pops and w/ If morphology approaching that of A. andersonii.

†Arctostaphylos glutinosa: Obligate seeder; lvs hairy on both surfaces, if base deeply lobed. Knobcone pine–maritime chaparral. County endemic; only on siliceous shale in the Chalks (Lockheed; S). An infrequent, green-lvd (non-canescent) 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, petioloed, similar on both surfaces, w/ If 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, petioloed, similar on both surfaces, w/ If 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, if 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, petioloed, 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, If 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 gambiaicus: Group 1. Slender annual; fls purple-tinged, 2.5–3.3 mm; fr reflexed. Open areas.

Atriplis 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.


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).


Baccharis pilularis subsp. consanguinea: Sts erect forming rounded shrub; lvs gen 15+ mm (vs. ). Subspp. intergrade.

Baccharis pilularis subsp. p.: Sts prostrate, mat-forming; lvs gen to 15 mm (vs. ). Bluffs and beaches. Subspp. intergrade.

Barbarea orthoceras: Basal lvs w/ 2–4 lateral lobes; fr to 4 cm long (vs. 7).

Barbarea verna: Basal lvs w/ 6+ lateral lobes; fr 4.5+ cm long (vs. 9).


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; lflts 7–23, ± palmately veined (vs. 7). Woodland in North County.

Berberis pinnata subsp. p.: Bud scales among upper lvs deciduous; lflts gen 7–11, gen pinnately veined (vs. 7). 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 pilosa: Lvs pinnate; ray fls 0 or minute; fr narrowly cylindric 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.


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. 6). 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. 6). Cultivated land.

Brodiaea elegans subsp. e.: Perianth tube funnel-shaped; staminodia held away from, < stamens (vs. 6). 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.

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. 6). Burns, sandy chaparral openings.

Calandrinia ciliata: Fr gen not > calyx (vs. 5). 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.


Calypso bulbosa var. occidentalis: Basal If 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 lft 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 barbaraee: 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 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 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 gynodynamia: 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 staminately 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 Ovales, 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 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 nudata: Group 8. Cespitose. Streambeds below high-water mark.

♦ Carex obturpta: 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 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 subbracteata*: Groups 11D, F, H. Cespite; gynoecious. 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. Cespite; gynoecious; 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 cespite; 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 ambiguus 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.*: Inflorescence 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:* Inflorescence 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) & “se” (1936). Presumably extirpated.

✿ *Castilleja subinclusa subsp. franciscana:* Inflorescence 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. 6). 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/ if 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. 5). Mostly in Sandhills (BDS & ZS).

✿ *Ceanothus dentatus:* Pl gen 0.5–1.5 m; If 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; If 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 Mts. 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-fld 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).


♦ *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 austiniae*: 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 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 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 subspp.) and fls very lg, variously marked. TJM2 states that stigmas are exserted beyond anthers in this taxon, but in our pls stigmas are scarcely exserted 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 exserted 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-fld, 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.
\textbf{Claytonia parviflora} subsp. \textit{viridis}: As above but cauline lvs gen free. \textit{TJM2}: Intergrades w/ \textit{C. rubra}.

\textbf{Claytonia perfoliata} subsp. \textit{mexicana}: Basal lvs $< 3 \times$ longer than wide, deltate to reniform, lf tips mucronate; cauline disk angles gen 2, short-pointed. \textit{TJM2}: Subspp. difficult; a highly variable complex; intergrades w/ \textit{C. p.} subsp. \textit{perfoliata}, \textit{C. parviflora}, and \textit{C. rubra}.

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

\textbf{Claytonia rubra} subsp. \textit{depressa}: Basal lvs $< 3 \times$ 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. \textit{TJM2}: Variable; can intergrade w/ \textit{C. parviflora} and \textit{C. perfoliata}.

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

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

\textbf{Clematis lasiantha}: 3–5 lflts; infl gen 1-flld, flwg January–June. Chaparral. (vs. \textit{\textbullet{}})

\textbf{Clematis ligusticifolia}: 5+ lflts; infl $> 1$-flld, flwg June–Sep. Streamsides. (vs. \textit{\textbullet{}})

\textbf{Collinsia bartsiifolia} var. \textit{b.}: Corolla white to pale-lavender; upper lip $\pm$ = lower lip. Only documented in Zayante Sandhills (ZS).

\textbf{Collinsia heterophylla} var. \textit{h.}: Proximal pedicels $<$ calyx (vs. \textit{\textbullet{}}). County pls gen pale-flld compared to showier inland forms. Grows w/ \textit{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 \textit{Bombus}.” —James A. West

\textbf{Collinsia multicolor}: Proximal pedicels $>>$ calyx, distal pedicels $\pm$ = calyx (vs. \textit{\textbullet{}}); 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.

\textbf{Collomia grandiflora}: Lf entire; corolla 2 cm+, pale-apricot. Disturbed areas.

\textbf{Corallorhiza maculata} var. \textit{m.}: Lip with 2 lateral lobes, spotted (vs. \textit{C. striata}); lip $\pm$ not widening to tip (vs. \textit{\textbullet{}}).

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

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

\textbf{Corethrogyne filaginifolia}: Variable. We have several forms locally (see JHT):

1) the common form (especially in ZS) has erect sts and multiple, glandular heads [= \textit{C. f. var. rigid} A. Gray];

2) the form w/ prostrate sts and lg, single heads from NC [= \textit{C. californica} DC. var. c.];
3) the LR, very early-flwg, prostrate form w/ nonglandular, white-tomentose involucres 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 nutfallii: 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.


♦ 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.

♦ Crocanthemum 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.


♦ 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 tuber-
ous; 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.

♦ *Cypripedium 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.

♦ *Cypripedium 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.


♦ *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. Vernally 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.


Dichondra donelliana: Sts 1–2 mm thick; calyx in fr >= 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-fld 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. decuratus (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 L.R. See JHT.

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

*Drymocallis glandulosa var. wrangelliana*: Lateral lft pairs gen 3; petals cream or pale-yellow. *Drymocallis* spp. have terminal lft distinc; stamens 20+ (vs. *Horke- lia* 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 Dudylas assort into 3 or 4 main categories: the common, thick-leaved, yellow-fld _D. caespitosa_ along the immediate coast (and farther inland in BLM & S); the rare, small, reddish-fld _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 graduall from orange-fld in northwest to yellow-fld in south-east 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~


*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.


*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. jepponii* (Burtt Davy) Gould, w/ green, hairy lf sheaths and blades (vs. *E. g. subsp. g.*, w/ glaucous, glabrous or scabrous lf sheaths and blades) (see T/JMI).

**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 tend 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 >= 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 ± 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 laeavigatum:** 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).

**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 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.

**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. auri culatum:* 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; lflts deeply dissected; sepal tips bristly. Smaller fls, drier habitats than *E. botrys.*

*Erodium moschatum:* Lvs pinnate; lflts broad; sepal tips glabrous. Garden weed.

*Erysimum ammophilum:* Dunes (SB). At northern edge of range here.

*Erysimum capitatum var. c.:* Orange-fld. 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-fld; basal lvs threadlike. County endemic; Sandhills (BDS & ZS).

*Erythranthe androsacea:* [TJM2 = *Mimulus androsaceus*] Fls reddish-purple. Zayante Sandhills (ZS). At northern edge of coastal range here. A pale-fld variant reported from Quail Hollow Quarry. *Erythranthe* spp. have axile placentation; frs apically rounded to truncate.
**Erythranthe arvensis**: [TM2 = *Mimulus guttatus*] Since TM2, 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-fld (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**: [TM2 = *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**: [TM2 = *Mimulus guttatus*] JHT: Lg-fld 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?**: [TM2 = *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**: [TM2 = *Mimulus moschatus*] Rhizomatous perennial; pl glabrous to slimy-hairy, gen w/ musk scent; calyx lobes << tube; corolla yellow.

**Erythranthe nasuta**: [TM2 = *Mimulus guttatus*] Yellow-fld 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**: [TM2 = *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 peplus**: Annual, glabrous; lvs entire; gland 2-horned; fr lobes 2-keeled.

**Euphorbia prostrata**: [TM2 = *Chamaesyce p.*] Annual; sts hairy or becoming glabrous; gland appendage width >= gland width; only fr lobes hairy.
♦ **Euphorbia serpens**: \[TM2 = Chamaesyce s.\] Annual, glabrous; gland appendage width \(\geq\) gland width; stipules fused into wide, membranous scale.

♦ **Euphorbia serpyllifolia** \(\text{subsp. s.}\): \[TM2 = Chamaesyce s.\] 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**: \[TM2 = Atriplex c.\] 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 TM2, but recognized as distinct in FNANM).

1) *F. idahoensis*: If blades 3–5 ribbed, adaxially pubescent or scabrous; infl branches usually somewhat spreading at maturity; vs.

2) *F. roemerii*: If 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 \[TM1 = Vulpia microstachys var. confusa\], w/ glumes hairy and lemmas glabrous;

b) *F. grayi* (Abrams) Piper \[TM1 = V. m. var. ciliata\], w/ glumes and lemmas hairy; and

c) *F. pacifica* Piper \[TM1 = V. m. var. pauciflora\], 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 \[TM1 = V. m. var. ciliata\], w/ glumes and lemmas hairy;

b) *F. microstachys* Nutt. \[TM1 = V. m. var. m.\], w/ glumes glabrous and lemmas hairy; and

c) *F. reflexa* Buckley \[TM1 = V. m. var. pauciflora\], 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-); If sheath reddish, closed, gen w/ downward-pointing hairs, senescent sheaths rapidly becoming fibrous; If blade < 3 mm wide, ± folded. Extremely variable; at least two non-local forms introduced. Native forms rare, localized. Many subspp. 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: Ridgetop 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. parisienne.

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. 6).

Gamochaeta ustulata: Lf faces contrasting; phyllaries dk-brown/purple (vs. 5).

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. 6).

Geranium molle: Lf segments 5–7, lf divided 0.5–0.75 to base (vs. 5).

Gilia achilleifolia subsp. a.: Dense infl (9–25 fls); lg, bright-blue fls w/ wide throats (vs. 6). 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. 5). Variable. TJM2: “Often grows with G. a. subsp. achilleifolia and may ultimately be better treated as a separate species.”

Gilia angelsonis: Only one old record: “sc” (1881). Presumably extirpated.

Gilia capitata subsp. c.: Corolla lobes < 1 mm wide (vs. 5). Only two old records: slv. Commonly seeded in “native wildflower” mixes.

Gilia capitata subsp. staminea: Corolla lobes 3 mm wide (vs. 5). Sandy areas.

Gilia clivorum: Grassy areas. Extremely variable between populations in Lf morphology, glandulosity, fl color, etc. A tall, non-glandular, white-fld form has been reported from S. Study needed.

Gilia tenuiflora subsp. arenaria: Longest stamens ± exserted; stigmas among anthers; fr 5–6.2 mm (vs. 5). Sand dunes. Monterey Bay endemic. Locally, only (correctly) recorded in SB.

Gilia tenuiflora subsp. t.: Longest stamens exserted; stigmas exceeding anthers; fr 3.5–6 mm (vs. 5). 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.

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 Gamochaeta 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.


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.


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.

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

- **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.

- **Hesperocyparis 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. echioideae**: 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 albinum**: 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-flwng.

- **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 striolata?**: 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.

- **Holocarpha 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
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 bal-
samiferus* 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. Dry-
ing areas in wet soil.

◆ **Isolepis cernua**: The common form locally is perennial, found mainly on coastal cliffs but also oc inland; it is sold in nurseries as the “fiber optic plant.” The an-

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 Eng-

lish walnut, then scion dies and rootstock persists. Not native here, but naturalized outside its native range.
Juglans nigra: TJM2: “Resembles J. h. but has lfts 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: Lfts 5–11, elliptic to oblong-ovate, entire; nut shell ± thin, wrinkled. Spread by jays and squirrels.


Juncus balticus subsp. ater: Group 2. Rhizomatous perennial; sts gen cylindric; 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; If 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; If 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 subcapitata.”—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; If blades iris-like; infl w/ many, few-fld heads; fr gradually tapered to long beak.

Juncus phaeocephalus var. p.: Group 4. As above but w/ few, many-fld heads.

Juncus xiphioides: Group 4. Perennial; If blades iris-like; infl w/ many, few-fld 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. ![image](image1)).

♦ **Kickxia spuria:** Lvs narrowly to widely ovate or subcordate throughout (vs. ![image](image2)).

♦ **Koeleria macrantha:** Inflo 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-flwng, 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. ![image](image3)).

♦ **Lactuca serriola:** Lvs oblanceolate to oblong-elliptic to obovate in outline; infl branches often widely spreading (vs. ![image](image4)).

♦ **Laennecia coulteri:** Lvs clasping, lobed or toothed. Disturbed, gen alkaline areas.

♦ **Lamium amplexicaule:** Upper st lvs clasping; inner corolla tube hairs 0 (vs. ![image](image5)).

♦ **Lamium purpureum:** Upper st lvs petioled; inner corolla tube hairy (vs. ![image](image6)).

♦ **Landoltia punctata:** Roots gen 2–7. Freshwater. Only two records: NM & pv.

♦ **Lastarriaceae 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. Vernally 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 ![image](image7)). 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 lfts ± 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 gaillardioides**: 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 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 *TJM*1/2, *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-fld (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-fld form w/ a very long tube only known from Lucille’s Court Meadow in Boulder Creek (SLV); and — not from County,

c) a larger-fld but shorter-tubed, bright-yellow-fld 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-fld (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 apiifolium**: Corolla white; involucel 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).


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 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. varicolor 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); pedi- cel 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; lfts 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. arboresus*.

**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 wood-land. 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; If blade > petiole, ± fleshy. Marshy areas in mixed-evergreen and redwood forest. Spathe emits fetid odor.

~M~

**Madia elegans:** Fl heads showy. Subspp. 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-scent-ed; 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. arcuratus* (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-fld 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. ▲). Ridgetop 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 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.

Microseris 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; If 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, If-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/ bulbles; 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.


~N~

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


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-fld 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-flld 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

~O~

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

†Osmorhiza berteroi: Involute 0 or much reduced (vs. •). Common.

†Osmorhiza brachypoda: Involute conspicuous (vs. •). Reported by CLA from “mountains and woods,” and two records/reports: cr (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; lflts 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 alsinooides: Ray fls 0 or < 1 mm; disk fls gen 4; corolla 3-lobed. Openings in grassland, chaparral.


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 Seascapes 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 pen coll i ca: 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), lflts 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 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, If 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 If segments 3–5, and calyx lobes narrow; it may be an intergrade w/ P. egena [w/ basal If segments 7–11(15) and calyx lobes linear to ob lanceolate, 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.: [TJ]M2 = P. m.] Groups 2, 3. Annual, stiff-hairy; lvs simple distally; corolla cream-white, 5–7 mm; stamens exserted.

Phacelia nemoralis var. n.: [TJ]M2 = P. n. subsp. n.] Group 1. Short-lived perennial; basal lvs gen w/ 3 lflets; corolla green- or yellow-white, 3.5–5 mm; style 6–9 mm.

Phacelia ramosissima: Group 1. Perennial; lvs cauline, compound; lflets 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 cespitose 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: Cespitose 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.


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 torreyi: Older lvs folded or cylindric (vs. 5). Only recorded from Davenport Landing (NC) & just north of the Pajaro River mouth (sb) (1971). Surf zone.


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 Mts., unassigned taxonomically in this treatment, may be indistinct from var. *pacific* (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 chorisanus 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.


*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-fld 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-oblanceolate, 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 californicum: Veins fused or free; If blade deltate to ovate, often w/ an irregular outline, lwr segment pairs often >= 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; If blade oblong-ovate and ± 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; If 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 ob lanceolate. 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 biorellii**: 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. If 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. garyana 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 garyana 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—If 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
\textit{Ranunculus aquatilis} var. \textit{a.}: Receptacle bristly; floating lvs 0 or reniform, 3-parted, segments not linear; submersed lvs w/ linear segments (vs. \textit{R. californicus} var. \textit{o.}). Streams, ponds, other wet areas. Only two reports: BLM (2000) & PV (2011).

\textit{Ranunculus aquatilis} var. \textit{diffusus}: As above but both floating and submersed lvs w/ linear segments.

\textit{Ranunculus arvensis}: Fr spiny.

\textit{Ranunculus californicus} var. \textit{californicus}: Petals 9+ (vs. \textit{R. occidentalis} var. \textit{o.}); sts thin, decumbent to erect; basal lvs compound. Inland (vs. \textit{R. parviflorus}).

\textit{Ranunculus californicus} var. \textit{cuneatus}: Sts thick, prostrate; basal lvs simple. Coastal bluffs, hillsides (vs. \textit{R. parviflorus}).

\textit{Ranunculus hebecarpus}: Petals to 2 mm; fr finely papillate on faces and margin, each papilla w/ hooked bristle; beak lanceolate (vs. \textit{R. parviflorus}).


\textit{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.


\textit{Ranunculus parviflorus}: Petals to 1.8 mm; fr finely papillate only on faces, each papilla w/ hooked bristle; beak deltate (vs. \textit{R. hebecarpus}).

\textit{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.

\textit{Ranunculus repens}: Sts decumbent or creeping, rooting at nodes; fr smooth, beak curved. Many habitats.

\textit{Ranunculus sceleratus} var. \textit{s.}: Sts erect; fr faces w/ fine wrinkles. Ponds.


\textit{Raphanus raphanistrum}: Petals pale-yellow, ± white in age; fr strongly constricted between seeds, beak ± slender (vs. \textit{R. sativus}). \textit{TJM2}: Hybridizes w/ \textit{R. sativus} to produce pls highly variable in fl color and fr constriction.

\textit{Raphanus sativus}: Petals pink to purple (occ white); fr not or only ± constricted between seeds, beak conic (vs. \textit{R. raphanistrum}).

\textit{Rhododendron columbianum}: Lvs thick, evergreen; fr dehisces from base upward; fls white to cream. Stream margins. At southern edge of coastal range here.

\textit{Rhododendron macrophyllum}: Lvs thick, evergreen; fr dehisces from top downward; fls white to pink or purple. Forested areas, acidic soils.

\textit{Rhododendron occidentale}: Lvs thin, deciduous; fls white to pink to salmon. Occasional populations are winter-flowering.

\textit{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. pubiforum**: 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. Flw Oct–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. Flw Feb–April. Woodland.


**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.


**Rubus armeniacus**: Sts 5-angled, prickles many; lflts gen 5, abaxially densely white-tomentose; fls pink. Hybridization btw this and *R. ursinus* occurs rarely.

**Rubus leucodermis**: Sts not angled; lflts 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; lflts 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.


**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, ± pressed 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 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.


♦ *Sambucus nigra* subsp. *caerulea*: Fr bluish-black; infl ± flat-topped (vs. *S. canadensis*).

♦ *Sambucus racemosa* var. *r.*: Fr red; infl ± dome-shaped (vs. *S. nigra*). 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. 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-fld 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 glomeratus:** Lvs evenly fine-dentate (vs. *S. aronicoides*).

**Senecio sylvaticus:** Sts densely curly-hairy (vs. *S. vulgaris*).

**Senecio vulgaris:** Sts glabrous or sparsely hairy (vs. *S. minimus*).

**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. *S. m.* subsp. *laciniata*). 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. *vereucunda*. 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. 5). Salt marshes, alkaline areas.

Sparganium eurycarpum var. e.: Stigmas 2(+) on 60+% of pistillate fls (vs. 6). 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. 5).

Spergularia arvensis: Lvs opposite but appearing whorled.

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; If blade ovate, base cordate; mature infl elongated, many bracts visible; basal ring of hairs inside corolla tube strongly oblique, tube base pouches. Pls approaching S. r. var. rigida (pls gen 1 m; If 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 bigelowii 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 flwng 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).
♦ Symphoricarpos albus var. laevigatus: Pl erect, 6+ dm high; infl w/ 8+ fls (vs. 6).
♦ Symphoricarpos mollis: Pl sprawling, to 6 dm high; infl w/ 2–8 fls (vs. 5).
♦ Symphyotrichum chilense: Rhizomatous perennial; outer phyllaries obtuse. “Variable as to phenology, stature, foliar morphology, & fl color.” — James A. West
♦ Symphyotrichum subspicatum: Rhizomatous perennial; outer phyllaries ± acute. TJM2: Highly variable; grading into S. chilense.
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


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, clapping.

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

Tiarella trifoliata var. unifoliata: Petals thread-like; stamens 10; fr scoolike.


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.

Toralis arvensis: Pl erect; umbel open (vs. •). Common.

Toralis 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.


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. Inflls 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-flld 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 (lf length/width and depth of lflt notch) and are identical in genetic (ITS) signature. This deeply-cleft lflt variant is relatively uncommon and limited in range compared w/ var. *decipiens*.

♦ **Trifolium bifidum var. decipiens**: See note 5.

♦ **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-fld; 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 scari-ous; 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-flld 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-flwg 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.” ampectens, 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. ampectens.

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 with T. a., with 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-flowered 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; If 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. streamside); 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* var.s.: 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-flowered 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-flowered relative, *T. appendiculatum* Lojac (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 wildenovii*: 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.)

♦ *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.

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.

Vaccinium ovatum: Lvs evergreen, thick, margins toothed; fr blue-black (vs. ).


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. ▲).

Verbasum blattaria: Lvs glabrous; proximal pedicels 10+ mm.

Verbasum speciosum: Lvs densely tomentose; infl not dense, branched.

Verbasum thapsus: Lvs densely tomentose; infl dense, unbranched.

Verbasum virgatum: Lvs ± hairy; proximal pedicels < 10 mm.

Verbena lasiostachys var. scabra?: 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 petiolate; 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 red-purple, 12–14 mm; fls 6–15.

Vicia hassei: Infl 1–2-fld, 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-fld, 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-fld, fls considerably showier; fr glabrous.


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-fld, 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. 6). TJM2: CA Nativity status uncertain. Behaves as a weed locally.

♦ **Xanthium strumarium**: Annual; nodal spines 0 (vs. 5). 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 fld. White-fld 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 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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