

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. Synonomy of plant names is listed in parentheses to aid in species identification with reference to herbarium specimens and the original plant list.

Don A. Duncan, Research Coordinator
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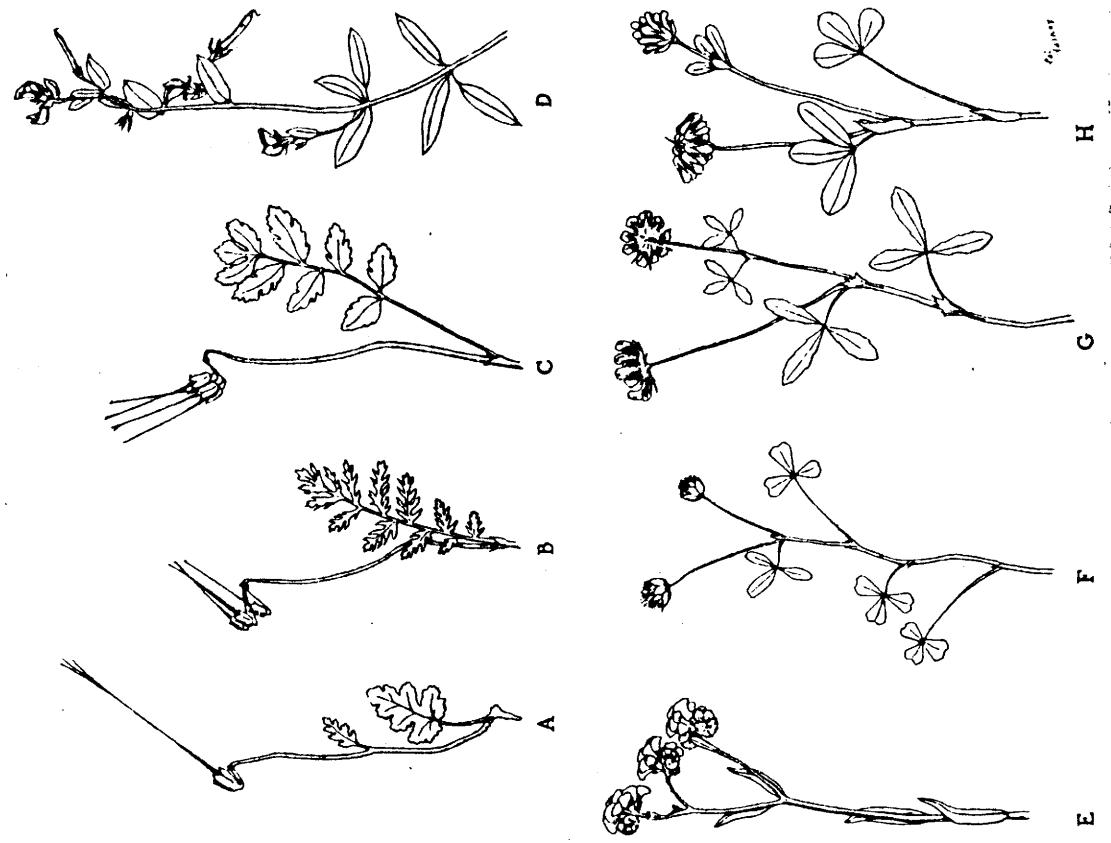


Fig. 1 - Eight important broadleaved herbs occurring on the San Joaquin Experimental Range:
A, broadleaf filaree; B, red-stem filaree; C, white-stem filaree; D, Spanish clover; E, poppy-flowered; F, maidenhair; G, tree clover.

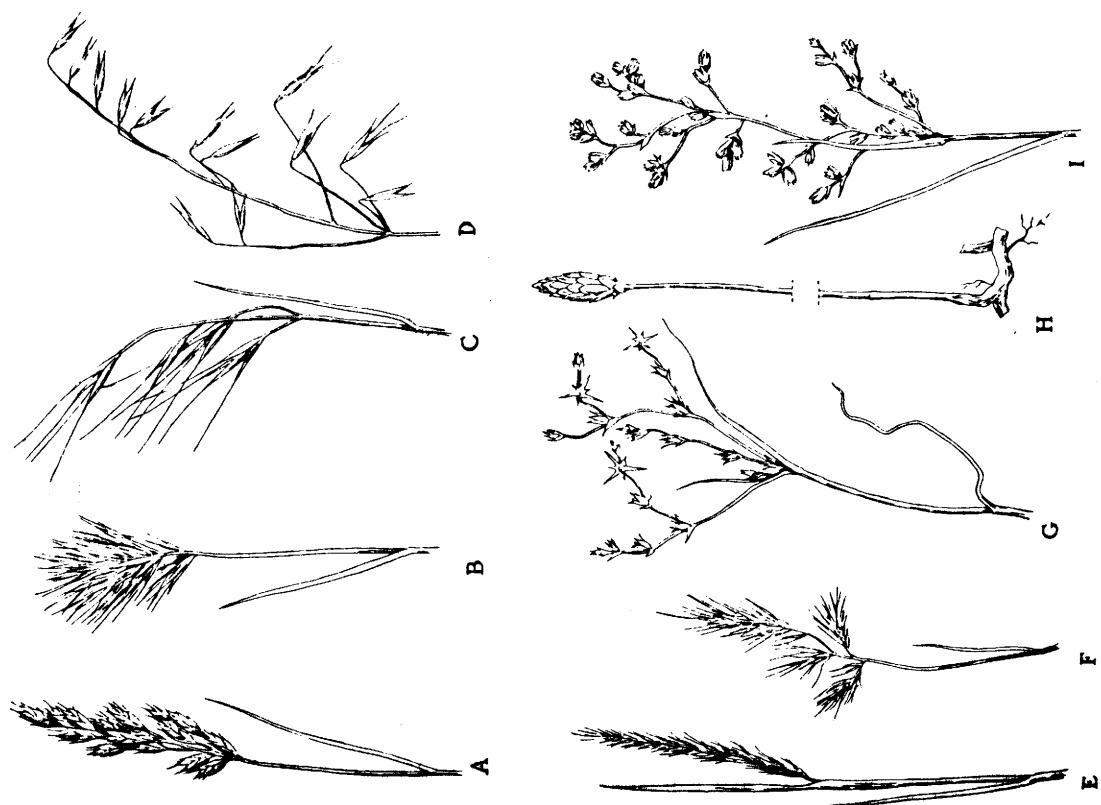


Fig. 2 - Important grasses and grasslike plants on the San Joaquin Experimental Range:
A, soft chess; B, ripgut brome; C, slender oat; D, foxtail fescue; E, Gray's fescue; F, toad rush; H, spike sedge; I, slender-leaved rush.

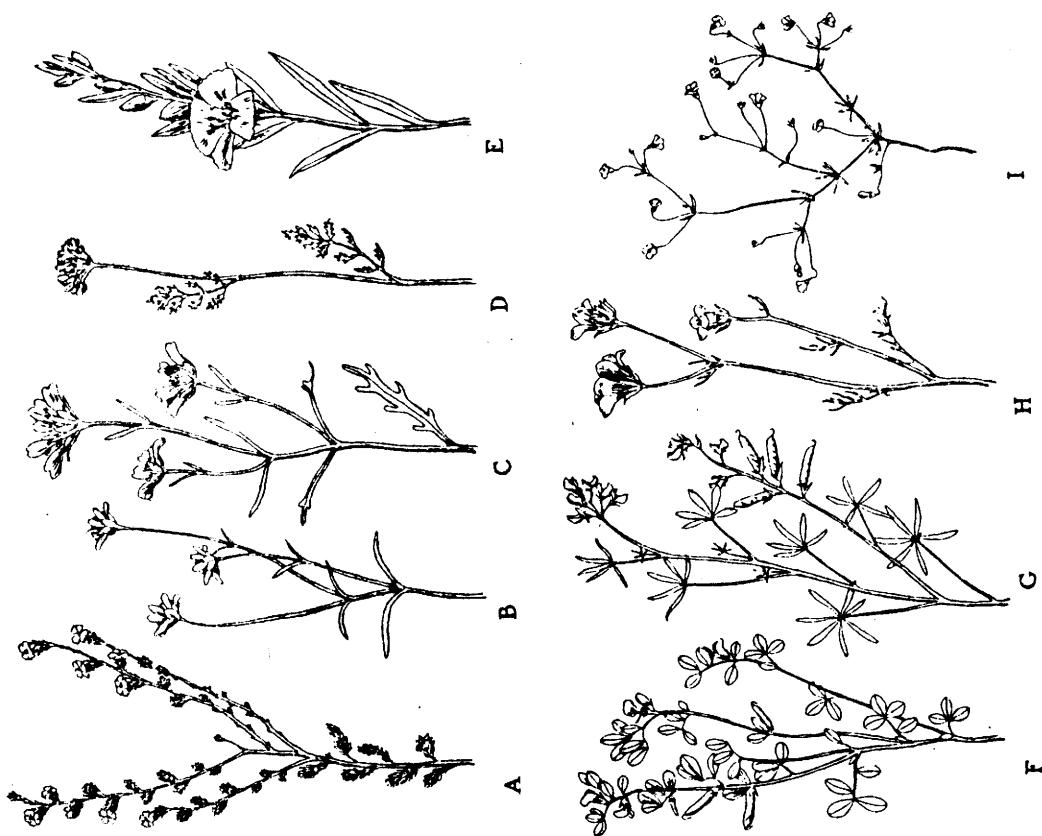


Fig. 3 - Broadleaved herbs of secondary importance on the San Joaquin Experimental Range: A, yellow tarweed; B, goldfields; C, layia; D, rattlesnake weed; E, godetia; F, fine-leaf lotus; G, ground lupine; H, birdseye gilia; and I, linanthus.

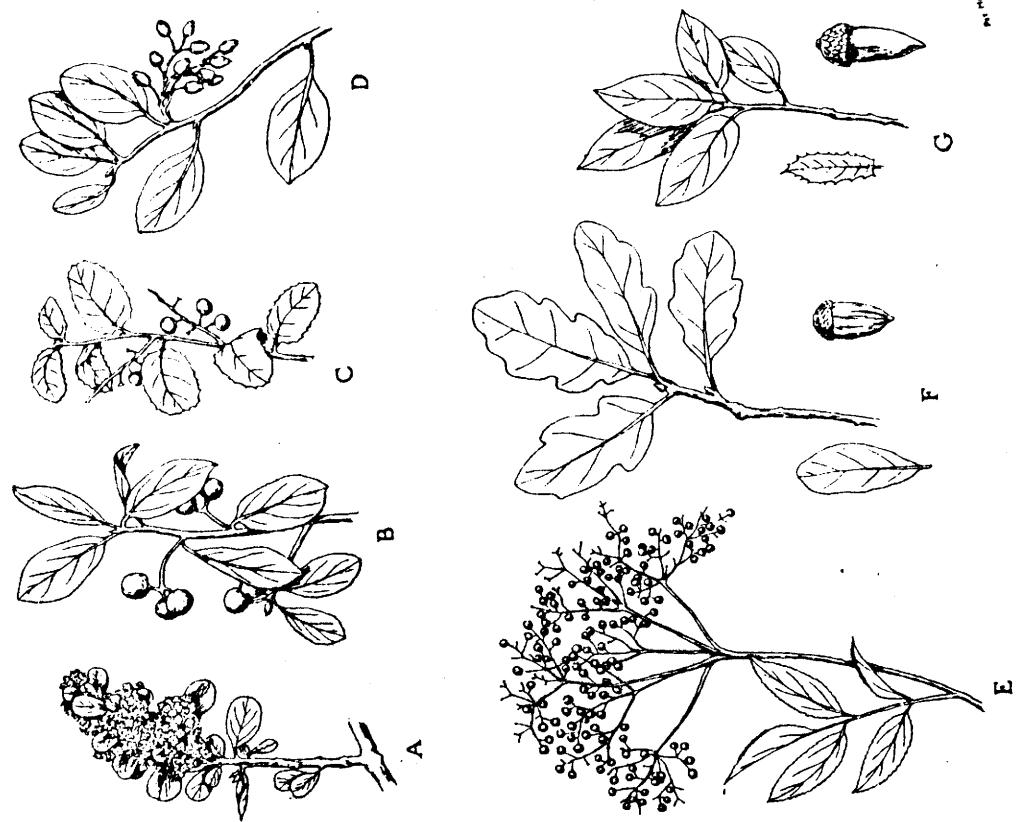


Fig. 4 - Seven shrubs and trees commonly browsed on the Experimental Range: A, wedgeleaf ceanothus; B, coffeeberry; C, hollyleaf buckthorn; D, Mariposa manzanita; E, blue elderberry; F, blue oak; G, interior live oak.

(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> |
|---|---|-------------------------|-------------------|
| TYPHACEAE Cattail family | | | |
| <u>Typha latifolia</u> L. common cattail, soft flag | Wet swale | May-June | Rare |
| POACEAE 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> (Trin. Munro 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

| Botanical and Common Name | Habitat | Flowering Period | Occurrence |
|---|-------------------------------|------------------|-----------------------|
| <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

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

LILIACEOUS PLANTS

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|------------------------------|------------------|-------------|
| <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. Soaplant Amole | Rock outcrop, lower slope | May-Aug | Common |

BROADLEAVED PLANTS/FORBS

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|--------------------------|------------------|-------------|
| <u>RANUNCULACEAE</u> Buttercup family | | | |
| <u>Delphinium hansenii</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, Alfileria, 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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|--------------------------|------------------|------------|
| <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 Wood sorrel | 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>LINACEAE</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>DATISCACEAE</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 heterphylla</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>Athyrsanus 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 kabér</u> (D.C.) Wheeler (<u>Sinapis kabér</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/FOREST

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|----------------------------------|------------------|------------|
| <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 fringed-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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|---------------------------|------------------|-------------|
| <u>Herniaria cinerea</u> DC. Gray burstwort, 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>barbata</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 |

PORTULACACEAE 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 |

AIZOACEAE Carpetweed family

| | | | |
|--|----------------------|---------|----------|
| <u>Mollugo verticillata</u> L. Carpetweed, Indian chickweed | Seep and lower slope | Apr-Jul | Uncommon |
|--|----------------------|---------|----------|

BROADLEAVED PLANTS/FORBS

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|------------------------|------------------|------------|
| POLYGONACEAE Buckwheat family | | | |
| <u>Chorizanthe membranacea</u> Benth. Pink chorizanthe Spineflower | Slope on shallow soil | Apr-May | Common |
| <u>Chorizanthe stellulata</u> Benth. Starlet chorizanthe 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 drymariooides</u> Fisch. and Mey. Pterostegia | Shaded slope | Mar-May | Common |
| <u>Rumex crispus</u> L. Curly dock | Creekbed | Mar-July | Common |
| CHENOPODEACEAE 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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|--------------------------------|------------------|-------------|
| AMARANTHACEAE Amaranth family | | | |
| <u>Amaranthus alba</u> L. <u>(A. graecizans</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 |
| PRIMULACEAE Primrose family | | | |
| <u>Anagallis 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 hansenii</u> (Greene) H.J. Thomps. Shootingstar | Shaded slope | Feb-Apr | Uncommon |
| PLANTAGINACEAE 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 |
| GENTIANACEAE Gentian family | | | |
| <u>Centauryum venustum</u> (Gray) Rob. Pink centaurium | Dry swale | May-Jul | Common |
| ASCLEPIADACEAE 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. Wooly milkweed | Slope | May-Jun | Common |

BROADLEAVED PLANTS/FORBS

| <u>Botanical and Common Names</u> | <u>Habitat</u> | <u>Flowering Period</u> | <u>Occurrence</u> |
|---|---|-------------------------|-------------------|
| POLEMONIACEAE 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 |
| HYDROPHYLACEAE 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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|--------------|------------------|------------|
| <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 |

BORAGINACEAE 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 menziesii</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/FORBS

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|--------------------------------|------------------|-------------|
| <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 |

SOLANACEAE Nightshade family

| | | | |
|--|-------------------|---------|----------|
| <u>Datura inoxia</u> Miller (<u>Datura meteloides</u> DC.) Tolgaucha, Thorn-apple | Disturbed soil | May-Aug | Uncommon |
| <u>Nicotiana attenuata</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 |

SCROPHULARIACEAE Figwort family

| | | | |
|---|-------------------|---------|----------|
| <u>Antirrhinum cornutum</u> Benth. Spurred snapdragon | Slope, esp. south | Apr-Jun | Uncommon |
| <u>Collinsia bartsiifolia</u> Benth. Seaside collinsia | Slope | Mar-Apr | Uncommon |

BROADLEAVED PLANTS/FORB

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|------------------------------|------------------|------------|
| <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>Occurence</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>Trichostoma 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 gambelianus</u> Sheldon Gambel's dwarf locoweed | Slope, esp. south | Mar-Apr | Common |
| <u>Lotus argophyllum</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/FORB

| <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/FORB

| <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 hyssopifolia</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 |

BROADLEAVED PLANTS/FORB

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|---|-------------------|------------------|------------|
| <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. Panicled 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 |

CALLITRICHACEAE Callitrichae family

| | | | |
|---|---------------------|----------|----------|
| <u>Callitrichae marginata</u> Torr. Callitrichae, water starwort | Seeps, vernal pools | Apr-June | Uncommon |
|---|---------------------|----------|----------|

UMBELLIFERAE 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> |
|--|---------------------------|-------------------------|-------------------|
| RUBIACEAE 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 |
| VALERIANACEAE 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 |
| CUCURBITACEAE Gourd family | | | |
| <u>Marah horridus</u> (Congd.) S.T. Dunn. Wild cucumber, Mock cucumber Man-root | Slope, climbing on shrubs | Mar-June | Common |
| CAMPANULACEAE 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 |
| ASTERACEAE 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. Rocky slope Common pearl everlasting | | Apr-Jun | Common |
| <u>Balsamorhiza deltoidea</u> Nutt. Balsamroot | North slope | Mar-May | Rare |

BROADLEAVED PLANTS/FORB

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|------------------------|------------------|------------|
| <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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|-----------------------|------------------|-------------|
| <u>Erigeron foliosus</u> Nutt. Leafy fleabane | Rocky slope | May-Jun | Uncommon |
| <u>Eriophyllum confertiflorum</u> Gray Golden yarrow eriophyllum | Rocky slope | Apr-Jun | Common |
| <u>Evax caulescens</u> Benth. Evax | Slope on shallow soil | May-Jun | Uncommon |
| <u>Filago gallica</u> L. Fluffweed | Common | Apr-Jun | Slope |
| <u>Gnaphalium californicum</u> Gray California everlasting | Rocky slope | Apr-Jul | Uncommon |
| <u>Gnaphalium palustre</u> Nutt. Lowland cudweed | Lower slope | Apr-Jul | Uncommon |
| <u>Grindelia camporum</u> Greene Field gumweed | Slope, esp. south | May-Aug | Uncommon |
| <u>Holocarpha heermannii</u> (Greene) Keck. (<u>Hemizonia heermannii</u> Greene) Yellow tarweed | Lower slope and swale | Jun-Sep | Very common |
| <u>Hemizonia kelloggii</u> Greene (<u>Hemizonia wrightii</u> Gray) Wright's tarweed | Rocky slope | Jun-Sep | Common |
| <u>Hemizonia pungens</u> (H. & A.) T. & G. (<u>Centromadia pungens</u> [T. & G.] Greene) Common spikeweed | Lower slope | Apr-Jul | Common |
| <u>Hypochoeris glabra</u> L. Smooth catsear | Lower slope and swale | Mar-May | Very common |
| <u>Lactuca serriola</u> L. Prickly lettuce | Disturbed soil | May-Aug | Uncommon |
| <u>Lasthenia chrysostoma</u> (F. & M.) var. <u>gracilis</u> Hall (<u>Baeria</u> <u>chrysostoma gracilis</u> Hall) Branchy goldfields | Slope | Feb-Apr | Very common |
| <u>Lasthenia debilis</u> (Greene ex Gray) Ornduff (<u>Baeria debilis</u> Greene ex Gray) Goldfields | Slope | Apr-May | Uncommon |

BROADLEAVED PLANTS/FORBS

| <u>Botanical and Common Names</u> | <u>Habitat</u> | <u>Flowering Period</u> | <u>Occurrence</u> |
|--|------------------------|-------------------------|-------------------|
| <u>Lasthenia minor</u> (Nutt.) Ornduff (<u>Baeria uliginosa</u> Gray) Goldfields | Slope | Mar-Apr | Uncommon |
| <u>Layia gaillardiooides</u> Hook. and Arn. Layia | Shady slope | Apr-May | Common |
| <u>Layia pentachaeta</u> Gray (<u>Layia pentachaeta</u> var. <u>hansenii</u> Jeps.) Tidytips, Layia | Slope, some shade | Apr-May | Common |
| <u>Lessingia germanorum</u> Cham. var. <u>glandulifera</u> (Gray) J.T. Howell (<u>Lessingia germanorum</u> var. <u>vallicola</u> J.T. Howell) Lessingia | Slope | May-Jul | Common |
| <u>Lessingia nemaeclada</u> Greene Lessingia | Slope | May-July | Common |
| <u>Madia elegans</u> D. Don. ssp. <u>densifolia</u> (Greene) Keck. Madia | Creekbed | Mar-May | Uncommon |
| <u>Matricaria matricarioides</u> (Less.) Porter Pineappleweed | Disturbed soil | Mar-Jul | Uncommon |
| <u>Micropus californicus</u> F. & M. Micropus | Slope, on shallow soil | Mar-May | Common |
| <u>Microseris heterocarpa</u> Nutt. Chamb. (<u>Uropappus lindleyi</u> Nutt.) Uropappus | Lower slope | May-Apr | Uncommon |
| <u>Microseris nutans</u> (Hook) Sch.-Bip. (<u>Scorzonella nutans</u> Hook.) Scorzonella | Shaded slope | May-Apr | Rare |
| <u>Psilocarphus brevissimus</u> Nutt. Dwarf woolly-heads | Vernal pool | Mar-May | Uncommon |
| <u>Psilocarphus tenellus</u> Nutt. Slender woolly-heads | Vernal pool | Mar-May | Uncommon |
| <u>Senecio vulgaris</u> L. Common groundsel | Distrubed places | Feb-Jul | Uncommon |

BROADLEAVED PLANTS/FORB

| <u>Botanical and Common Names</u> | <u>Habitat</u> | <u>Flowering Period</u> | <u>Occurence</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>Occurence</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>HYDROPHYLLOACEAE</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

| Botanical and Common Names | Habitat | Flowering Period | Occurrence |
|--|---------------------------------------|------------------|-------------|
| FAGACEAE 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 |
| SALICACEAE Willow family | | | |
| <u>Populus fremontii</u> Wats. Fremont cottonwood | Creekbank | May-June | Uncommon |
| <u>Salix laevigata</u> Bebb. Red willow | Creekbank | Apr-May | Uncommon |
| RHAMNACEAE 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 |
| LORANTHACEAE Mistletoe family | | | |
| <u>Arceuthobium campylopodium</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 | Creekbank 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> |
|---|---------------------|-------------------|
| POLYPODIACEAE 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 |
| ISOETACEAE Quillwort family | | |
| <u>Isoetes howellii</u> Engelm. Quillwort | Vernal pools | Rare |
| <u>Isoetes nuttallii</u> A. Br. ex Engelm. Quillwort | Vernal pools | Rare |
| SALVINIACEAE 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>Astrella californica</u> (Hampe.) Underw. | Sheltered, moist places | Soil and lower side, rock ledges | Very common |
| <u>Fossumbronia 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.) Mill. Arg. | X | | | | | |
| CLADONIACEAE | | | | | | |
| <u>Cladonia chlorphaea</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 | |
| DIPLOSCHISTACEAE | | | | | | |
| <u>Diploschistes scruposus</u> (Schreb.) Norm. | WM | WM | | | | |

¹ A = 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

| Gra- | Substrate ¹ | | | | |
|------|------------------------|------|-----|------|-------|
| | nite | Soil | Oak | Pine | Shrub |

HEPPIACEAE

- Peltula euploca (Ach.) Wetm.
P. zahlbruckneri (Hasse) Wetm.

X
X

LECANORACEAE

- Lecanora mellea W.A. Weber
L. muralis (Schreb.) Rabenh.
L. novomexicana Magn.
Rhizoplaca glaucophana (Nyl. ex Hasse)
 W.A. Weber
R. marginalis (Hasse) W.A. Weber

| | |
|----|--------|
| X | SP |
| X | SP |
| X | CC, SP |
| HS | |
| SS | |

LECIDEACEAE

- Aspicilia caesiocinerea (Nyl.) Arn.
A. cinerea (L.) Korb
Aspicilia sp.
Lecidia atrobrunnea (Ram.) Schaer.
L. scotopholis (Tuck.) Herre
L. tessellata (Ach.) Flörke
Trapeliopsis wallrothii (Flörke ex Spreng.)
 Hert. & G. Schneider (syn. Lecidea
wallrothii Flörke ex Spreng.)

X
X
X
X
X
X
WM

LICHENACEAE

- Lichenella stipatula Nyl.

X

PANNARIACEAE

- Pannaria leucophaea (Vahl) Joerg.
P. leucostictoides Ohlsson

WM
WM

PARMELIACEAE

- Melanelia elegantula (Zahlbr.) Essl.
M. glabra (Schaer.) Essl.
M. subargentifera (Nyl.) Essl.
M. subelegantula (Essl.) Essl.
M. subolivacea (Nyl.) Essl.
Neofuscelia loxodes (Nyl.) Essl.
Parmelia flaventior Stirz.
Parmelina quercina (Willd.) Hale
Pseudoparmelia caperata (L.) Hale
Xanthoparmelia subconspersa (Nyl.) Hale
 (syn. Parmelia conspersa var. subconspersa)
X. cumberlandia (Gyel.) Hale
X. lineola (Berry) Hale
X. mexicana (Gyel.) Hale
X. subramigera (Gyel.) Hale
X. taractica (Kremplh.) Hale

| | | |
|--------|--|----|
| Qd | | |
| Qd, Qw | | CF |
| Qw | | |
| Qd | | |
| Qw | | |
| X | | |
| Qw | | |
| Qw | | |
| Qd | | CF |
| X | | |
| X | | |
| X | | |
| X | | |
| X | | |

Species List

| | Substrate ¹ | | | | |
|--|------------------------|------|-----|------|-------|
| | Granite | Soil | Oak | Pine | Shrub |
| | | | | | Other |

PELTIGERACEAE

Peltigera rufescens (Weiss) Humb. (syn.
P. canina [L.] Willd. var. rufescens
[Weiss] Mudd)

WM

PHYSIACEAE

Physcia adscendens (Th. Fr.) Olive.
P. aipolia (Ehrh.) Hampe
P. dubia (Hoffm.) Lett.
P. mexicana B. de Lesd.
P. phaea (Tuck.) Thoms.
P. tenella (Scop.) DC.
P. stellaris (L.) Nyl.
Physconia detersa (Nyl.) Poelt
P. enteroxantha (Nyl.) Poelt
P. pulverulaceae Moberg (syn.
P. pulverulenta [Schreb.] Poelt)

| | | | |
|----|--------------|-----|----------|
| WM | Qw Qd, Qw | A,C | CC CF |
| X | Qw | | |
| WM | Qd | | |
| | Qd | | |
| | Qw | | CC, CF |
| | Qw | | |
| | Qw | | |
| | Qd | | |

PLACYNTHIACEAE

Leptochidium albociliatum (Desm. Choisy)

WM WM

TELOSCHISTACEAE

Caloplaca saxicola (Hoffm.) Nordin
C. cerina (Ehrh.) Th. Fr. (syn.
C. sideritis [Tuck.] Zahlbr.)
C. trachyphylla (Tuck.) Zahlbr.
Xanthoria candelaria (L.) Th. Fr.
X. elegans (Link.) Th. Fr.
X. fallax (hepp.) Arn.
X. polycarpa (Ehrh.) Oliv.

| | | |
|----|--------|--------|
| HS | Qw | CC |
| | | CC, M |
| X | Qw | |
| X | Qd, Qw | CC, CF |
| X | Qd | |

UMBILICARIACEAE

Umbilicaria phaea Tuck.

X

USNEACEAE

Evernia prunastri (L.) Ach.
Letharia vulpina (L.) Hue

Qd
CF

VERRUCAREACEAE

Dermatocarpon fluviatile (G. Web.) Th. Fr.
D. miniatum (L.) Mann
Endocarpon pusillum Hedw.

X X
X X

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