

A Revised Checklist of the Plants of the San Joaquin Experimental Range

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FOREWORD

The San Joaquin Experimental Range is located near the center of the State in the granite-soil section of the Sierra Nevada foothills. It is in Madera County, 28 miles north of Fresno, California. This 4500 acre (1790 ha.) area was established in 1934 as a branch station of the California Forest and Range Experiment Stations, U.S. Forest Service and was California's first range research station. Eighty acres are a designated Research Natural Area which has been neither grazed nor burned for 50 years. Research aimed at increased production from California foothill range through improved management, fertilization, brush control, and livestock management has been carried out since establishment. A number of wildlife species have also been studied. Since its establishment in 1934 the wide variety of studies have been conducted by Forest Service researchers and cooperators from state and federal agencies, organization, and universities. In 1984 the Pacific Southwest Forest and Range Experiment Station and California State University, Fresno entered into a long-term cooperative agreement, with C.S.U., Fresno assuming the administration of the Experimental Range, which will continue to be used as a research and education facility and contribute to the knowledge of the use and conservation of California's rangeland resources.

The area lies in the annual plant-oak woodland type and is characterized by grassy rolling hills with a sparse covering of trees and occasional dense stands of brush. It is in the lower part of the woodland zone between the treeless valley floor and the higher brush and timber belts. This annual grass-oak woodland savanna has been variously classified under different vegetation systems--foothill woodland (Munz 1958. Orndorf 1974), digger pine-- oak woodland (Storer and Usinger 1963), and upper Sonoran zone (Merriam). Elevations vary from 700-1700 ft (213-518 m) with most of the area lying between 1000-1500 ft (305-457 m). Exposures are generally southwesterly. The drainage basin empties into a small tributary of the San Joaquin River. No permanent streams flow through the area, but springs are numerous and the small drainages carry surface flows during the winter months.

The slope soils are shallow, residual, of granitic origin and are classed in the Ahwahnee series. The swale soils are deeper, alluvial, and are classed in the Visalia series. Both have a low water-holding capacity.

The climate is Mediterranean, characterized by mild, rainy winters and hot, dry summers. Snow is rare. Seasonal precipitation usually begins in September and has averaged 18.5 in (470 mm), ranging from a low of 9 in (229) to a high of 37 in (940) for the last 49 years. The annual mean max-min temperatures have been 73°F (23°C) and 44°F (6.7°C).

Seeds of most herbaceous plant species germinate with the first 0.5-1 in (1.3-2.5 cm) of fall rain. The plants grow slowly during the winter, then grow rapidly when warm temperatures return in March, reach maturity in April, and are mostly dry by mid-May.

Standards of abundance listed were those established in the original plant list (Buttery and Green 1958).

- | | |
|-------------|---|
| Abundant | -- species appeared on at least 75% of sample quadrats; 3 species fall in this category. |
| Very Common | -- species appears on at least 15% of sample quadrats; 18 species fall in this category. |
| Common | -- species appears on at least 1 sample quadrat. |
| Uncommon | -- species appears each year on the Range, but was infrequent in sample quadrats. |
| Rare | -- species appears in 1 or 2 locations on the Range, or perhaps only in especially favorable years. |

This checklist is based, in large, on California Forest and Range Experiment Station Miscellaneous Paper No. 23, April 1958 by R.F. Buttery and L.R. Green. The nomenclature has been revised to conform to present standards (Munz and Keck 1968). Locally established common names are listed. In addition, a number of vascular plants not previously listed have been added, as well as lists of the mosses and lichens occurring at the San Joaquin Experimental Range. Synonymy of plant names is listed in parentheses to aid in species identification with reference to herbarium specimens and the original plant list.

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Fig. 2 - Important grasses and grasslike plants on the San Joaquin Experimental Range: A, soft chess; B, red brome; C, ripgut brome; D, slender oat; E, foxtail fescue; F, Gray's fescue; G, toad rush; H, spike sedge; I, slender-leaf rush.

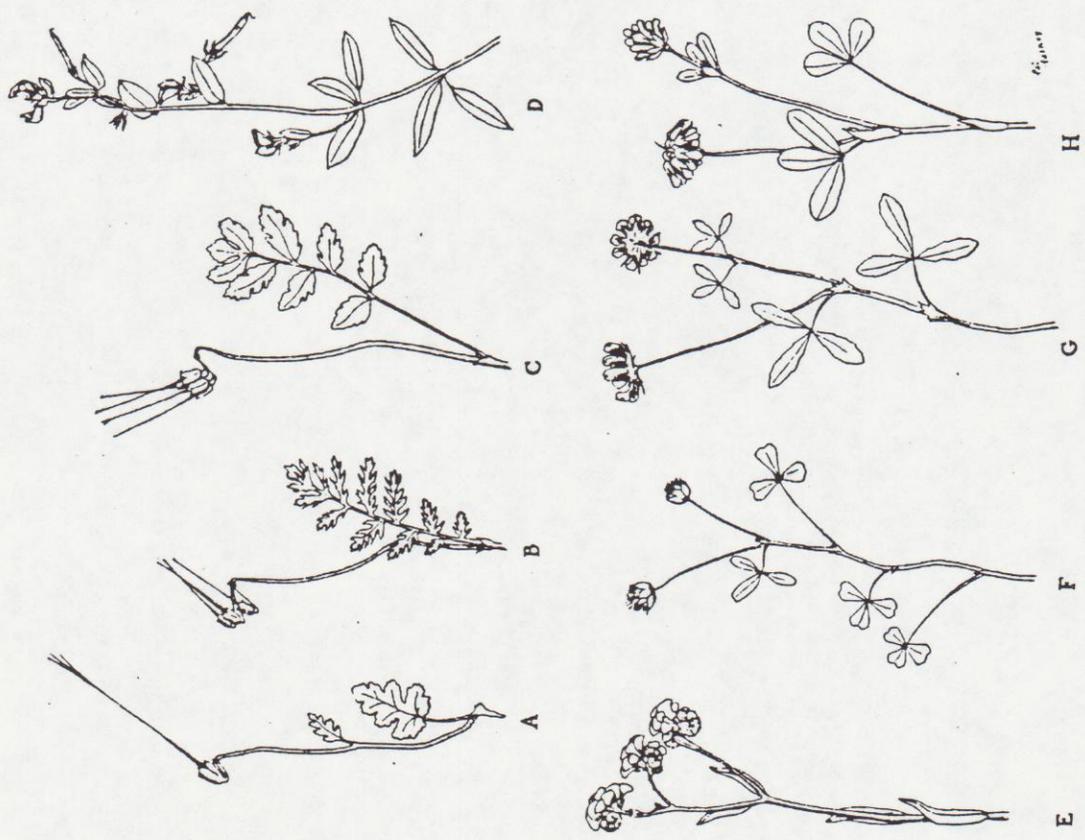


Fig. 1 - Eight important broadleaved herbs occurring on the San Joaquin Experimental Range: A, broadleaf filaree; B, red-stem filaree; C, white-stem filaree; D, Spanish clover; E, pop-corn flower; F, maiden clover; G, tomat clover; H, tree clover.

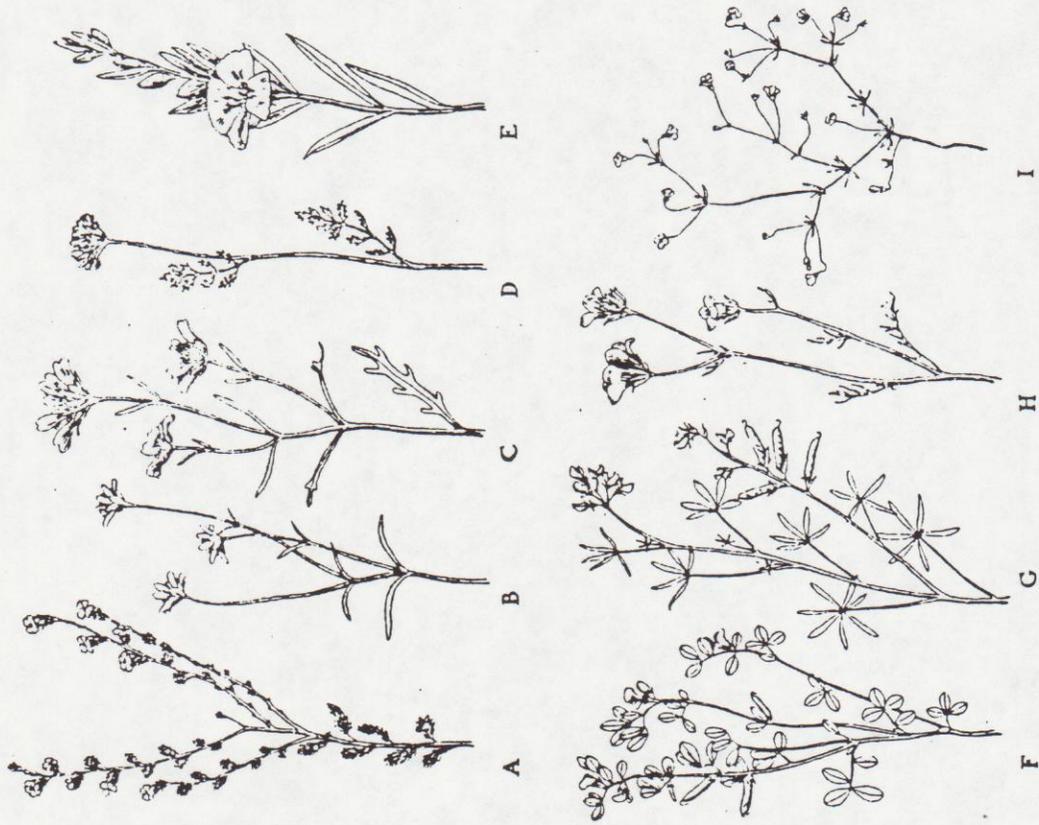


Fig. 3 - Broadleaved herbs of secondary importance on the San Joaquin Experimental Range: A, yellow tarweed; B, goldfields; C, layia; D, rattlesnake weed; E, godetia; F, fine-leaf lotus; G, ground lupine; H, birdseye gillia; and I, linanthus.



Fig. 4 - Seven shrubs and trees commonly browsed on the Experimental Range: A, wedgeleaf ceanothus; B, coffeeberry; C, hollyleaf buckthorn; D, Mariposa manzanita; E, blue elderberry; F, blue oak; G, interior live oak.

(After C.B. Hutchison and E.I. Kotok. 1942. The San Joaquin Experimental Range, UC Agri. Exp. Stn. Bull. 663.)

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GRASSES AND GRASSLIKE PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>TYPHACEAE</u> Cattail family			
<u>Typha latifolia</u> L. common cattail, soft flag	Wet swale	May-June	Rare
<u>POACEAE</u> Grass family			
<u>Aira caryophyllea</u> L. (<u>Aspris caryophyllea</u> Nash) Silver hairgrass	Slope, shallow soil	Mar-May	Common
<u>Avena barbata</u> Brot. Slender wild oat	Slope, esp. south	Feb-May	Very common
<u>Avena fatua</u> L. Wild oat	Slope	Mar-May	Rare
<u>Briza minor</u> L. Little quakinggrass	Swale; along creek	Mar-June	Common
<u>Bromus arenarius</u> Labill. Australian brome	Slope, esp. south	Mar-May	Common
<u>Bromus diandrus</u> Roth. (<u>Bromus rigidus</u> Roth.) Ripgut brome	Slope, esp. shaded, dry swale, tree shade	Feb.-Apr	Very common
<u>Bromus madritensis</u> L. Spanish brome, Madrid brome	Upper swale	Mar-May	Uncommon
<u>Bromus mollis</u> L. (<u>Bromus hordaceus</u> L.) Soft brome, soft chess	Slope, dry swale	Mar-May	Abundant
<u>Bromus rubens</u> L. Red brome, foxtail brome, foxtail chess	Slope, all expo- sures	Feb-May	Very common
<u>Bromus tectorum</u> L. Cheatgrass, downy brome	Slope, shallow soil	Feb-Apr	Uncommon
<u>Cynodon dactylon</u> (L.) Pers. Bermuda grass	Wet swale	May-Aug	Uncommon
<u>Deschampsia danthonoides</u> (<u>Trin. Munro</u> ex. Benth.) Annual hairgrass	Lower slope and swale	Mar-May	Uncommon
<u>Digitaria sanguinalis</u> (L.) Scop. Hairy crabgrass	Gardens	May-Sep.	Uncommon

GRASSES AND GRASSLIKE PLANTS

<u>Botanical and Common Name</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Distichlis spicata</u> var. <u>stricta</u> (Torr.) Beetle (<u>Uniola spicata</u> Torr.) Inland saltgrass	Creek bank	May-Aug	Rare
<u>Elymus triticoides</u> Buckl. Creeping wildrye Beardless wildrye	Dry swale	May-Aug	Rare
<u>Eragrostis megastachya</u> (Koel.) Link. (<u>E. cilianensis</u> [All.]) Stinkgrass	Barnyard and garden	May-Aug	Rare
<u>Gastridium ventricosum</u> (Gouan) Schinz and Thell Nitgrass	Slope on shallow soil	Jun-Aug	Common
<u>Hordeum brachyantherum</u> Nevski Meadow barley	Dry swale	Apr-May	Uncommon
<u>Hordeum geniculatum</u> Allioni (<u>Hordeum hystrix</u> Roth.) Mediterranean barley	Wet swale	Mar-May	Very common
<u>Hordeum leporinum</u> Link (<u>Hordeum murinum</u> L.) Common foxtail, mouse barley	Disturbed soil or lower slope	Mar-May	Common
<u>Koeleria phleoides</u> (Vill.) Pers. Annual koeleria	Swale	Apr-Jun	Rare
<u>Lolium multiflorum</u> Lam. Annual ryegrass	Seeded	Mar-May	Swale and lower slope
<u>Melica californica</u> Scribn. California melicgrass	Rock outcrop	Apr-Jul	Uncommon
<u>Melica imperfecta</u> Trin. Small-flowered melicgrass	Rock outcrop	Apr-Jul	Uncommon
<u>Panicum capillare</u> L. var. <u>occidentale</u> Rydb. Common witchgrass	Uncommon	May-Aug	Swale
<u>Phalaris californica</u> H. & A. California canarygrass	Shaded wet areas	Mar-May	Rare
<u>Phalaris caroliniana</u> Walt. Carolina canarygrass	Wet swale	Mar-May	Uncommon
<u>Phalaris minor</u> Retz. Canary grass	Packed soil, waste areas	Apr-Jly	Uncommon

GRASSES AND GRASSLIKE PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Phalaris tuberosa</u> L. var. <u>stenoptera</u> [P.S. Hack.] Hitchc. Hardinggrass	Swale	May-Jly	Seeded and Natural Area
<u>Poa annua</u> L. Annual bluegrass	Swale	Jan-Apr	Common
<u>Poa bulbosa</u> L. Perennial bluegrass Bulbous bluegrass	Lawns and horse pasture	Mar-Jun	Rare
<u>Poa scabrella</u> (Thurb.) Benth. ex Vassey Pine bluegrass	Slope, esp. north	Apr-Jun	Common
<u>Polypogon monspeliensis</u> (L.) Desf. Rabbitfoot grass	Creekbed	Apr-Jul	Common
<u>Scribneria bolanderi</u> (Thurb.) Hack. Scribneria	Slope	May-Aug	Rare
<u>Setaria viridis</u> (L.) Beauv. Green bristlegrass	Gardens	May-Aug	Uncommon
<u>Sorghum halepense</u> (L.) Pers. Johnsongrass	Swale	May-Sep	Rare
<u>Stipa cernua</u> Steb. and Love Nodding stipa	Slope	Mar-Jun	Where seeded
<u>Stipa pulchra</u> Hitchc. California needlegrass Purple stipa	Slope, north	Mar-June	Where seeded
<u>Vulpia microstachys</u> (Nutt.) var. <u>ciliata</u> (Beal) Lonard & Gould (<u>Festuca grayi</u> [Abrams] Piper) Gray's fescue	Slope, esp. south	Feb-Apr	Common
<u>Vulpia microstachys</u> (Nutt.) Benth. var. <u>confusa</u> (Piper) Lonard & Gould (<u>Festuca confusa</u> Piper, <u>F. tracyi</u> Hitchc.) Hairy-leaved fescue	Slope	Feb-Apr	Uncommon
<u>Vulpia microstachys</u> (Nutt.) Benth. var. <u>pauciflora</u> (Beal) Lonard & Gould (<u>Festuca pacifica</u> Piper, <u>F. reflexa</u> Buckl.) Pacific fescue, Small fescue Reflexed fescue	Slope, esp. north	Feb-Apr	Uncommon

GRASSES AND GRASSLIKE PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Vulpia myuros</u> (L.) K.C. Gmel. var. <u>hirsuta</u> Hack. (<u>Festuca megalura</u> Nutt.) Foxtail fescue	Slope, all exposures and dry swale	Feb-Apr	Abundant
<u>Vulpia myuros</u> (L.) K.C. Gmel. var. <u>myuros</u> (<u>Festuca myuros</u> L.) Rattail fescue	Lower slope	Feb-Apr	Uncommon
<u>Vulpia octoflora</u> (Walt.) Rydb. Six-weeks fescue	Slope	Feb-Apr	Rare
<u>CYPERACEAE</u> Sedge family			
<u>Carex buxbaumii</u> Wahl. Carex	Creekbed	Apr-June	Rare
<u>Cyperus aristatus</u> Rottb. (<u>Cyperus inflexus</u>) Muhl.) Flatsedge, Awned cyperus	Creekbed	Mar-May	Uncommon
<u>Cyperus eragrostis</u> Lam. (<u>Cyperus vegetus</u> Willd, <u>Cyperus virens</u> Michx.) Green flatsedge, Tall cyperus	Creekbed	Jun-Aug	Uncommon
<u>Heleocharis palustris</u> (L.) R. & S. (<u>H. macrostachya</u> Britton) Spike sedge, spike rush	Wet swale, creekbed	Apr-Jun	Common
<u>JUNCACEAE</u> Rush family			
<u>Juncus bufonius</u> L. Toad rush	Dry swale	Feb-Apr	Common
<u>Juncus dubius</u> Engelm. Slender-leaf rush	Wet swale	Apr-Jul	Common
<u>Juncus macrophyllus</u> Coville Long-leaved rush	Wet swale	May-Aug	Common
<u>Juncus oxymiris</u> Engelm. Pointed rush	Wet swale	Jun-Aug	Uncommon

LILIACEOUS PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>AMARYLLIDACEAE</u> Amaryllis Family			
<u>Allium hyalinum</u> Curran Paper-flowered onion	Slope	Mar-May	Uncommon
<u>Brodiaea elegans</u> Hoov. (<u>Brodiaea coronaria</u> [Salisb. Engler])	Swale and lower slope	Apr-Jul	Common
<u>Dichelostemma pulchella</u> Heller. (<u>Brodiaea pulchella</u> [Salisb.] Greene. <u>Brodiaea capitata</u> Benth.) Blue dicks, Common brodiaea, Wild hyacinth	Slope	Apr-Jul	Very common
<u>Dichelostemma californicum</u> (Torr.) Wood, (<u>Brodiaea volubilis</u> [Kell.] Baker) Snake-lily, twining brodiaea	Steep rocky slope	May-Jul	Uncommon
<u>Muilla maritima</u> (Torr.) Wats. (<u>Muilla tenuis</u> Congdon) Muilla	Slope	Mar-May	Uncommon
<u>Triteleia laxa</u> Benth. (<u>Brodiaea laxa</u> [Benth.] Wats) Grassnut brodiaea, Ithuriel's spear	Slope	May-Jul	Uncommon
<u>Triteleia ixioides</u> Greene (<u>Brodiaea lutea</u> [Lindl.] Mort. Golden brodiaea, Pretty face	Slope	Apr-Jun	Uncommon
<u>LILIACEAE</u> Lily family			
<u>Calochortus luteus</u> Dougl. ex Lindl. Yellow mariposa	Slope	Apr-Jun	Uncommon
<u>Calochortus vestae</u> Purdy (<u>Calochortus luteus</u> var. <u>oculatus</u> Wats.) Mariposa lily	Slope	May-Jul	Uncommon
<u>Calochortus superbus</u> Purdy ex J. T. Howell Mariposa lily	Slope	May-Jul	Uncommon
<u>Chlorogalum pomeridianum</u> (DC.) Kunth. Soapplant Amole	Rock outcrop, lower slope	May-Aug	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>RANUNCULACEAE</u> Buttercup family			
<u>Delphinium hanseni</u> Greene Hansen larkspur	Shaded lower slope	Apr-May	Common
<u>Delphinium patens</u> Benth. (<u>D. decorum</u> var. <u>patens</u> Gray) Yellow tinge larkspur Coast larkspur	Slope, esp. north	Apr-May	Uncommon
<u>Ranunculus aquatilis</u> L. var. <u>hispidulus</u> E. Drew Water buttercup	Creek	Mar-May	Common
<u>Ranunculus californicus</u> Benth. California buttercup	Wet swale	Mar-Apr	Common
<u>Ranunculus hebecarpus</u> Hook. and Arn. Pubescent-fruit buttercup	Shady slope	Mar-Apr	Uncommon
<u>MALVACEAE</u> Mallow family			
<u>Malva parviflora</u> L. Little mallow, Cheeseweed	Disturbed soil	Feb-Apr	Uncommon
<u>Sidalcea hartwegii</u> Gray Checkermallow	Lower slope and swale	Mar-May	Common
<u>GERANIACEAE</u> Geranium family			
<u>Erodium botrys</u> Bertol. Broadleaf filaree Big heronbill	Slope and dry swale	Feb-May	Abundant
<u>Erodium cicutarium</u> L'Her Redstem filaree, Alfilaria, Fineleaf filaree	Lower slope	Feb-May	Common
<u>Erodium obtusiplicatum</u> (Maire, Weiller and Wilczek) J.T. Howell (<u>E. botrys</u> f. <u>montanum</u> Brumhard) Broadleaf filaree, Big heronbill Foothill filaree	Slope	Feb-May	Very common
<u>Erodium moschatum</u> L'Her. Whitestem filaree	Lower slope	Feb-May	Uncommon

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Geranium carolinianum</u> L. Carolina geranium	Lower slope	Mar-Apr	Uncommon
<u>Geranium dissectum</u> L. (<u>G. laxum</u> Hanks) Geranium	Lower slope	Mar-Apr	Uncommon
<u>OXALIDACEAE</u> Oxalis Family			
<u>Oxalis corniculata</u> L. Creeping oxalis Woodsorrel	Gardens and shaded slope	Mar-Sep	Uncommon
<u>Oxalis pes-caprae</u> L. Bermuda buttercup	Gardens	Mar-Jul	Uncommon
<u>LIMNANTHACEAE</u> Meadowfoam family			
<u>Limnanthes douglasii</u> R. Br. Douglas meadowfoam	Creekbank	Mar-May	Common
<u>Limnanthes montana</u> Jeps. Mountain meadowfoam	Creekbank, seeps	Mar-May	Uncommon
<u>LINANCEAE</u> Flax family			
<u>Linum usitatissimum</u> L. Common flax	Slope	May-Jun	Uncommon
<u>ZYGOPHYLLACEAE</u> Caltrops family			
<u>Tribulus terrestris</u> L. Puncturevine, Goathead	Disturbed soil	Jun-Oct	Rare
<u>EUPHORBIACEAE</u> Spurge family			
<u>Eremocarpus setigerus</u> (Hook.) Benth. Turkey mullein, Doveweed	Lower slope and swale	Jun-Sep	Common
<u>Euphorbia ocellata</u> D. & H. Euphorbia	Slope	Apr-Jul	Common
<u>Euphorbia supina</u> Raf. Spotted spurge	Gardens and road-sides	Apr-Jul	Uncommon
<u>DATISCEAE</u> Dastica family			
<u>Datisca glomerata</u> (Presl.) Baill. Durango root	Creekbank	May-Aug	Rare

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>LOASACEAE</u> Loasa family			
<u>Mentzelia lindleyi</u> T. & G. ssp. <u>crocea</u> (Kell.) C.B. Wolf Lindley's mentzelia	Slope, esp. south	Apr-May	Rare
<u>PAPAVERACEAE</u> Poppy family			
<u>Eschscholzia caespitosa</u> Benth. Gold poppy	Slope, esp. south	Mar-May	Uncommon
<u>Eschscholzia californica</u> Cham. California poppy	Slope, esp. south	Mar-May	Uncommon
<u>Eschscholzia lobbii</u> Greene Fryingpan poppy	Slope	Mar-Apr	Common
<u>Platystemon californicus</u> Benth. Creamcups platystemon	Lower slopes	Mar-Apr	Common
<u>Stylomecon heterophylla</u> Benth. (<u>Papaver heterophyllum</u> Greene) Wind poppy	Shady north slope	Apr-May	Uncommon
<u>CRUCIFERAE</u> Mustard family			
<u>Arabis sparsiflora</u> (Nutt.) in T. & G. var. <u>arcuata</u> (Nutt.) Roll. Rockcress	Rocky slope or rock crack	Mar-May	Uncommon
<u>Athysanus pusillus</u> (Hook.) Dwarf athysanus	Slope	Mar-Apr	Common
<u>Brassica geniculata</u> (Desf.) J. Ball Shortpod mustard	Disturbed area	Feb-Apr	Uncommon
<u>Brassica kaber</u> (D.C.) Wheeler (<u>Sinapis kaber</u> DC.) Charlock	Disturbed area	Feb-Apr	Uncommon
<u>Capsella bursa-pastoris</u> (L.) Medic. Shepherdspurse	Slope	Feb-May	Common
<u>Cardamine oligosperma</u> Nutt. Bittercress	Swale	Mar-Apr	Rare
<u>Caulanthus coulteri</u> Wats. (<u>Streptanthus coulteri</u> Greene) Twist flower	Slope	Mar-Apr	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Draba verna</u> L. Whitlow-grass	Swale	Mar-Apr	Uncommon
<u>Lepidium nitidum</u> Nutt. Peppergrass, Tongue pepperweed	Swale	Mar-May	Common
<u>Lepidium oblongum</u> Small. Wayside pepper-grass	Creekbank or swale	Mar-May	Rare
<u>Nasturtium officinale</u> R. Br. (<u>Radicula nasturtium-aquaticum</u> [L.] Britt. and Rendle) Watercress	Seep	Mar-Jun	Uncommon
<u>Sisymbrium irio</u> L. (<u>Norta irio</u> Britt.) London-rocket	Disturbed areas	Feb-May	Rare
<u>Streptanthus diversifolius</u> Wats. Varied-leaved streptanthus	Slope	Apr-May	Uncommon
<u>Streptanthus heterophyllus</u> Nutt. San Diego streptanthus	Slope	Mar-Apr	Uncommon
<u>Streptanthus tortuosus</u> Kell. Mountain streptanthus	Slope	Apr-May	Uncommon
<u>Thysanocarpus curvipes</u> Hook. Hairy fringe-pod	Slope	Feb-Apr	Common
<u>Thysanocarpus curvipes</u> var. <u>elegans</u> (F. & M.) Rob. in Gray Lace pod	Slope	Feb-Apr	Common
<u>Thysanocarpus curvipes</u> var. <u>longistylis</u> Jeps. Lace pod	Slope	Feb-Apr	Uncommon
<u>Tropidocarpum gracile</u> Hook. Dobie pod	Slope	Mar-Apr	Common
<u>CARYOPHYLLACEAE</u> Pink family			
<u>Arenaria californica</u> (Gray) Brew.	Gravelly areas	Apr-May	Rare
<u>Arenaria douglasii</u> Fenzl. ex T. & G. Douglas sandwort	Gravelly areas or rock cracks	Apr-May	Uncommon
<u>Cerastium viscosum</u> L. Sticky cerastium Mouse-ear chickweed	Lower slope	Feb-Apr	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Herniaria cinerea</u> DC. Gray burdickwort, Gray herniaria	Slope	Mar-Apr	Uncommon
<u>Polycarpon tetraphyllum</u> (L.) L. Four-leaved Polycarp	Waste places	Apr-Jun	Uncommon
<u>Sagina apetala</u> Ard. var. <u>barbarta</u> Fenzl. Dwarf pearlwort	Slope	Mar-Apr	Uncommon
<u>Silene gallica</u> L. Windmill pink, common catchfly	Slope	Mar-Apr	Very common
<u>Spergula arvensis</u> L. Corn spurry	Lower slope and dry swale	Apr-Jul	Uncommon
<u>Spergularia marina</u> (L.) Griseb. (<u>S. salina</u> J. & C.) Saltmarsh sand spurry	Lower slope	May-Sep	Uncommon
<u>Stellaria media</u> (L.) Cyrill. Chickweed	Lower slope	Feb-Apr	Common
<u>Stellaria nitens</u> Nutt. Shining chickweed	Swale or creekbank	Feb-Apr	Rare
<u>Stellaria longipes</u> Goldie Starwort	Seep or creekbank	Apr-May	Rare
<u>PORTULACACEAE</u> Purslane family			
<u>Calandrinia ciliata</u> (R. & P.) DC. var. <u>menziesii</u> (Hook.) Macbr. (<u>Calandrinia caluescens</u> <u>menziesii</u> Gray) Redmaids	Slope	Feb-May	Very common
<u>Montia verna</u> Neck. (<u>Montia fontana</u>) Water chickweed, Indian lettuce	Wet swale or seep	Feb-Apr	Common
<u>Montia perfoliata</u> (Donn.) Howell Miners' lettuce, Indian lettuce	Shaded slope	Feb-Apr	Common
<u>Portulaca oleracea</u> L. Common purslane	Gardens	May-Aug	Uncommon
<u>AIZOACEAE</u> Carpetweed family			
<u>Mollugo verticillata</u> L. Carpetweed, Indian chickweed	Seep and lower slope	Apr-Jul	Uncommon

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>POLYGONACEAE</u> Buckwheat family			
<u>Chorizanthe membranacea</u> Benth. Pink chorizanth Spineflower	Slope on shallow soil	Apr-May	Common
<u>Chorizanthe stellulata</u> Benth. Starlet chorizanth Spineflower	Slope, on shallow soil	Apr-May	Common
<u>Eriogonum gracillimum</u> Wats. Slender eriogonum	Slope	May-Jul	Uncommon
<u>Eriogonum latifolium</u> Sm. ssp. <u>nudum</u> (Dougl. ex Benth.) S. Stokes Barestem eriogonum	Slope	May-Jul	Uncommon
<u>Eriogonum virgatum</u> Benth. Virgate eriogonum	Slope	May-Jul	Common
<u>Polygonum aviculare</u> L. Knotweed, Prostrate knotweed	Barnyard and gardens	May-Jul	Uncommon
<u>Polygonum punctatum</u> Elliot (<u>Polygonum acre</u> H.B.K.) Water smartweed Dotted smartweed	Creekbed	May-Aug	Uncommon
<u>Pterostegia drymarioides</u> Fisch. and Mey. Pterostegia	Shaded slope	Mar-May	Common
<u>Rumex crispus</u> L. Curly dock	Creekbed	Mar-July	Common
<u>CHENOPODEACEAE</u> Goosefoot family			
<u>Chenopodium album</u> L. Lambsquarters goosefoot Pigweed	Disturbed soil	May-Aug	Uncommon
<u>Chenopodium ambrosioides</u> <u>chilense</u> (Schrad.) Spegaz. Wormseed goosefoot, Pigweed	Disturbed soil	May-Aug	Uncommon
<u>Chenopodium leptophyllum</u> Nutt. Slimleaf goosefoot	Disturbed soil	May-Aug	Common
<u>Chenopodium pumilio</u> R. Br. Goosefoot	Disturbed soil	May-Aug	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>AMARANTHACEAE</u> Amaranth family			
<u>Amaranthus alba</u> L. (<u>A. graezicans</u> L.) Tumbling pigweed	Disturbed soil, vernal pool	May-Aug	Uncommon
<u>Amaranthus retroflexus</u> L. Rough pigweed Redroot amaranthus	Disturbed soil	May-Aug	Uncommon
<u>PRIMULACEAE</u> Primrose family			
<u>Anagalis arvensis</u> L. Scarlet pimpernel	Creekbank, gardens	Mar-May	Uncommon
<u>Dodecatheon clevelandii</u> Greene ssp. <u>patulum</u> (Greene) H.J. Thomps. Dwarf shootingstar	Shaded slope	Feb-Apr	Uncommon
<u>Dodecatheon hanseni</u> (Greene) H.J. Thomps. Shootingstar	Shaded slope	Feb-Apr	Uncommon
<u>PLANTAGINACEAE</u> Plantain family			
<u>Plantago hookeriana</u> F. & M. var. <u>californica</u> (Greene) Poe (<u>Plantago erecta</u> Morris) Dotseed plantain	Slope	Feb-Apr	Very common
<u>GENTIANACEAE</u> Gentian family			
<u>Centaurium venustum</u> (Gray) Rob. Pink centaurium	Dry swale	May-Jul	Common
<u>ASCLEPIADACEAE</u> Milkweed family			
<u>Asclepias cordifolia</u> (Benth.) Jepson Purple milkweed	Slope	May-Jun	Uncommon
<u>Asclepias fascicularis</u> Dcne. in DC. (<u>A. mexicana</u> auth., not Cav.) Mexican milkweed	Dry swale or lower slope	May-Jul	Uncommon
<u>Asclepias vestita</u> Hook. and Arn. Woolly milkweed	Slope	May-Jun	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>POLEMONIACEAE</u> Phlox family			
<u>Eriastrum pluriflorum</u> (Heller) H.L. Mason (<u>Gilia brauntonii</u> Jepson and Mason) Many-flowered eriastrum	Slope on shallow soil	Apr-Jun	Uncommon
<u>Gilia capitata</u> Sims. Globe gilia	Slope	Mar-Apr	Uncommon
<u>Gilia tricolor</u> Benth. Birdseye gilia	Slope	Mar-Apr	Very common
<u>Linanthus bicolor</u> (Nutt.) Greene Bicolored linanthus	Slope	Apr-May	Common
<u>Linanthus ciliatus</u> (Benth.) Greene Bristly-leaved linanthus	Slope	Apr-May	Common
<u>Linanthus dichotomus</u> Benth Eveningsnow linanthus	Slope, esp. north	Apr-May	Uncommon
<u>Linanthus filipes</u> (Benth.) Greene Filiform linanthus	Slope, on shallow soil	Apr-May	Common
<u>Linanthus serrulatus</u> Green Madera linanthus	Slope, esp. north	Apr-May	Uncommon
<u>Navarretia heterandra</u> Mason Tehama navarretia	Dried seep	May-Jun	Uncommon
<u>Navarretia pubescens</u> (Benth.) Hook. and Arn. Downy navarretia	Shaded slope, esp. north	Apr-Jun	Uncommon
<u>Navarretia viscidula</u> Benth. Sticky navarretia	Slope, on shallow soil	Apr-Jun	Common
<u>HYDROPHYLLACEAE</u> Phacelia family			
<u>Nemophila heterophylla</u> F. & M. Small white nemophila	Shaded slope or rock base, or creekbank	Mar-May	Common
<u>Nemophila maculata</u> Benth. Fivespot nemophila Spotted nemophila	Creekbank	Mar-Apr	Uncommon
<u>Nemophila menziesii</u> Hook. & Arn. Baby blue-eyes	Lower slope	Mar-Apr	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Phacelia californica</u> Cham. California phacelia	Rock outcrop	Mar-May	Uncommon
<u>Phacelia cicutaria</u> Greene var. <u>hispida</u> Gray Caterpillar phacelia	Rock outcrop	Mar-Apr	Common
<u>Phacelia imbricata</u> Greene Phacelia	Rocky places	Mar-May	Uncommon
<u>Phacelia platyloba</u> Gray Broadlobed phacelia	Shaded slope	Mar-May	Uncommon
<u>Phacelia tanacetifolia</u> Benth. Fiddleneck phacelia	Rock outcrop	Mar-May	Uncommon
<u>Pholistoma auritum</u> (Lindl.) Lilja. (<u>Nemophila aurita</u> Lindl.) Purple nemophila, Fiesta flower Climbing nemophila	Shaded slope	Mar-Apr	Uncommon
<u>BORAGINACEAE</u> Borage family			
<u>Amsinckia eastwoodae</u> Ray & Shisaki Eastwood's fiddleneck	Slope	Feb-Apr	Common
<u>Amsinckia intermedia</u> F. & M. Fiddleneck	Slope	Feb-Apr	Uncommon
<u>Amsinckia menziessi</u> (Lehm.) Nels. & Macbr. (<u>A. retrosa</u> Suksd) Menzies' fiddleneck Rigid fiddleneck	Lower slope	Feb-Apr	Rare
<u>Cryptantha flaccida</u> (Dougl) Greene Cryptantha	Slope	Mar-May	Common
<u>Cryptantha hooveri</u> I.M. Johnston Hoover's cryptantha	Slope	Mar-May	Uncommon
<u>Heliotropium curassavicum</u> Salt heliotrope	Disturbed soil	May-Jul	Rare
<u>Pectocarya penicillata</u> (H. & A.) A. DC. Pectocarya	Gravelly places, seep, vernal pools	Mar-Apr	Rare
<u>Plagiobothrys acanthocarpus</u> (Piper) Jtn. Plagiobothrys, adobe allocarya	Vernal pools	Mar-Apr	Rare

BROADLEAVED PLANTS/FORBES

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Plagiobothrys canescens</u> Benth. Valley popcorn flower	Lower slope, dry swale	Mar-Apr	Uncommon
<u>Plagiobothrys distantiflorus</u> (Piper) Jtn. Plagiobothrys	Creekbanks, vernal pools	Mar-May	Rare
<u>Plagiobothrys hispidula</u> (Greene) Harsh allocarya	Wet places, small vernal pools	Mar-May	Rare
<u>Plagiobothrys nothofulvus</u> (Gray) Popcorn flower, Snow drops Redstain popcornflower	Slope and dry swale	Feb-Apr	Very common
<u>Plagiobothrys tenellus</u> Gray Slender popcorn flower	Slope, on shallow soil	Feb-Apr	Common
<u>Plagiobothrys trachycarpus</u> (Gray) Jtn. (<u>Allocarya trachycarpa</u> [Gray])	Wet swale	Mar-Jun	Uncommon
<u>Plagiobothrys stipitatus</u> (Greene) Jtn. Stipitate allocarya	Wet swale, vernal pool	Mar-Jun	Uncommon
<u>Plagiobothrys undulatus</u> (Piper) Jtn. Coast allocarya	Vernal pool	Mar-Jun	Rare
<u>SOLANACEAE</u> Nightshade family			
<u>Datura inoxia</u> Miller (<u>Datura meteloides</u> DC.) Tolgaucha, Thorn-apple	Disturbed soil	May-Aug	Uncommon
<u>Nicotiana attentuata</u> Torr. Coyote tobacco	Disturbed soil or	Jun-Sep	Uncommon
<u>Solanum nigrum</u> L. Black nightshade	Lower slope	Jun-Sep	Rare
<u>Solanum xanthii</u> Gray Purple nightshade	Lower slope	Jun-Sep	Uncommon
<u>SCROPHULARIACEAE</u> Figwort family			
<u>Antirrhinum cornutum</u> Benth. Spurred snapdragon	Slope, esp. south	Apr-Jun	Uncommon
<u>Collinsia bartsiaefolia</u> Benth. Seaside collinsia	Slope	Mar-Apr	Uncommon

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Collinsia heterophylla</u> Buist. ex Grah. (<u>Collinsia bicolor</u> Benth) Chinese houses, Pagoda collinsia	Shaded slope	Mar-May	Common
<u>Collinsia tinctoria</u> Hartw. Sticky Chinese houses Brownstain collinsia	Shaded creekbank	Apr-May	Uncommon
<u>Cordylanthus compactus</u> Pennell Muleweed	Rocky slope	Jun-Aug	Uncommon
<u>Linaria canadensis</u> (L.) Dum.-Cours. var. <u>texana</u> (Scheele) Penn. Toadflax	Lower slope	Mar-May	Rare
<u>Mimulus bolanderi</u> Gray Tobacco mimulus	Shaded slope	Apr-Jun	Uncommon
<u>Mimulus douglasii</u> (Benth. in DC.) Gray Dwarf monkey-flower	Creekbank	Apr-May	Rare
<u>Mimulus floribundus</u> Dougl. Floriferous monkey-flower	Wet swale	Mar-May	Uncommon
<u>Mimulus guttatus</u> Fisch. ex DC. Common monkey-flower	Wet swale	Mar-Jul	Common
<u>Mimulus layneae</u> (Greene) Jeps. Layne's monkeyflower	Rock crack	Apr-May	Rare
<u>Mimulus nanus</u> Hook. and Arn. Dwarf monkeyflower	Slope	Apr-May	Uncommon
<u>Mimulus pilosus</u> (Benth.) Wats. Downy mimulus	Lower slope	Apr-May	Uncommon
<u>Mimulus viscidus</u> Congdon. Viscid monkeyflower	Slope, esp. base of rocks	Apr-Jun	Uncommon
<u>Orthocarpus attenuatus</u> Gray Valley tassels	Slope	Mar-May	Common
<u>Orthocarpus erianthus</u> Benth. var. <u>micranthus</u> (Gray) Jeps. Johnnytuck, Butter-and-eggs	Slope	Mar-Apr	Uncommon
<u>Orthocarpus linearilobus</u> Benth. Pallid owlclover	Slope	Apr-May	Uncommon
<u>Orthocarpus purpurascens</u> Benth. Common owlclover	Slope	Mar-Apr	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Scrophularia californica</u> Cham. & Sch. var. <u>floribunda</u> Greene California figwort	Rock outcrop	Mar-Apr	Uncommon
<u>Verbascum blattaria</u> L. Moth mullein	Lower slope	May-Aug	Rare
<u>Veronica peregrina</u> L. ssp. <u>xalapensis</u> (HBK.) Penn. Purslane speedwell	Lower slope, swale	Apr-Jun	Uncommon
<u>VERBENACEAE</u> Verbena family			
<u>Verbena lasiostachys</u> Link. (<u>Verbena prostrata</u> R. Br.) Western verbena	Slope	Jun-Aug	Uncommon
<u>LABIATAE</u> Mint family			
<u>Marrubium vulgare</u> L. Common hoarhound	Disturbed soil	Apr-Jun	Uncommon
<u>Monardella candicans</u> Benth. Sierra monardella	Swale	May-Jun	Common
<u>Monardella lanceolata</u> Gray Mustang mint	Swale	Apr-Jun	Uncommon
<u>Pogogyne douglasii</u> Benth. Douglas pogogyne	Swale	Apr-May	Common
<u>Salvia carduacea</u> Benth. Thistle sage	Slope	Apr-May	Common
<u>Salvia columbariae</u> Benth. California chia	Shaded slope	Mar-Apr	Uncommon
<u>Scutellaria bolanderi</u> Gray Bolander's skullcap	Wet swale and seeps	Apr-May	Uncommon
<u>Scutellaria tuberosa</u> Benth. Tuberous skullcap	Shaded slope	Apr-May	Uncommon
<u>Stachys albens</u> Gray Whitesedge nettle	Seeps	Apr-Jun	Uncommon
<u>Trichostema lanceolatum</u> Benth. Vinegar bluecurls	Slope	Jul-Sep	Common
<u>Trichostema oblongum</u> Benth. Mountain bluecurls	Swale	May-Jul	Uncommon

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>CRASSULACEAE</u> Stonecrop family <u>Tillaea erecta</u> Hook. and Arn. Sand pygmyweed	Slope, shallow soil	Feb-Apr	Very common
<u>SAXIFRAGACEAE</u> Saxifrage family			
<u>Lithophragma heterophylla</u> (H. & A.) T. & G. Hillstar	Shady north slope	Mar-Apr	Common
<u>Saxifraga californica</u> Greene California saxifrage	Slope, esp. north	Mar-Apr	Uncommon
<u>Saxifraga oregana</u> Howell (<u>Saxifraga integrifolia</u> Hook.) Hooker's saxifrage	Slope, esp. north	Mar-Apr	Uncommon
<u>ROSACEAE</u> Rose family			
<u>Alchemilla occidentalis</u> Nutt. Western ladysmantle Field ladysmantle	Slope	Mar-Apr	Common
<u>FABACEAE</u> Pea family			
<u>Astragalus asymmetricus</u> Sheldon Woolyleaf loco San Joaquin locoweed	Slope	May-Jun	Rare
<u>Astragalus gambellianus</u> Sheldon Gambel's dwarf locoweed	Slope, esp. south	Mar-Apr	Common
<u>Lotus argophyllus</u> (Gray) Greene Silver deervetch	Slope	Apr-Jun	Uncommon
<u>Lotus purshianus</u> (Benth.) Clem. & Clem. (<u>Lotus americanus</u> [Nutt.] Bisch.) Spanish clover, deervetch	Lower slope	Apr-Aug	Very common
<u>Lotus micranthus</u> Benth. Little flower deervetch	Slope	Apr-May	Uncommon
<u>Lotus scoparius</u> (Nutt.) Ottley Deerweed, Broom deervetch	Slope, esp. north	Apr-June	Uncommon
<u>Lotus strigosus</u> (Nutt.) Greene Fine-leaved deervetch	Slope, esp. south	Mar-May	Common
<u>Lotus subpinnatus</u> Lag. Chilean deervetch Hairy lotus	Slope	Mar-May	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Lupinus benthamii</u> Hel. Bentham's lupine, Spider lupine	Slope	Mar-Apr	Common
<u>Lupinus bicolor</u> Lindl. Bicolor lupine, Ground lupine	Slope	Mar-Apr	Very common
<u>Lupinus densiflorus</u> Benth. Dense-flowered lupine Gully lupine	Slope	Mar-Apr	Uncommon
<u>Lupinus formosus</u> Greene Summer lupine	Slope	Apr-June	Common
<u>Lupinus nanus</u> Dougl Sky lupine	Slope	Apr-May	Uncommon
<u>Medicago apiculata</u> Willd. Smoothbur medic	Lower slope and dry swale	May-June	Uncommon
<u>Medicago hispida</u> Gaertn. California burclover	Lower slope and dry swale	Mar-June	Uncommon
<u>Melilotus indica</u> (L.) All. Yellow sweet clover	Lower slope and dry swale	Mar-May	Uncommon
<u>Trifolium albopurpureum</u> Torr. & Gray Indian clover, Rancheria clover	Slope	Apr-May	Uncommon
<u>Trifolium amplexens</u> Torr. & Gray Bladder clover, pale sack clover	Slope	Mar-Apr	Uncommon
<u>Trifolium ciliolatum</u> Benth. (<u>Trifolium ciliatum</u> Nutt.) Foothill clover, Tree clover	Lower slope	Mar-May	Common
<u>Trifolium depauperatum</u> Desv. Depauperate clover Dwarf sack clover	Slope	Mar-May	Uncommon
<u>Trifolium dichotomum</u> Hook. & Arn. Branched Indian clover	Slope, esp. north	Mar-May	Uncommon
<u>Trifolium hirtum</u> All. Rose clover	Lower slope and nursery	Apr-May	Uncommon
<u>Trifolium microcephalum</u> Pursh. Littlehead clover	Slope	Mar-May	Very common

BROADLEAVED PLANTS/FORBES

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Trifolium obtusiflorum</u> Hook. Clammy clover, creek clover	Creekbed or bank	Apr-Jun	Uncommon
<u>Trifolium procumbens</u> Hop clover	Nursery, where planted	Apr-May	Rare
<u>Trifolium subterraneum</u> Subterranean clover	Slope or dry swale	Apr-May	Where seeded
<u>Trifolium tridentatum</u> Lindl. Tomcat clover	Lower slope	Apr-Jun	Common
<u>Trifolium variegatum</u> Nutt. Whitetip clover	Wet swale	Mar-May	Very common
<u>Vicia villosa</u> Roth Winter vetch	Lower slope, nursery	Apr-May	Uncommon
<u>LYTHRACEAE</u> Loosestrife family			
<u>Lythrum hyssipifolia</u> L. Loosestrife, Hyssop lythrum	Swale, esp. on disturbed soil	May-June	Common
<u>ONAGRACEAE</u> Evening primrose family			
<u>Boisduvalia densiflora</u> (Lindl.) Wats. Dense spikeprimrose	Swale	Apr-June	Uncommon
<u>Boisduvalia stricta</u> (Gray) Greene Brook spikeprimrose	Swale	Apr-June	Uncommon
<u>Camissonia graciliflora</u> Raven (<u>Oenothera graciliflora</u> Hook. & Arn.) Slender primrose	Lower slope	Apr-May	Common
<u>Clarkia cylindrica</u> (Jeps.) Lewis & Lewis Clarkia	Lower slope	May-June	Uncommon
<u>Clarkia dudleyana</u> (Abrams) Macbr. (<u>Godetia dudleyana</u> Abrams) Dudley's godetia	Slope, esp. north	May-June	Common
<u>Clarkia nitens</u> Lewis & Lewis Clarkia	Slope	May-June	Common
<u>Clarkia purpurea</u> (Curt.) Nels. & Macbr. ssp. <u>quadrivulnera</u> (Dougl.) Lewis & Lewis Clarkia	Slope	May-June	Uncommon

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<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Clarkia unguiculata</u> Lindl. (<u>Clarkia elegans</u> Dougl.) Rose clarkia	Slope, esp. north	May-Jun	Common
<u>Clarkia williamsonii</u> (Dur. & Hilg.) Lewis & Lewis (<u>Godetia viminea</u> Jeps.) Orchid godetia	Slope, esp. north	May-Jun	Common
<u>Epilobium paniculatum</u> Nutt. Panicked willow-herb	Slope	May-Jun	Uncommon
<u>Oenothera contorta</u> Dougl. ex Hook. var. <u>epiloboides</u> (Greene) Munz Contorted primrose	Slope	May-Jun	Uncommon
<u>Oenothera dentata</u> Cav. Field primrose	Slope, esp. south	May-Jun	Common
<u>CALLITRICHACEAE</u> Callitriche family			
<u>Callitriche marginata</u> Torr. Callitriche, water starwort	Seeps, vernal pools	Apr-June	Uncommon
<u>UMBELLIFERAE</u> Carrot family			
<u>Daucus pusillus</u> Michx. Rattlesnake weed	Slope	Apr-June	Common
<u>Eryngium vaseyi</u> Coult. & Rose var. <u>globosum</u> (Jeps.) Munz Coyote thistle, Star parsley Button snakeweed	Swale	May-July	Common
<u>Lomatium utriculatum</u> (Nutt.) Coult. & Rose. Common lomatium	Slope, esp. north	Apr-May	Uncommon
<u>Perideridia pringlei</u> (Coult. & Rose) Nels. & Macbr. Pringle's Yampah	Slope	May-Jun	Rare
<u>Sanicula bipinnatifida</u> Dougl. Purple sanicle	Slope	Apr-May	Common
<u>Sanicula tuberosa</u> Torr. Tuber sanicle, Turkey pea	Rock outcrop or gravelly places	Mar-Apr	Common

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>RUBIACEAE</u> Madder family			
<u>Galium aparine</u> L. Catchweed bedstraw	Shaded slope or swale	Mar-Apr	Common
<u>Galium nuttallii</u> Gray Nuttall bedstraw	Shaded slope or swale	Mar-Apr	Uncommon
<u>VALERIANACEAE</u> Valerian family			
<u>Plectritis ciliosa</u> (Greene) Jepson Plectritis	Shady lower slope	Mar-Apr	Common
<u>Plectritis macrocera</u> T. & G. Longhorn plectritis	Shady lower slope	Mar-Apr	Uncommon
<u>CUCURBITACEAE</u> Gourd family			
<u>Marah horridus</u> (Congd.) S.T. Dunn. Wild cucumber, Mock cucumber Man-root	Slope, climbing on shrubs	Mar-June	Common
<u>CAMPANULACEAE</u> Bellflower family			
<u>Downingia bicornuta</u> Gray Downingia	Wet swale	Mar-May	Uncommon
<u>Githopsis specularioides</u> Nutt. Githopsis	Slope	Apr-Jun	Uncommon
<u>Nemacladus interior</u> (Munz) Robbins (<u>Nemacladus rigidus</u> var. <u>interior</u> Munz) Nemacladus	Lower slope or	May-Jun	Uncommon
<u>ASTERACEAE</u> Sunflower family			
<u>Achillea lanulosa</u> Nutt. Western yarrow	Lower slope	May-Jul	Uncommon
<u>Agoseris heterophylla</u> (Nutt.) Greene Annual agoseris Mountain dandelion	Slope	Mar-Jun	Common
<u>Anaphalis margaritacea</u> (L.) B. & H. Common pearl everlasting	Rocky slope	Apr-Jun	Common
<u>Balsamorhiza deltoidea</u> Nutt. Balsamroot	North slope	Mar-May	Rare

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Bidens frondosa</u> L. Devils beggarticks	Lower slope	Apr-Jun	Uncommon
<u>Brickellia californica</u> (T. & G.) California brickellia	Rocky slope	May-Jul	Uncommon
<u>Calycadenia mollis</u> Gray Rosinweed	Slope	May-June	Common
<u>Calycadenia multiglandulosa</u> DC. ssp. <u>bicolor</u> (Greene) Keck Rosinweed	Slope	May-Jul	Common
<u>Calycadenia villosa</u> DC. Rosinweed	Slope	Jun-Aug	Uncommon
<u>Centaurea melitensis</u> L. Napa thistle, Tocalote	Slope	May-Aug	Common
<u>Centaurea solstitialis</u> L. Yellow starthistle	Slope	May-Aug	Uncommon
<u>Chaenactis glabriuscula</u> DC. var. <u>megacephala</u> Gray Chaenactis	Slope	Apr-Jun	Common
<u>Chaetopappa exilis</u> (Gray) Keck. (<u>Pentachaeta exilis</u> Gra) Pentachaeta	Slope, on shallow soil	May-Jun	Common
<u>Cirsium occidentale</u> (Nutt.) Jepson (<u>Cirsium coulteri</u> Harv. & Gray) Western thistle	Slope	Apr-Jun	Common
<u>Conyza canadensis</u> (L.) Cronq. (<u>Erigeron canadensis</u> L.) Horseweed fleabane	Disturbed soil	May-Jul	Uncommon
<u>Coreopsis bigelovii</u> (Gray) Hall Bigelow coreopsis	Shaded slope	May-Jun	Rare
<u>Coreopsis douglasii</u> (DC.) Hall Douglas coreopsis	Shaded slope	May-Jun	Uncommon
<u>Coreopsis stillmanii</u> (Gray) Stillman coreopsis	Shaded slope	May-June	Uncommon
<u>Cotula australis</u> (Sieber) Hook. Southern brassbuttons	Yards and waste places	Mar-Jul	Uncommon

BROADLEAVED PLANTS/FORBS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>Silybum marianum</u> (L.) Gaertn. Milkthistle	Creekbank	Apr-Jun	Rare
<u>Sonchus asper</u> L. Sow thistle	Wet area	Apr-May	Uncommon
<u>Stephanomeria pauciflora</u> (Torr.) Nels. Wirelettuce	Slope	May-Jul	Uncommon
<u>Xanthium strumarium</u> L. var. <u>canadense</u> (Mill.) T. & G. Cocklebur	Creekbank, creekbed wet swale	Jul-Oct	Uncommon

WOODY PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>PINACEAE</u> Pine family			
<u>Pinus sabiniana</u> Dougl Digger pine	Slope	Mar-Apr	Very common
<u>STERCULIACEAE</u> Cacao family			
<u>Fremontodendron californicum</u> Cov. (<u>Fremontia californica</u> Torr.) Fremontia, Flannel bush	Planted native	Mar-May	Rare
<u>ERICACEAE</u> Heath family			
<u>Arctostaphylos mariposa</u> Dudley Mariposa manzanita	Rocky slope	Feb-Apr	Common
<u>OLEACEAE</u> Olive family			
<u>Fraxinus latifolia</u> Benth. (<u>Fraxinus oregona</u> Nutt.) Oregon ash	Riparian	Apr-May	Uncommon
<u>Olea europaea</u> L. Olive	Planted, yards and old homesteads	Jly-Aug	Uncommon
<u>HYDROPHYLLACEAE</u> Phacelia family			
<u>Eriodictyon californicum</u> (Hook. & Arn.) Greene Yerba santa	Slope	Apr-May	Uncommon
<u>SCROPHULARIACEAE</u> Figwort family			
<u>Keckiella breviflora</u> (Lindl.) Straw ssp. <u>glabrisepala</u> (Keck) Straw (<u>Penstemon breviflorus</u> Sch. var. <u>floribunda</u> Greene) Stubflower penstemon	Rock outcrop	Mar-May	Uncommon
<u>SAXIFRAGACEAE</u> Saxifrage family			
<u>Carpenteria californica</u> Torr. Carpenteria, tree-anemone	Planted native	May-July	Rare
<u>FABACEAE</u> Pea family			
<u>Cercis occidentalis</u> Torr. ex Gray Redbud, Judas tree	Planted native	Mar-Apr	Rare
<u>Lupinus albifrons</u> Benth. L. Bush lupine, whiteface lupine	Common	Feb-Apr	Rocky slope
<u>PLATANACEAE</u> Sycamore family			
<u>Platanus racemosa</u> Nutt.	Planted native	Apr-May	Rare

WOODY PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>FAGACEAE</u> Oak family			
<u>Quercus douglasii</u> Hook & Arn. Blue oak	Slope	Apr-May	Very common
<u>Quercus morehus</u> Kell. Oracle oak	Slope	Apr-May	Rare
<u>Quercus wislizenii</u> DC Interior live oak	Slope	Apr-May	Very common
<u>SALICACEAE</u> Willow family			
<u>Populus fremontii</u> Wats. Fremont cottonwood	Creekbank	May-June	Uncommon
<u>Salix laevigata</u> Bebb. Red willow	Creekbank	Apr-May	Uncommon
<u>RHAMNACEAE</u> Buckthorn family			
<u>Ceanothus cuneatus</u> (Hook.) Nutt. Buckbrush ceanothus Wedgeleaf ceanothus	Slope, esp. north	Mar-Apr	Very common
<u>Ceanothus leucodermis</u> Greene (<u>Ceanothus divaricatus</u>) Deerbrush, wild lilac, Chaparral whitethorn	Slope	Mar-Apr	Uncommon
<u>Rhamnus californica</u> Esch. ssp. <u>cuspidata</u> (Greene) C.B. Wolf Coffeeberry	Slope	Mar-Apr	Common
<u>Rhamnus crocea</u> Nutt. in T. & G. ssp. <u>ilicifolia</u> (Kell.) C.B. Wolf Redberry, Buckthorn	Slope	Mar-Apr	Common
<u>LORANTHACEAE</u> Mistletoe family			
<u>Arceuthobium campylopodum</u> Engelm. Pine mistletoe, dwarf mistletoe	Parasitic on digger pine	May-Jun	Very common
<u>Phoradendron flavescens</u> (Pursh.) Nutt. var. <u>villosum</u> (Nutt.) Engelm. in Rothr. (<u>Phoradendron</u> <u>villosum</u> Nutt.) Common mistletoe	Parasitic on blue oak and live oak	Apr-May	Very common

WOODY PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Flowering Period</u>	<u>Occurrence</u>
<u>SIMARUBACEAE</u> Quassia family			
<u>Ailanthus altissima</u> (Mill.) Swingle Tree of Heaven	Where planted	Jun-Jly	Rare
<u>HIPPOCASTANACEAE</u> Buckeye family			
<u>Aesculus californica</u> (Spach) Nutt. California buckeye	Slope	Apr-Jun	Common
<u>ANACARDIACEAE</u> Sumac family			
<u>Toxicodendron radicans</u> L. ssp. <u>diversiloba</u> (T. & G.) Thorne (<u>Rhus diversiloba</u> T. & G.) Poisonoak	Rocky slope	Mar-May	Common
<u>RUBIACEAE</u> Madder family			
<u>Cephalanthus occidentalis</u> L. var. <u>californicus</u> Benth. Buttonbush	Creebank or seep	Jun-Aug	Uncommon
<u>CAPRIFOLIACEAE</u> Honeysuckle family			
<u>Lonicera interrupta</u> Benth. Chaparral honeysuckle	Slope, esp. north	Apr-May	Rare
<u>Sambucus mexicana</u> Presl. (<u>Sambucus caerulea</u> var. <u>mexicana</u> L. Benson) Blue elderberry	Rocky slope	Apr-May	Uncommon
<u>ASTERACEAE</u> Sunflower family			
<u>Senecio douglasii</u> DC Douglas groundsel	Slope	Mar-Jun	Uncommon

FERNS AND FERNLIKE PLANTS

<u>Botanical and Common Names</u>	<u>Habitat</u>	<u>Occurrence</u>
<u>POLYPODIACEAE</u> Fern family		
<u>Pellaea mucronata</u> (D.C. Eaton) D.C. Eaton Birdsfoot fern Birdsfoot cliffbrake	Shaded rock outcrop	Common
<u>Pityrogramma triangularis</u> (Kaulf.) Maxon (Gymnogramme triangularis [Kaulf.] Goldenback fern Goldfern	Shaded rock outcrop	Common
<u>Pityrogramma triangularis</u> (Kaulf.) Maxon var. <u>palida</u> Weath. Whiteback fern	Shaded rock outcrop	Rare
<u>ISOETACEAE</u> Quillwort family		
<u>Isoetes howellii</u> Engelm. Quillwort	Vernal pools	Rare
<u>Isoetes nuttallii</u> A. Br. ex Engelm. Quillwort	Vernal pools	Rare
<u>SALVINIACEAE</u> Salvinia family		
<u>Azolla filiculoides</u> Lam. Duckweed fern Fern-like Azolla	Ponds	Rare

BRYOPHYTES

<u>Botanical name</u>	<u>Habitat</u>	<u>Substrate</u>	<u>Notes</u> ¹
HEPATICAE (Liverworts)			
<u>Astellia californica</u> (Hampe.) Underw.	Sheltered, moist places	Soil and lower side, rock ledges	Very common
<u>Fossombronia wondraezeki</u> (Corda.) Dum.	Around entry of abandoned rodent holes	Soil	Uncommon
<u>Riccia glauca</u> L.	Around entry of abandoned rodent holes	Soil	Uncommon
<u>Riccia trichocarpa</u> M.A. Howe	Around entry of abandoned rodent holes and at edge of flatter rock outcrops	Soil	Uncommon
MUSCI (Mosses)			
<u>Byrum pallens</u> SW.	Sunny locations	Soil	Very common
<u>Ceratodon purpureus</u> (Hedw.) Brid.	Moist places	Soil and shallow soil over rocks	--
<u>Dicranoweisia crispula</u> (Hedw.) Mild.	North exposure	Shallow soil over rocks	--
<u>Grimmia laevigata</u> (Brid.) Brid.	Rock surfaces	Shallow soil over rocks	Abundant
<u>Homolothecium nevadense</u> (Lesq.) Ren. & Card.	North exposure	Bare rocks and tree trunks	Abundant
<u>Polytrichum piliferum</u> Hedw.	Sheltered, moist places	Soil	--
<u>Tortula princeps</u> De Not.	Rocks and tree trunks (blue oak)	Shallow soil over rocks and tree trunks	Abundant

¹ Abundant, very common, common, uncommon, rare

LICHENS OF THE SAN JOAQUIN EXPERIMENTAL RANGE

Species List	Substrate ¹					
	Gra-nite	Soil	Oak	Pine	Shrub	Other
ACAROSPORACEAE						
<u>Acarospora fuscata</u> (Schrad.) Arn.	X					CC,SP
<u>A. schleicheri</u> (Ach.) Mass.	X					CC,SP
<u>Sarcogyne clavus</u> (Ram.) Kremp.	SS					
BUELLIACEAE						
<u>Buellia parasema</u> (Ach.) De Not.	SS					
<u>Dimelaena oreina</u> (Ach.) Norm.	X					
<u>Rinodina colobina</u> (Ach.) Th. Fr.				X		CF
<u>Rinodina</u> sp.	X					
CANDELARIACEAE						
<u>Candelaria concolor</u> (Dicks) B. Stein		X	Qd,Qw	X	A,C	CF
<u>C. concolor</u> var. <u>effusa</u> (Tuck.) Burnh.			Qw			
<u>Candelariella vitellina</u> (Ehrh.) Müll. Arg.	X					
CLADONIAACEAE						
<u>Cladonia chlorophaea</u> (Flörke ex Somm. Spreng.	WM	WM				
<u>Cladonia coniocraea</u> (Flörke) Spreng.		WM				
<u>Cladonia pyxidata</u> (L.) Hoffm.		WM				
COCCOCARPIACEAE						
<u>Spilonema revertens</u> Nyl.	X					
COLLEMATACEAE						
<u>Leptogium californicum</u> Tuck.	WM	WM				
<u>L. palmatum</u> (Huds.) Mont.	WM	WM				
<u>L. tenuissimum</u> (Dicks.) Fr.	WM	WM				
CYPHELIACEAE						
<u>Cyphelium tigillare</u> (Ach.) Ach.					A	CF
DIPILOSCHISTACEAE						
<u>Diploschistes scruposus</u> (Schreb.) Norm.	WM	WM				

¹A = Arctostaphylos, C = Ceanothus, CC = concrete, CF = cedar fence, HS = hard substrate, M = mortar, QD = Quercus douglasii, QW = Q. wislizenii, SP = sandstone paving, SS = soft substrate, WM = with moss, X = presence

Species List	Substrate ¹					
	Gra-nite	Soil	Oak	Pine	Shrub	Other
HEPPLIACEAE						
<u>Peltula euploca</u> (Ach.) Wetm.	X					
<u>P. zahlbruckneri</u> (Hasse) Wetm.	X					
LECANORACEAE						
<u>Lecanora mellea</u> W.A. Weber	X					SP
<u>L. muralis</u> (Schreb.) Rabenh.	X					SP
<u>L. novomexicana</u> Magn.	X	X				CC,SP
<u>Rhizoplaca glaucophana</u> (Nyl. ex Hasse) W.A. Weber	HS					
<u>R. marginalis</u> (Hasse) W.A. Weber	SS					
LECIDEACEAE						
<u>Aspicilia caesiocinerea</u> (Nyl.) Arn.	X					
<u>A. cinerea</u> (L.) Körb	X					
<u>Aspicilia</u> sp.	X					
<u>Lecidia atrobrunnea</u> (Ram.) Schaer.	X					
<u>L. scotopholis</u> (Tuck.) Herre	X					
<u>L. tessellata</u> (Ach.) Flörke	X					
<u>Trapeliopsis wallrothii</u> (Flörke ex Spreng.) Hert. & G. Schneider (syn. <u>Lecidea</u> <u>wallrothii</u> Flörke ex Spreng.)	WM					
LICHENACEAE						
<u>Lichenella stipatula</u> Nyl.	X					
PANNARIACEAE						
<u>Pannaria leucophaea</u> (Vahl) Joerg.	WM					
<u>P. leucostictoides</u> Ohlsson	WM					
PARMELIACEAE						
<u>Melanelia elegantula</u> (Zahlbr.) Essl.				Qd		
<u>M. glabra</u> (Schaer.) Essl.				Qd,Qw		CF
<u>M. subargentifera</u> (Nyl.) Essl.				Qw		
<u>M. subelegantula</u> (Essl.) Essl.				Qd		
<u>M. subolivacea</u> (Nyl.) Essl.				Qw		
<u>Neofuscelia loxodes</u> (Nyl.) Essl.	X					
<u>Parmelia flaventior</u> Stirt.				Qw		
<u>Parmelina quercina</u> (Willd.) Hale				Qw		
<u>Pseudoparmelia caperata</u> (L.) Hale				Qd		CF
<u>Xanthoparmelia subconsersa</u> (Nyl.) Hale (syn. <u>Parmelia consersa</u> var. <u>subconsersa</u>)	X					
<u>X. cumberlandia</u> (Gyel.) Hale	X					
<u>X. lineola</u> (Berry) Hale	X					
<u>X. mexicana</u> (Gyel.) Hale	X					
<u>X. subramigera</u> (Gyel.) Hale	X					
<u>X. taractica</u> (Krempfh.) Hale	X					

Species List	Substrate ¹					
	Gra- nite	Soil	Oak	Pine	Shrub	Other
PELTIGERACEAE						
<u>Peltigera rufescens</u> (Weiss) Humb. (syn. <u>P. canina</u> [L.] Willd. var. <u>rufescens</u> [Weiss] Mudd)						WM
PHYSIACEAE						
<u>Physcia adscendens</u> (Th. Fr.) Olive.				Qw		CC
<u>P. aipolia</u> (Ehrh.) Hampe				Qd, Qw	A, C	CF
<u>P. dubia</u> (Hoffm.) Lett.	WM					
<u>P. mexicana</u> B. de Lesd.				Qw		
<u>P. phaea</u> (Tuck.) Thoms.	X					
<u>P. tenella</u> (Scop.) DC.				Qd		
<u>P. stellaris</u> (L.) Nyl.				Qd		
<u>Physconia detersa</u> (Nyl.) Poelt	WM			Qw		CC, CF
<u>P. enteroxantha</u> (Nyl.) Poelt				Qw		
<u>P. pulverulaceae</u> Moberg (syn. <u>P. pulverulenta</u> [Schreb.] Poelt)				Qw		
PLACYNTHIACEAE						
<u>Leptochidium albociliatum</u> (Desm. Choisy)	WM	WM				
TELOSCHISTACEAE						
<u>Caloplaca saxicola</u> (Hoffm.) Nordin	HS			Qw		CC
<u>C. cerina</u> (Ehrh.) Th. Fr. (syn. <u>C. sideritis</u> [Tuck.] Zahlbr.)						CC, M
<u>C. trachyphylla</u> (Tuck.) Zahlbr.	X					
<u>Xanthoria candelaria</u> (L.) Th. Fr.	X			Qw		
<u>X. elegans</u> (Link.) Th. Fr.	X					
<u>X. fallax</u> (hepp.) Arn.	X	X		Qd, Qw		CC, CF
<u>X. polycarpa</u> (Ehrh.) Oliv.				Qd		
UMBILICARIACEAE						
<u>Umbilicaria phaea</u> Tuck.	X					
USNEACEAE						
<u>Evernia prunastri</u> (L.) Ach.				Qd		
<u>Letharia vulpina</u> (L.) Hue						CF
VERRUCAREACEAE						
<u>Dermatocarpon fluviatile</u> (G. Web.) Th. Fr.	X					
<u>D. miniatum</u> (L.) Mann	X	X				
<u>Endocarpon pusillum</u> Hedw.	X					

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 Cyperus, 4

 Dandelion, 22
 Deerbrush, 28
 Deervetch, 18
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 Dobie pod, 9
 Dock, 11
 Doveweed, 30
 Durango root, 7

 Elderberry, 29
 Eriogonum, 11
 Euphorbia, 7
 Everlasting, 22, 24

 Fern, 30
 Fescue, 3
 Fiddleneck, 14
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 Filaree, 6
 Fivespot, 13
 Flannel bush, 27
 Flatsedge, 4
 Flax, 7
 Fleabane, 24
 Fluffweed, 24
 Fremontia, 27
 Fringepod, 9

 Geranium, 7
 Gilia, 13
 Godetia, 21
 Goldfields, 24
 Goosefoot, 11
 Groundsel, 25
 Gumweed, 24

 Hairgrasses, 1
 Heliotrope, 14
 Heronbill, 6
 Hillstar, 18
 Hoarhound, 17
 Honeysuckle, 29

 Ithuriel's spear, 5

 Johnnytuck, 15
 Johnsongrass, 3

 Knotweed, 11
 Koeleria, 2

 Lacepod, 9
 Ladysmantle, 18
 Lambsquarters, 11
 Larkspur, 6
 Lettuce, Indian, 10
 Lettuce, miner's, 10
 Lettuce, prickly, 24
 Lilac, wild, 28
 Lily, 5
 Linanthus, 13
 Locoweed, 18
 Lomatium, 21
 London-rocket, 9
 Loosestrife, 20
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 Madia, 25
 Mallow, 6
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 Mariposa lily, 5
 Meadowfoam, 7

 Melicgrass, 2
 Micropus, 25
 Milkthistle, 26
 Milkweed, 12
 Mint, 17
 Mistletoe, 28
 Monardella, 17
 Monkey flower, 16
 Mulla, 5
 Mullein, moth, 17
 Mullein, turkey, 7
 Muleweed, 16
 Mustard, 8

 Navarretia, 13
 Needlegrass, 3
 Nemophila, 13, 14
 Nettle, 17
 Nightshade, 15
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 Oak, 28
 Oat, 1
 Olive, 27
 Onion, 5
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 Oxalis, 7
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 Pentachaeta, 23
 Pentstemon, bush, 27
 Peppergrass, 9
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 Phacelia, 14
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 Pineappleweed, 25
 Pink, 10
 Plantain, 12
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 Popcorn flower, 15
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 Pterostegia, 11
 Puncturevine, 7
 Purslane, 10, 17
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 Redberry, 28
 Redbud, 27
 Redmaids, 10
 Rockcress, 8
 Rosinweed, 23
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 Ryegrass, 2

 Sage, 17
 Saltgrass, 2
 Sandwort, 9

 Sanicle, 21
 Saxifrage, 18
 Scarlet pimpernel, 12
 Scribneria, 3
 Scorzonella, 25
 Sedges, 4
 Shepherdspurse, 8
 Shootingstar, 12
 Skullcap, 17
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 Snakelily, 5
 Snapdragon, 15
 Snowdrops, 15
 Soap plant, 5
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 Speedwell, 17
 Spikeprimrose, 20
 Spikesedge, 4
 Spikeweed, 23
 Spineflower, 11
 Spurge, 7
 Spurry, 10
 Star thistle, 23
 Starwort, 10
 Stinkgrass, 2
 Stipa, 3
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 Sycamore, 27

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 Thistle, western, 23
 Tidytops, 25
 Thornapple, 15
 Tree of heaven, 28
 Twistflower, 8

 Uropappus, 25

 Valley tassels, 16
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 Watercress, 9
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 Wildrye, 2
 Willow, 28
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 Wirelettuce, 26
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 Woodsorrel, 7
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 Yarrow, 22
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