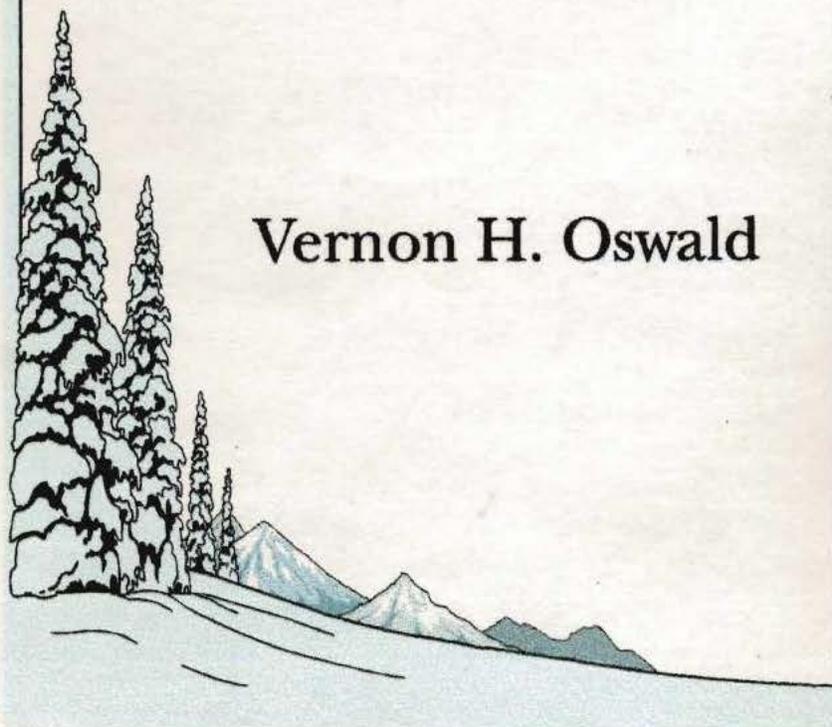


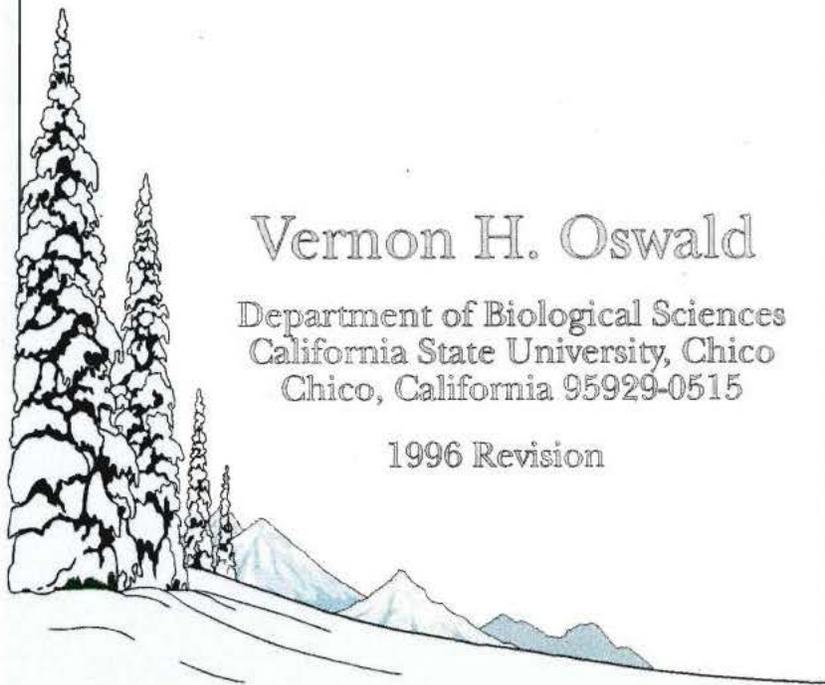
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Vascular Plants of  
**Paradise Lake**

Vernon H. Oswald



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## INTRODUCTION

A formal survey of the vascular flora of Paradise Lake was carried out during 1990, supplemented by additional records compiled during periodic visits between 1986 and 1989. The primary purpose of the survey was to collect data for a study of the vascular flora of Butte County, which has now been published (Oswald and Ahart, 1994).

Paradise Lake is located in Butte County, California, about three miles north of Magalia (T23N R3E, portions of sections 12 and 13, and T23N R4E, portions of sections 7 and 18). It is an impoundment of Little Butte Creek that was constructed by the Paradise Irrigation District as part of the municipal water system of Paradise. Water from the lake is released downstream into Magalia Reservoir, which is visible from the Skyway just north

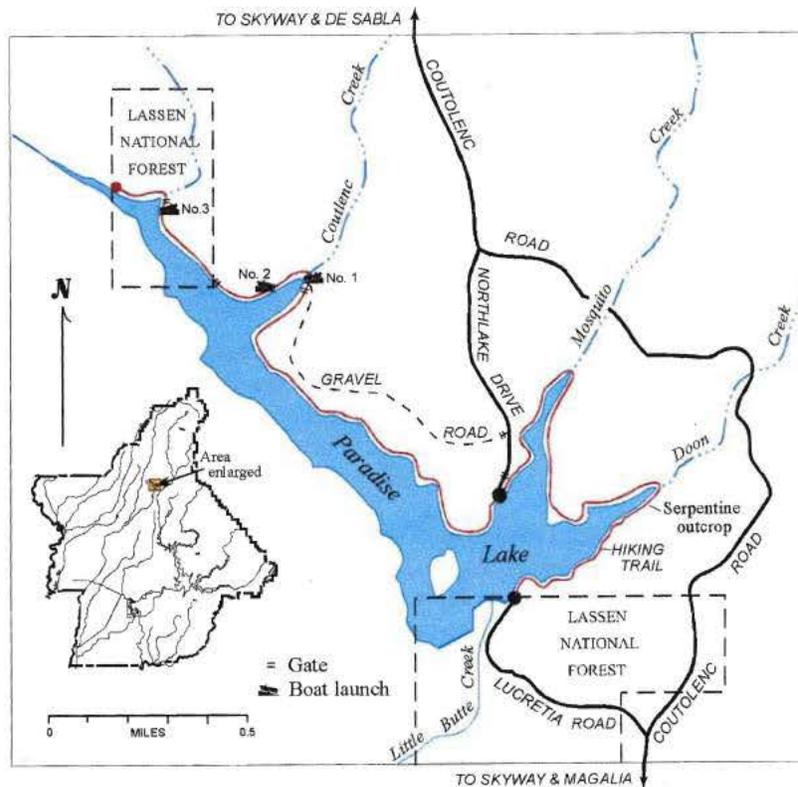


FIGURE 1. Map of Paradise Lake. This flora covers those plants located along the hiking trail shown in brown.

of Magalia, from which it enters the distribution system of the irrigation district. The initial phase in the construction of Paradise Lake was completed in 1956. The lake was enlarged in 1976, and the spillway is now at an elevation of 2544 ft. The present storage capacity is 11,500 acre feet.

The main branch of Paradise Lake extends from the dam in a northwesterly direction, following the course of Little Butte Creek. Smaller arms to the east and along the north side of the main branch follow the drainages of Doon Creek, Mosquito Creek, Coutolenc Creek, and a small unnamed streamlet near the northwest end of the lake. Most of the land surrounding the lake is private, but the dam and small portions of the reservoir are within Lassen National Forest lands (see map). Public access to the lake is from Coutolenc Rd via Lucretia Rd., which leads into picnic grounds and a fisherman's parking lot near the dam, and via Northlake Rd., which leads to several boat launching and parking areas. A service road, which serves also for fishing access and hiking, extends from a trailhead at the picnic grounds to near the upstream end of the lake, a distance of about 4.5 miles.

Geologically, the lake is mostly within a Pre-Cretaceous formation consisting of metavolcanic outcrops, together with a small outcropping of ultrabasic serpentine about 0.5 mile northeast of the trailhead (near Doon Creek). Between Mosquito and Coutolenc creeks, a small area of a more recent Pliocene andesite-type volcanic formation is exposed. Thus, the lake is on the transition between the Sierra Nevada to the east and the southern tip of the Cascade Range to the west.

The lake is within the yellow pine forest community characterized by Munz (1973). The woodland surrounding the lake is a mixed coniferous forest. Riparian, seep, freshwater marsh, and rock outcrop associations can also be identified. The serpentine outcrop is of especial interest, and a number of plants have been found only at this location.

A total of 296 plant taxa in 63 families and 198 genera was recorded during this survey (Table 1). About 25 percent of the plants, mostly in the grass and composite families, are non-native introductions to California. Although the area was visited on seventeen occasions from late March to late September, some plants growing at the lake may not been recorded. Since the survey covered only the public area along the hiking trail on the north and east sides of the lake, additional plants could probably be located if the remaining shoreline were surveyed.

Only two of the plants found at Paradise Lake are in the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and

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Pavlik, 1994): *Mimulus glaucescens*, the shield-bracted monkey flower, and *Arctostaphylos mewukka* ssp. *truei*, True's manzanita. Both are in list 4, plants of limited distribution but not now endangered.

TABLE 1. Numerical analysis of the vascular flora of Paradise Lake.

FAMILIES	GENERA	SPECIES*	VARIETIES	TOTAL	NON-NATIVE	CNPS LISTED
63	198	291	5	296	73 (24.7%)	2

\*Includes both varieties and subspecies.

Nomenclature in the plant list is based upon *The Jepson Manual* (Hickman, 1993). Some recent synonyms are indicated in brackets. Common names are mostly those of Abrams (1923–1960). The date(s) associated with each plant indicate the flowering interval for the plant at Paradise Lake, in so far as it could be determined from the available observations. *Early* is applied to days 1 through 10, *mid* to days 11 through 20, and *late* to days 21 through the end of the month. The flowering intervals, together with locations and habitats in which the plants were found, should be considered to be positive but not inclusive statements. Thus, a particular plant might be found at some location other than the one mentioned in the plant list, or it might be found blooming before or after the date or interval indicated. Words such as rare, common, abundant, etc., are entirely subjective.

Some voucher specimens have been collected. They are indicated by collection number and are deposited in the herbarium at California State University, Chico (CHSC).

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## THE PLANT LIST

The following plant list progresses from fern allies and ferns to conifers, dicot flowering plants, and finally monocot flowering plants. Within each group the plants are arranged alphabetically by family. Some familiarity with botanical terms and plant families is necessary to use this list effectively. Except for the conifers, keys are provided for plants within each family but not to the families themselves. A name printed with a non-serif typeface, e.g., *Lactuca serriola*, indicates a non-native plant.

### FERNS AND FERN ALLIES

#### EQUISETACEAE – HORSETAIL FAMILY

*Equisetum arvense* L. – COMMON HORSETAIL. Locally abundant on the strand of the lake and along creeks. All plants vegetative.

#### POLYPODIACEAE – FERN FAMILY

- 1 Sporangia borne in clusters away from the margins of fertile segments... *Polystichum imbricans*
- 1 Sporangia borne under the reflexed margins of fertile segments.
  - 2 Plants coarse, not strongly clumped, usually > 3 dm tall, growing on forest floor; leaf-stalks straw-colored..... *Pteridium aquilinum* var. *pubescens*
  - 2 Plants more delicate, strongly clumped, < 3 dm tall, growing in rocky places; leaf-stalks brownish..... *Aspidotis densa*

*Aspidotis densa* (Brack.) Lellinger – INDIAN’S-DREAM. Locally common at the serpentine outcrop. [*Cheilanthes siliquosa* Maxon; *Onychium densum* Brack.]

*Polystichum imbricans* (D.C.Eaton) D.H.Wagner ssp. *imbricans* – NARROW-LEAVED SWORD FERN. Locally common on more or less shaded metavolcanic and serpentine outcrops. [*P. munitum* (Kaulf.) C.Presl var. *imbricans* (D.C.Eaton) Maxon]

*Pteridium aquilinum* (L.) Kuhn var. *pubescens* Underw. – WESTERN BRACKEN. Common along the trail and on forest floor, sometimes forming extensive colonies.

### CONIFERS

- 1 Trees without cones, the seeds bony, each nested within a fleshy cup..... Taxaceae (*Taxus brevifolia*)
- 1 Trees with cones, the seeds borne on the surface of cone scales.
  - 2 Leaves scale-like, thickly covering the branches; cones with 3 pairs of scales, only the middle pair fertile..... Cupressaceae (*Calocedrus decurrens*)
  - 2 Leaves needle-like or linear, not scale-like; cones with numerous scales..... Pinaceae

#### CUPRESSACEAE – CYPRESS FAMILY

*Calocedrus decurrens* (Torr.) Florin – INCENSE-CEDAR. Common forest tree. [*Libocedrus decurrens* Torr.]

## PINACEAE – PINE FAMILY

- 1 Cones erect on the branch, the scales falling separately at maturity; terminal buds rounded .....  
..... *Abies concolor*
- 1 Cones pendulous, falling as a unit; terminal buds pointed.
  - 2 Leaves solitary, not grouped in bundles; cone scales with conspicuously exerted bracts .....  
..... *Pseudotsuga menziesii*
  - 2 Leaves grouped in bundles of 3 or 5; cone scales without obvious bracts.
    - 3 Leaves in bundles of 3; cones < 2 dm long..... *Pinus ponderosa*
    - 3 Leaves in bundles of 5; cones usually > 2 dm long..... *Pinus lambertiana*

*Abies concolor* (Gord. & Glend.) Lindl. ex Hildebr. – WHITE FIR. Occasional tree in woodland surrounding the lake.

*Pinus lambertiana* Douglas – SUGAR PINE. Common tree in woodland surrounding the lake.

*Pinus ponderosa* Douglas ex Lawson & C. Lawson var. *ponderosa* – PACIFIC PONDEROSA PINE. One of the dominant trees in woodland surrounding the lake.

*Pseudotsuga menziesii* (Mirb.) Franco var. *menziesii* – DOUGLAS-FIR. One of the dominant trees in woodland surrounding the lake.

## TAXACEAE – YEW FAMILY

*Taxus brevifolia* Nutt. – PACIFIC YEW. Occasional small tree on shaded slopes between the trailhead and Doon Creek. [Oswald 2275]

## DICOT FLOWERING PLANTS

## ACERACEAE – MAPLE FAMILY

- 1 Leaves large, the lobes not sharply toothed; flowers many, in long racemes; fruits hairy.....  
..... *Acer macrophyllum*
- 1 Leaves smaller, the lobes sharply toothed; flowers few, in flat- or convex-topped clusters; fruits glabrous..... *Acer circinatum*

*Acer circinatum* Pursh – VINE MAPLE. Locally common small tree on shaded and north-facing slopes, especially between the trailhead and Doon Creek; also noted past boat launch No. 3. Late Apr–May. [Oswald 2346 & 2951]

*Acer macrophyllum* Pursh – BIG-LEAVED MAPLE. Common tree on shaded and north-facing slopes. Late Apr–May [Oswald 2345]

## AMARANTHACEAE – AMARANTH FAMILY

*Amaranthus californicus* – CALIFORNIA AMARANTH. Occasional to locally common prostrate annual on the lower strand of the lake from late summer into fall. California amaranth is apparently restricted to the strands of reservoirs in Butte County—it is also locally abundant on the lower strand of Lake Oroville. Mid Aug–Nov. [Oswald 4454]

## ANACARDIACEAE – SUMAC FAMILY

*Toxicodendron diversilobum* (Torr. & A.Gray) Greene – POISON OAK. Uncommon shrub on banks along the trail. Late Apr–May. [*Rhus diversiloba* Torr. & A.Gray]

## APIACEAE – CARROT FAMILY

## [Umbelliferae]

- 1 Ovary and fruit bearing tubercles, prickles or bristles.
  - 2 Fruit with a beak and straight, forward-directed bristles; crushed tissue with an anise odor..... *Osmorhiza chilensis*
  - 2 Fruit lacking a beak; crushed tissue without an anise odor.
    - 3 Leaves with a margined and toothed axis; fruits with tubercles bearing prickles ..... *Sanicula bipinnatifida*
    - 3 Leaves without a margined and toothed axis; fruits with tubercles lacking prickles ..... *Sanicula tuberosa*
- 1 Ovary and fruit glabrous or variously hairy but without tubercles, prickles or bristles.
  - 4 Flowers yellow..... *Tauschia kelloggii*
  - 4 Flowers white.
    - 5 Leaflets linear-lanceolate, usually entire..... *Perideridia lemmonii*
    - 5 Leaflets ovate, variously toothed or lobed.
      - 6 Fruit ± flat in X-section, the ribs winged..... *Angelica californica*
      - 6 Fruit ± circular in X-section, the ribs not winged..... *Ligusticum californicum*

*Angelica californica* Jeps. – CALIFORNIA ANGELICA. Uncommon herbaceous perennial on banks and openings in brush. Early Jul. [*A. tomentosa* S.Watson var. *californica* Jeps.]

*Ligusticum californicum* J.M.Coult. & Rose – CALIFORNIA LOVAGE. Herbaceous perennial known from a single plant in brush on a roadside bank between the trailhead and the serpentine outcrop. Early Jun–Jul.

*Osmorhiza chilensis* Hook. & Arn. – MOUNTAIN SWEET-CICELY. Common herbaceous perennial on shaded banks and forest floor. Mid May–Jun.

*Perideridia lemmonii* (J.M.Coult. & Rose) T.I.Chuang & Constance – LEMMON'S YAMPAH. Locally abundant herbaceous perennial in a brushy opening in forest along the unnamed streamlet in Lassen National Forest at the upstream end of the lake. Mid Jul–Aug. [*P. parishii* (J.M.Coult. & Rose) A.Nelson & J.F.Macbr., in part]

*Sanicula bipinnatifida* Douglas ex Hook. – PURPLE SANICLE. Scattered herbaceous perennial in sunny exposures on brushy banks and semi-open forest floor. Although varieties are not recognized in recent floras, these plants are the yellow-flowered var. *flava* Jeps. Late Apr–May.

*Sanicula tuberosa* Torr. – TURKEY-PEA. Locally common herbaceous perennial on the serpentine outcrop. Late Mar–May.

*Tauschia kelloggii* (A.Gray) J.F.Macbr. – KELLOGG'S TAUSCHIA. Occasional herbaceous perennial on brushy forest floor. Late Apr–May.

## APOCYNACEAE – DOGBANE FAMILY

*Apocynum androsaemifolium* L. – MOUNTAIN DOGBANE. Occasional herbaceous perennial along the trail and on open forest floor. Mid May–Jul.

## ARISTOLOCHIACEAE – PIPEVINE FAMILY

*Asarum hartwegii* S. Watson – HARTWEG'S WILD GINGER. Scattered herbaceous perennial on shaded banks between the trailhead and Doon Creek. Late Apr–May.

## ASCLEPIADACEAE – MILKWEED FAMILY

*Asclepias speciosa* Torr. – SHOWY MILKWEED. Herbaceous perennial forming a localized colony along the unnamed streamlet in the Lassen National Forest parcel at the upstream end of the lake. Mid Jul.

## ASTERACEAE – SUNFLOWER FAMILY

[Compositae]

## Plants thistle-like.

- 1 Flowers yellow.
- 2 Phyllaries ending in spines..... *Centaurea solstitialis*
- 2 Phyllaries not ending in spines..... *Sonchus asper*
- 1 Flowers purplish..... *Cirsium vulgare*

## Plants not thistle-like. Corollas all strap-shaped, 5-toothed at apex. Sap milky or colored.

- 1 Rays blue..... *Cichorium intybus*
- 1 Rays other than blue.
- 2 Rays white (sometimes tinged with pink).
- 3 Pappus bristles deciduous..... *Malacothrix floccifera*
- 3 Pappus bristles not deciduous..... *Hieracium albiflorum*
- 2 Rays pink or yellow.
- 4 Rays pink (occasionally whitish)..... *Stephanomeria paniculata*
- 4 Rays yellow.
- 5 At least some of the bristles of the pappus feathery.
- 6 Plants with a leafy stem..... *Tragopogon dubius*
- 6 Plants without a leafy stem.
- 7 Flowering stem unbranched, lacking small bracts..... *Leontodon taraxacoides*
- 7 Flowering stem branched above, bearing small bracts.
- 8 Glabrous annual; outer akenes truncate, the inner beaked..... *Hypochoeris glabra*
- 8 Hairy perennial; all of the akenes beaked..... *Hypochoeris radicata*
- 5 Bristles of pappus smooth, scabrous, or minutely barbed but never feathery.
- 9 Akenes flattened; stems leafy.
- 10 Involucre bell-shaped; akenes not beaked..... *Sonchus asper*
- 10 Involucre cylindrical; akenes beaked.
- 11 Margins of leaves conspicuously spiny-toothed..... *Lactuca serriola*
- 11 Margins of leaves entire or with distantly-spaced small teeth... *Lactuca saligna*
- 9 Akenes either angled or cylindrical, not flattened; leaves all basal.
- 12 Akenes minutely spined above..... *Taraxacum officinale*

- 12 Akenes not spined above.  
 13 Annual; involucre commonly with purplish-segmented and gland-tipped hairs...  
 ..... *Agoseris heterophylla*  
 13 Perennial; hairs of involucre, if present, not purplish.  
 14 Leaf segments bent downward; akene body truncate at apex, abruptly  
 beaked..... *Agoseris retrorsa*  
 14 Leaf segments not bent downward; akene body tapering at apex, gradually  
 beaked..... *Agoseris grandiflora*

**Plants not thistle-like. At least some of the corollas tubular.  
 Marginal strap-shaped corollas, when present, 2–3-toothed. Sap watery.  
 Rays absent**

- 1 Pappus absent.  
 2 Involucre of pistillate heads becoming a stout, spiny bur..... *Xanthium strumarium*  
 2 Involucre not becoming a stout, spiny bur.  
 3 Phyllaries in a single series..... *Adenocaulon bicolor*  
 3 Phyllaries in 2 or more usually overlapping series.  
 4 Heads in a paniculate inflorescence; leaves with a medicinal odor... *Artemisia douglasii*  
 4 Heads solitary at the ends of the branches; leaves with a pineapple-like odor.....  
 ..... *Chamomilla suaveolens*
- 1 Pappus present.  
 5 Pappus of stiff, barbed awns..... *Bidens frondosa*  
 5 Pappus of capillary bristles.  
 6 Phyllaries completely transparent; herbage ± white-woolly.  
 7 Receptacle chaffy except in the center..... *Filago gallica*  
 7 Receptacle naked.  
 8 Pappus bristles united at the base, falling away in a ring..... *Gnaphalium purpureum*  
 8 Pappus bristles not or only partly united at base, deciduous separately or in small  
 groups.  
 9 Clusters of heads leafy-bracted..... *Gnaphalium palustre*  
 9 Clusters of heads not leafy-bracted.  
 10 Disk flowers reddish..... *Gnaphalium luteo-album*  
 10 Disk flowers yellow to whitish.  
 11 Plants of wet places; stems usually simple above; heads in dense terminal  
 clusters, their centers distinctly yellow..... *Gnaphalium stramineum*  
 11 Plants of dry places; stems usually branched above; heads in rather open  
 panicles, their centers not distinctly yellow..... *Gnaphalium canescens*
- 6 Phyllaries herbaceous or only partly transparent, if the latter herbage not white-woolly.  
 12 Woody shrubs..... *Baccharis pilularis*  
 12 Plants herbaceous.  
 13 Plants annual.  
 14 Leaves coarsely lobed; involucre with small, black-tipped bracts at base.....  
 ..... *Senecio vulgaris*  
 14 Leaves entire or with a few small teeth; involucre without black-tipped bracts at  
 base.  
 15 Involucre glabrous or nearly so..... *Conyza canadensis*  
 15 Involucre copiously hairy..... *Conyza floribunda*
- 13 Plants perennial.  
 16 Leaves opposite..... *Arnica discoidea*  
 16 Leaves basal or alternate.  
 17 Phyllaries essentially equal and in 1 series..... *Senecio aronicoides*  
 17 Phyllaries in 2–several series..... *Erigeron inornatus*

Plants not thistle-like. At least some of the corollas tubular.  
Marginal strap-shaped corollas, when present, 2–3-toothed. Sap watery.  
Rays present.

- 1 Pappus absent (or present only on sterile disk akenes).
- 2 Receptacle with stiff bristles or with chaffy bracts at the base of at least some of the flowers.
  - 3 Rays white.
    - 4 Heads large, solitary or few in number; rays long..... *Anthemis cotula*
    - 4 Heads small, many in dense panicle; rays short ..... *Achillea millefolium*
  - 3 Rays yellow.
    - 5 Ray akenes completely enclosed in the phyllaries; herbage without tack-shaped glands.
      - 6 Disk flowers 1 (or 2); plants usually < 1 dm tall ..... *Madia exigua*
      - 6 Disk flowers > 1; plants > 1 dm tall.
        - 7 Flowers in a spike-like raceme..... *Madia subspicata*
        - 7 Flowers in a branching panicle..... *Madia gracilis*
    - 5 Ray akenes not completely enclosed in the phyllaries; herbage with tack-shaped glands..
      - ..... *Calycadenia truncata*
  - 2 Receptacle without bristles or chaffy bracts ..... *Eriophyllum lanatum*
- 1 Pappus present.
  - 8 Pappus of scales or stiff awns.
    - 9 Leaves large (8–50 cm long), entire ..... *Wyethia angustifolia*
    - 9 Leaves small (<8 cm long), usually toothed or lobed..... *Eriophyllum lanatum*
  - 8 Pappus of soft capillary bristles.
    - 10 Rays yellow.
      - 11 Phyllaries ± overlapping..... *Solidago californica*
      - 11 Phyllaries subequal and in one series ..... *Senecio aronicoides*
    - 10 Rays white, blue, or purple.
      - 12 Rays inconspicuous, barely surpassing the disk.
        - 13 Involucre glabrous or nearly so ..... *Conyza canadensis*
        - 13 Involucre copiously hairy ..... *Conyza floribunda*
      - 12 Rays conspicuous, surpassing the disk.
        - 14 Perennial from a branching caudex; style branches sharply pointed... *Aster radulinus*
        - 14 Annual with shallow, fibrous roots; style branches blunt.
          - 15 Stem hairs spreading; leaves usually coarsely toothed..... *Erigeron annuus*
          - 15 Stem hairs appressed; leaves generally entire ..... *Erigeron strigosus*

*Achillea millefolium* L. – YARROW. Occasional herbaceous perennial along the trail and on open forest floor. Mid Jun–Jul. [*A. lanulosa* Nutt., *A. millefolium* var. *lanulosa* (Nutt.) Piper]

*Adenocaulon bicolor* Hook. – TRAILPLANT. Herbaceous perennial scattered on roadside banks and forest floor. Early Jul–Aug.

*Agoseris grandiflora* (Nutt.) Greene – LARGE-FLOWERED AGOSERIS. Occasional herbaceous perennial on open forest floor from boat launch No. 1 to the end of the trail Mid Jun–Jul.

*Agoseris heterophylla* (Nutt.) Greene – ANNUAL AGOSERIS. Locally abundant on the serpentine outcrop and occasional along the trail. Late Apr–May.

*Agoseris retrorsa* (Benth.) Greene – SPEAR-LEAVED AGOSERIS. Occasional herbaceous perennial on forest floor near the boat launch areas. Mid May.

*Anthemis cotula* L. – MAYWEED. Uncommon weedy annual on the strand of the lake. Mid Jun–Jul.

*Arnica discoidea* Benth. – RAYLESS ARNICA. Locally abundant herbaceous perennial on roadside banks between the trailhead and the serpentine outcrop. Mid May–Jul. [Includes var. *alata* (Rydb.) Cronquist]

*Artemisia douglasiana* Besser – MUGWORT. Herbaceous perennial noted near Doon and Coutolenc creeks. Late Jul–Aug.

*Aster radulinus* A.Gray – BROAD-LEAVED ASTER. Herbaceous perennial forming localized colonies along the edge of the trail between the trailhead and Mosquito Creek. Early Jul–Oct. [Oswald 2276]

*Baccharis pilularis* DC. – COYOTE-BUSH. Evergreen shrub along the trail between Doon and Mosquito creeks. Late Sep–Nov. [Includes ssp. *consanguinea* (DC.) C.B.Wolf]

*Bidens frondosa* L. – STICKTIGHT. Locally abundant annual at many places along the strand of the lake, especially where streams and drainages enter. Mid Aug–Oct.

*Calycadenia truncata* DC. – ROSINWEED. Locally abundant annual on the serpentine outcrop. Early Jun–Oct. [Includes ssp. *scabrella* (E.Drew) D.D.Keck]

*Centaurea solstitialis* L. – YELLOW STAR-THISTLE. Occasional to locally abundant weedy annual along the trail and on the upper strand of the lake. Early Jul–Nov.

*Chamomilla suaveolens* (Pursh) Rydb. – COMMON PINEAPPLE WEED. Rare annual on the strand of the lake. Late Apr. [*Matricaria matricarioides* (Less.) Porter]

*Cichorium intybus* L. – CHICORY. Locally common weedy annual along the trail and on the upper strand of the lake. Mid Jun–Oct.

*Cirsium vulgare* (Savi) Tenor – BULL THISTLE. Common weedy annual along the trail and in other disturbed places. Early Jul–Oct.

*Conyza canadensis* (L.) Cronquist – CANADIAN HORSEWEED. Annual weed along the trail and on the upper strand of the lake. Our plants are the nearly glabrous phase of the species native to the West (var. *glabrata* (A.Gray) Cronquist). Mid Jul–Oct.

*Conyza floribunda* Humb., Bonpl. & Kunth – MANY-FLOWERED HORSEWEED. Occasional annual weed along the trail and on the strand of the lake. Early Sept–Nov.

*Erigeron annuus* (L.) Pers. – ANNUAL DAISY. Locally abundant weedy annual on disturbed roadside near the Lassen National Forest parcel at the upstream end of the lake. The plant has also been noted at the mouth of Mosquito Creek. Mid Jun–Oct.

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*Erigeron inornatus* (A.Gray) A.Gray var. *inornatus* – CALIFORNIA RAYLESS DAISY. Uncommon herbaceous perennial on the edge of the trail just west of Doon Creek. Early Jul.

*Eriophyllum lanatum* (Pursh) J.Forbes var. *grandiflorum* (A.Gray) Jeps. – LARGE-FLOWERED WOOLLY-SUNFLOWER. Occasional herbaceous perennial on banks, openings in forest, and upper strand of the lake. Late May–Aug.

*Filago gallica* L. – NARROW-LEAVED FILAGO. Locally abundant weedy annual on the upper strand of the lake near Mosquito Creek. Mid May. [*Logfia gallica* (L.) Coss. & Germ.]

*Gnaphalium canescens* DC. var. *thermale* (E.E.Nelson) Stebbins & D.J.Keil – SMALL-HEADED CUDWEED. Scattered biennial to short-lived perennial on roadside banks and open forest floor. Mid Jul–Oct. [*G. microcephalum* Nutt. var. *thermale* (E.E.Nelson) Cronquist]

*Gnaphalium luteo-album* L. – WEEDY CUDWEED. Locally common weedy annual on disturbed roadside and on the strand of the lake. Late Apr–Oct.

*Gnaphalium palustre* Nutt. – WESTERN MARSH CUDWEED. Occasional annual on moist soil on the strand of the lake. Mid Jun.

*Gnaphalium purpureum* L. – PURPLE CUDWEED. Uncommon annual along the trail. Late Apr. [*Oswald 2031*]

*Gnaphalium stramineum* Humb., Bonpl. & Kunth – COTTON-BATTING CUDWEED. Annual to biennial herb noted at several locations along the trail and on the upper strand of the lake between boat launch No. 1 and the end of the trail. Mid Jul–Sept. [*G. chilense* Spreng.]

*Hieracium albiflorum* Hook. – WHITE-FLOWERED HAWKWEED. Common herbaceous perennial on roadside banks and forest floor. Early Jun–Sep.

*Hypochoeris glabra* L. – SMOOTH CAT'S-EAR. Locally abundant annual on disturbed roadside. Late Apr–Jun.

*Hypochoeris radicata* L. – ROUGH CAT'S-EAR. Herbaceous perennial noted along the trail near the boat launch areas. Mid Jun–Sep.

*Lactuca saligna* L. – WILLOW-LEAVED LETTUCE. Common weedy annual along the trail; it is locally abundant at the serpentine outcrop. Early Jul–Sep.

*Lactuca serriola* L. – PRICKLY LETTUCE. Common annual weed along the trail and on the upper strand of the lake. Mid Jul–Oct. [Includes the var. *integrata* Gren. & Godr., which differs from the typical variety only in having strap-shaped rather than pinnatifid leaves]

*Leontodon taraxacoides* (Vill.) Mérat ssp. *longirostris* Finch & P.D.Sell – LONG-BEAKED HAWKBIT. Common and locally abundant herbaceous perennial along the trail and on the upper strand of the lake. Late

Apr–Oct. [*L. leysseri* (Wallr.) Beck, in part; *L. nudicaulis* (L.) Mérat ssp. *nudicaulis*]

*Madia exigua* (Sm.) A.Gray – THREAD-STEMMED MADIA. Occasional annual on open forest floor near the boat launch areas. Mid May–Jun.

*Madia gracilis* (Sm.) D.D.Keck – SLENDER TARWEED. Common roadside annual. Early Jun–Aug.

*Madia subspicata* D.D.Keck – SLENDER TARWEED. Common roadside annual. These plants seem to be intermediate between typical *M. subspicata* and *M. gracilis* and should perhaps be referred to the latter. Mid May–Jun.

*Malacothrix floccifera* (DC.) S.F.Blake – WOOLLY MALACOTHRIX. Locally abundant annual on dry banks and open forest floor. Early Jun–Aug.

*Senecio aronicoides* DC. – CALIFORNIA RAGWORT. Herbaceous perennial forming localized colonies on forest floor. Mid May–Jun.

*Senecio vulgaris* L. – OLD-MAN-IN-THE-SPRING. Weedy annual found occasionally on the upper strand of the lake. Late Apr–Mar.

*Solidago californica* Nutt. – CALIFORNIA GOLDENROD. Occasional plants on dry roadside and open forest. Mid Aug–Nov.

*Sonchus asper* (L.) Hill ssp. *asper* – SPINY-LEAVED SOW-THISTLE. Occasional weedy annual along the trail and on the upper strand of the lake. Late Apr–Jul.

*Stephanomeria paniculata* Nutt. – STIFF-BRANCHED STEPHANOMERIA. Locally common annual in dry soil along the edge of the trail. Mid Aug–Oct.

*Taraxacum officinale* Weber – DANDELION. Occasional perennial along the trail and on the strand of lake. Late Apr–May.

*Tragopogon dubius* Scop. – YELLOW SALSIFY. Common weedy herb along the edge of the trail. Mid May–Aug.

*Wyethia angustifolia* (DC.) Nutt. – NARROW-LEAVED MULE'S-EARS. Uncommon herbaceous perennial in open forest near the end of the trail. Mid Jun–Jul.

*Xanthium strumarium* L. – COCKLEBUR. Locally abundant annual at many places on the strand of the lake. Mid Aug–Oct. [Includes var. *canadense* (P. Mill.) Torr. & A.Gray]

#### BERBERIDACEAE – BARBERRY FAMILY

*Berberis aquifolium* Pursh var. *dictyota* (Jeps.) Jeps. – JEPSON'S BARBERRY. Occasional small shrub in dry openings in forest. Late Mar–Apr. [*Mahonia dictyota* (Jeps.) Fedde]

#### BETULACEAE – BIRCH FAMILY

- 1 Leaves heart-shaped at base; fruit a nut enclosed in a leafy involucre..... *Corylus cornuta*  
 1 Leaves not heart-shaped at base; fruit cone-like..... *Alnus rhombifolia*

*Alnus rhombifolia* Nutt. – WHITE ALDER. Medium-sized tree scattered in moist places along the edge of the lake. Late Mar.

*Corylus cornuta* Marsh. var. *californica* (A.DC.) W.M.Sharp – CALIFORNIA HAZELNUT. Common tall shrub or small tree on shaded or north-facing exposures. Mid Mar.

#### BORAGINACEAE – BORAGE FAMILY

- 1 Corolla bluish..... *Cynoglossum grande*  
 1 Corolla yellow..... *Lithospermum californicum*

*Cynoglossum grande* Douglas ex Lehm. – PACIFIC HOUND'S-TONGUE. Occasional herbaceous perennial on shaded to semi-open banks and forest floor. Late Apr.

*Lithospermum californicum* A.Gray – CALIFORNIA GROMWELL. Occasional herbaceous perennial on open to brushy forest floor. Late Apr.

#### BRASSICACEAE – MUSTARD FAMILY

##### [*Cruciferae*]

- 1 Petals white.  
 2 Annual with basal leaves forming a rosette; stem not rooting at the nodes..... *Cardamine oligosperma*  
 2 Perennial without a basal rosette of leaves; stem rooting at the nodes..... *Rorippa nasturtium-aquaticum*  
 1 Petals yellowish or purplish to brownish.  
 3 Leaves ± hoary with hairs..... *Hirschfeldia incana*  
 3 Leaves green, not hairy.  
 4 Petals purplish or brownish, especially on the veins; plants always on serpentine..... *Streptanthus polygaloides*  
 4 Petals yellow.  
 5 Fruit somewhat 4-angled..... *Barbarea orthoceras*  
 5 Fruit cylindrical..... *Rorippa curvisiliqua*

*Barbarea orthoceras* Ledeb. – AMERICAN WINTERCRESS. Biennial to perennial herb found along the edge of Mosquito Creek downstream from the trail. Mid May.

*Cardamine oligosperma* Nutt. – WESTERN BITTERCRESS. Delicate winter and early spring annual found along the trail between the trailhead and Doon Creek. Late Mar–Apr.

*Hirschfeldia incana* (L.) Lagr.-Foss. – MEDITERRANEAN HOARY-MUSTARD. Herbaceous perennial represented by a single plant noted on the edge of the hiking trail at Coutolenc Creek, where gravel had been hauled in during the installation of a culvert. Mid Jul–Sep. [*Brassica geniculata* (Desf.) Ball]

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *orientalis* Stuckey – WESTERN YELLOWCRESS. Common annual or biennial on the strand of the lake. Late Apr–Nov.

*Rorippa nasturtium-aquaticum* Hayek – WATERCRESS. Locally abundant herbaceous perennial in Mosquito Creek just upstream from the hiking trail and in a seepy spring on the west side of the Mosquito Creek arm of the lake. Early Jul–Oct. [*Nasturtium officinale* R.Br.]

*Streptanthus polygaloides* A.Gray – MILKWORT JEWELFLOWER. Common annual on the serpentine outcrop. Mid May–Jul.

#### CALYCANTHACEAE – CALYCANTHUS FAMILY

*Calycanthus occidentalis* Hook. & Arn. – WESTERN SPICEBUSH. Uncommon shrub in shaded forest near Doon Creek. Early Jun.

#### CAMPANULACEAE – BELLFLOWER FAMILY

- 1 Slender annual with roundish sessile leaves; flowers small, mostly bud-like, the capsule and seeds developing without the flowers opening..... *Heterocodon rariflorum*  
 1 Herbaceous perennial, the leaves lanceolate to ovate and on short petioles; flowers well-developed, blue, 7–14 mm long..... *Campanula prenanthoides*

*Campanula prenanthoides* Durand – CALIFORNIA HAREBELL. Common on roadside banks. Early Jun–Sep.

*Heterocodon rariflorum* Nutt. – HETEROCODON. Delicate annual noted on moist mud bordering a drying pool on the strand of the lake near boat launch No. 1. Mid Jun.

#### CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

- 1 Berry white; corolla nearly regular, open bell-shaped to tubular funnel-shaped.  
 2 Plants erect; leaves glabrous to ± soft-hairy below..... *Symphoricarpos albus*  
 2 Plants trailing; leaves hairy above and densely so below..... *Symphoricarpos mollis*  
 1 Berry red; corolla irregular, tubular, often swollen on one side at the base..... *Lonicera hispidula*

*Lonicera hispidula* (Lindl.) Douglas ex Torr. & A.Gray var. *vacillans* A.Gray – HAIRY HONEYSUCKLE. Common woody vine trailing on forest floor and climbing on brush. Late May–Aug.

*Symphoricarpos albus* (L.) S.F.Blake var. *laevigatus* (Fernald) S.F. Blake – COMMON SNOWBERRY. Erect subshrub found on the brushy bank of Coutolenc Creek near the hiking trail. Mid Jun–Jul.

*Symphoricarpos mollis* Nutt. – CREEPING SNOWBERRY. Trailing subshrub on forest floor just past the 3-mile post. Mid May–Jul.

#### CARYOPHYLLACEAE – PINK FAMILY

- 1 Fruit a 1-seeded indehiscent utricle; petals absent..... *Herniaria hirsuta*  
 1 Fruit a several-many-seeded capsule; petals present.  
 2 Sepals separate to base or nearly so.  
 3 Scarios stipules present..... *Spergularia rubra*  
 3 Stipules absent.  
 4 Capsule cylindrical.  
 5 Annual without basal sterile offshoots..... *Cerastium glomeratum*

- 5 Perennials with prostrate or creeping basal branches or offshoots .....  
 ..... *Cerastium fontanum*
- 4 Capsule ovoid or ellipsoid.
- 6 Petals notched or deeply cleft.
- 7 Internodes with a longitudinal line of hairs; leaves ovate..... *Stellaria media*
- 7 Internodes lacking line of hairs; upper leaves lance-linear..... *Stellaria nitens*
- 6 Petals entire or nearly so ..... *Minuartia douglasii*
- 2 Sepals united into a tubular or cup-like calyx.
- 8 Styles 2; petals pink or rose..... *Dianthus armeria*
- 8 Styles 3.
- 9 Annuals; petals white, pink, or purplish.
- 10 Upper internodes with sticky bands; petals 2-lobed, not twisted..... *Silene antirrhina*
- 10 Internodes without sticky bands; petals entire or toothed, slightly twisted .....  
 ..... *Silene gallica*
- 9 Perennials.
- 11 Petals bright red..... *Silene californica*
- 11 Petals whitish to pinkish..... *Silene lemmonii*

*Cerastium fontanum* Baumg. ssp. *vulgare* (Hartm.) Greuter & Burdet  
 – COMMON MOUSE-EARED CHICKWEED. Occasional herbaceous perennial forming small mats on moist roadside banks and on the upper strand of the lake. Late Apr–Sep. [*Cerastium vulgatum* L., misapplied]

*Cerastium glomeratum* Thuill. – STICKY MOUSE-EARED CHICKWEED.  
 Occasional annual on disturbed roadside. Late Apr.

*Dianthus armeria* L. – DEPTFORD PINK. Annual or biennial forb on the edge of the trail between the 0.5 mile-post and Doon Creek. Early Jul.

*Herniaria hirsuta* L. ssp. *hirsuta* – HERNIARIA. Annual forb found on gravel which had been hauled in during the installation of a culvert on the trail at Coutolenc Creek. Mid Jul–Aug. [*Herniaria cinerea* DC., in part; Oswald 4362]

*Minuartia douglasii* (Fenzl ex Torr. & A.Gray) Mattf. – DOUGLAS' SANDWORT. Locally abundant annual on the serpentine outcrop. Mid May. [*Arenaria douglasii* Fenzl ex Torr. & A.Gray]

*Silene antirrhina* L. – SLEEPY CATCHFLY. Locally abundant annual on the upper strand of the lake near boat launch No. 1. Mid May–Jun.

*Silene californica* Durand – CALIFORNIA INDIAN-PINK. Herbaceous perennial noted on open forest floor near the end of the trail. Mid Jun.

*Silene gallica* L. – WINDMILL-PINK. Weedy annual on disturbed gravel at the culvert on Coutolenc Creek. Mid Jul.

*Silene lemmonii* S.Watson – LEMMON'S CATCHFLY. Herbaceous perennial noted on a brushy bank between the trailhead and the 0.5 mile post. Mid May.

*Spergularia rubra* (L.) J. & C.Presl – RUBY SANDSPURRY. Common and sometimes locally abundant annual or perennial weed on the bed of the trail. Mid May–Sep.

*Stellaria media* (L.) Vill. – COMMON CHICKWEED. Occasional weedy annual along the trail. Late Mar.

*Stellaria nitens* Nutt. – SHINY CHICKWEED. Locally abundant delicate annual on moist banks. Late Apr.

#### CHENOPODIACEAE – GOOSEFOOT FAMILY

*Chenopodium pumilio* R.Br. – TASMANIAN GOOSEFOOT. Common and locally abundant weedy annual on the strand of the lake and on the edge of the hiking trail. Mid Jun–Oct.

#### CONVOLVULACEAE – MORNING-GLORY FAMILY

*Calystegia occidentalis* (A.Gray) Brummitt ssp. *occidentalis* – WESTERN MORNING-GLORY. Common herbaceous perennial vine trailing on banks or climbing on vegetation. Mid May–Jul. [*Convolvulus occidentalis* A. Gray; *C. polymorpha* Greene; *Calystegia polymorpha* (Greene) Munz]

#### CORNACEAE – DOGWOOD FAMILY

- 1 Flowers in bractless cymes; shrubs along streams and in other wet places..... *Cornus sericea*  
 1 Flowers in heads with large, white bracts; small trees of shaded slopes and forest floor.....  
 ..... *Cornus nuttallii*

*Cornus nuttallii* Audubon ex Torr. & A.Gray – MOUNTAIN DOGWOOD. Common small tree on shaded or north-facing exposures in forest. Late Apr–May; some plants with ripening fruits bloom again in late summer and fall.

*Cornus sericea* L. ssp. *sericea* – AMERICAN DOGWOOD. Uncommon shrub noted on a seep on the west side of the Mosquito Creek arm of the lake and also at the unnamed drainage approaching the upstream end of the lake. Mid Aug–Sep, when found with both ripening fruits and new flowers. [*C. x californica* C.A.Mey.; *C. stolonifera* Michx.]

#### ELATINACEAE – WATERWORT FAMILY

*Elatine heterandra* H.Mason – VARIABLE-STAMENED WATERWORT. Delicate herbs on wet mud along an isolated pool between boat launches No. 1 and 2. Mid Jun.

#### ERICACEAE – HEATH AND WINTERGREEN FAMILY

[Includes *Pyrolaceae*]

- 1 Trees or shrubs.  
 2 Fruit a dry capsule..... *Rhododendron occidentale*  
 2 Fruit fleshy.  
 3 Tree with granular or warty fruit..... *Arbutus menziesii*  
 3 Shrubs with smooth fruits.  
 4 Pedicels of flowers and fruits glandular-pubescent, sticky..... *Arctostaphylos viscida*
-

- 4 Pedicels of flowers and fruits glabrous.
- 5 Basal burl present..... *Arctostaphylos mewukka* ssp. *mewukka*
- 5 Basal burl absent..... *Arctostaphylos mewukka* ssp. *truei*
- 1 Herbaceous plants.
- 6 Plants with green leaves..... *Chimaphila umbellata*
- 6 Plants without green leaves..... *Pterospora andromedea*

*Arbutus menziesii* Pursh – PACIFIC MADRONE. Occasional small trees along the hiking trail. Not observed in flower.

*Arctostaphylos mewukka* Merriam ssp. *mewukka* – INDIAN MANZANITA. Scattered to common shrub along the hiking trail. Late Mar.

*Arctostaphylos mewukka* ssp. *truei* (W.Knight) P.V.Wells – TRUE'S MANZANITA. Without a basal burl but otherwise indistinguishable from ssp. *mewukka* are scattered along the hiking trail. Late Mar. CNPS Inventory List 4.

*Arctostaphylos viscida* Parry – WHITE-LEAVED MANZANITA. Common shrub along the trail and in openings in forest. Late Mar.

*Chimaphila umbellata* (L.) Bartram – PIPSISSEWA. Low evergreen perennial forming scattered colonies on shaded forest floor. Mid Jun–Jul. [*C. umbellata* var. *occidentalis* (Rydb.) S.F.Blake]

*Pterospora andromedea* Nutt. – PINEDROPS. Saprophytic perennial found in dry brush near the 1-mile post. Late Sep (in fruit).

*Rhododendron occidentale* (Torr. & A.Gray) A.Gray – WESTERN AZALEA. Shrub growing in several moist to seepy areas along the west side of the Mosquito Creek arm of the lake. Mid May–Jul.

#### EUPHORBIACEAE – SPURGE FAMILY

- 1 Plants silvery-hairy..... *Eremocarpus setigerus*
- 1 Plants green.
- 2 Plants prostrate; glands of cyathium with petal-like appendages..... *Chamaesyce serpyllifolia*
- 2 Plant erect; glands of cyathium lacking petal-like appendages..... *Euphorbia crenulata*

*Chamaesyce serpyllifolia* (Pers.) Small – THYME-LEAVED SPURGE. Locally abundant annual at many places on the strand of the lake. Mid Jun–Nov. [*Euphorbia serpyllifolia* Pers.]

*Eremocarpus setigerus* (Hook.) Benth. – TURKEY-MULLEIN. Late summer and fall annual along the trail and on the upper strand of the lake. Late Aug–Oct.

*Euphorbia crenulata* Engelm. – CHINESECAPS. Erect annual forb on a trailside banks at Doon Creek and between boat launch No. 1 and the end of the trail. Mid May–Aug.

## FABACEAE – PEA FAMILY

## [Leguminosae]

- 1 Yellow-flowered shrubs ..... *Genista monspessulana*
- 1 Herbs.
- 2 Leaves pinnately compound or sometimes 2-foliolate with a terminal tendril or seta.
- 3 Axis of leaf without a tendril or seta.
- 4 Stipules expanded, not gland-like; plants perennial ..... *Lotus stipularis*
- 4 Stipules reduced to dot-like glands; plants annual.
- 5 Calyx teeth shorter than tube; corolla pinkish or pale salmon, tinged or turning reddish; pods not bent downward ..... *Lotus micranthus*
- 5 Calyx teeth longer than tube; corolla whitish, tinged with rose; pods bent downward ..  
..... *Lotus purshianus*
- 3 Axis of leaf prolonged into a tendril of short seta.
- 6 Leaflets 2 ..... *Lathyrus latifolius*
- 6 Leaflets at least 4 on some leaves.
- 7 Style bearded in a tuft or ring at apex (like a bottle brush).
- 8 Calyx strongly pouched at base, the pedicel appearing ventral ..... *Vicia villosa*
- 8 Calyx not pouched at the base, the pedicel basal or nearly so ..... *Vicia americana*
- 7 Style bearded down the down the face or side (like a toothbrush).
- 9 Flowers tan to yellowish or orange with purple or greenish penciling .....  
..... *Lathyrus sulphureus*
- 9 Flowers bluish ..... *Lathyrus nevadensis*
- 2 Leaves trifoliolate or palmately compound.
- 10 Leaves palmately compound.
- 11 Calyx spurred at base just above pedicel; banner with a patch of hairs on back (best seen before flower opens) ..... *Lupinus arbustus*
- 11 Calyx not spurred; banner glabrous on back ..... *Lupinus albicaulis*
- 10 Leaves trifoliolate.
- 12 Flowers in ovoid to oblong heads; corolla persistent after flowering.
- 13 Flowers yellow ..... *Trifolium dubium*
- 13 Flowers not yellow.
- 14 Flowers red ..... *Trifolium pratense*
- 14 Flowers white ..... *Trifolium repens*
- 12 Flowers in spikes or racemes; corolla deciduous.
- 15 Flowers yellow ..... *Medicago lupulina*
- 15 Flowers white ..... *Melilotus alba*

*Genista monspessulana* (L.) L.A.S.Johnson – FRENCH BROOM. Occasional to locally common shrub along the trail. Late Apr–Jul.

*Lathyrus latifolius* L. – EVERLASTING PEA. Herbaceous perennial established along the paved road on the approach to the trailhead. Early Jun–Jul.

*Lathyrus nevadensis* S.Watson var. *nevadensis*– SIERRA PEA. Locally abundant herbaceous perennial in openings in forest. Late Apr.

*Lathyrus sulphureus* W.H.Brewer ex A.Gray – SNUB PEA. Herbaceous perennial on brushy roadside banks. Late Apr–Jun.

*Lotus purshianus* (Benth.) Clem. & E.G.Clem. var. *purshianus* – SPANISH LOTUS. Common annual forb along the hiking trail and on the upper strand of the lake. Early Jul–Sep.

*Lotus micranthus* Benth. – SMALL-FLOWERED LOTUS. Locally abundant annual on open forest floor and roadsides. Late Apr.

*Lotus stipularis* (Benth.) Greene var. *ottleyi* Isely – OTTLEY'S LOTUS. Herbaceous perennial in a localized population on volcanic andesite between Coutolenc Creek and the upstream end of the hiking trail. Late May, the flowers heavily damaged by insects. [*Lotus balsamiferus* (Kellogg) Greene]

*Lupinus albicaulis* Douglas ex Hook. – SICKLE-KEELED LUPINE. Herbaceous perennial noted on brushy banks near the end of the trail. Mid Jun.

*Lupinus arbustus* Douglas ex Lindl. – SPURRED LUPINE. Herbaceous perennial in scattered locations in open forest and on trailside banks. At Paradise Lake, a white variant of this species is more common than the typical blue-flowered plant. Late Apr-May. [Includes ssp. *silvicola* (A.Heller) D.B.Dunn]

*Medicago lupulina* L. – BLACK MEDICK. Annual or sometimes perennial forb in wet drainages and near creeks. Mid May–Jun.

*Mellilotus alba* Medik. – WHITE SWEET-CLOVER. Tall annual to biennial forb at scattered locations along the hiking trail. Also noted along the paved road approaching the picnic grounds. Early Jul–Oct.

*Trifolium dubium* Sibth. – LITTLE HOP CLOVER. Uncommon annual forb on the upper strand of the lake. Mid May.

*Trifolium pratense* L. – RED CLOVER. Occasional herbaceous perennial near the creeks. Mid May–Oct. [Oswald 2952]

*Trifolium repens* L. – WHITE CLOVER. Herbaceous perennial found on seeps and in other moist places. Mid May–Aug.

*Vicia americana* Muhl. ex Willd. var. *americana* – AMERICAN VETCH. Herbaceous perennial scattered on trail-side banks and openings in forest from the boat launch areas to near the end of the trail. Mid May–Jun.

*Vicia villosa* Roth ssp. *varia* (Host) Corb. – WINTER VETCH. Annual forb noted on the upper strand of the Coutolenc Creek arm of the lake. Mid Jun. [*V. dasycarpa* Ten.]

#### FAGACEAE – BEECH FAMILY

1 Male catkins dense, erect, with persistent bracts; pistillate flowers at base of male catkins ..... *Lithocarpus densiflora*

1 Male catkins loose, drooping, with deciduous bracts; pistillate flowers in axillary clusters.

2 Leaves ± thick and leathery, present throughout the year ..... *Quercus chrysolepis*

2 Leaves thinner, deciduous ..... *Quercus kelloggii*

*Lithocarpus densiflora* (Hook. & Arn.) Rehder var. *densiflora* – COMMON TAN-OAK. Common small to medium-sized tree along the hiking trail. Early Jul.

*Quercus chrysolepis* Liebm. var. *chrysolepis* – CANYON LIVE OAK. Occasional tree along the edge of the lake. Flowering interval not determined.

*Quercus kelloggii* Newb. – CALIFORNIA BLACK OAK. Common tree throughout the area. Late Apr.

#### GENTIANACEAE – GENTIAN FAMILY

- 1 Corolla greenish-white, with conspicuous fringed glands on upper surface ..... *Swertia albicaulis*  
 1 Corolla reddish, without glands on upper surface ..... *Centaurium muehlenbergii*

*Centaurium muehlenbergii* (Griseb.) W.Wight ex Piper – JUNE CENTAURY. Locally common on seepy to moist places on the strand of the lake. Early Jul–Oct. [*C. floribundum* (Benth.) B.L.Rob.]

*Swertia albicaulis* (Douglas ex Griseb.) Kuntze var. *nitida* (Benth.) Jeps. – WHITE-STEMMED SWERTIA. Herbaceous perennial noted on an open bank between Coutolenc Creek and the end of the trail. Mid Jul. [*Frasera albicaulis* Douglas ex Griseb. ssp. *nitida* (Benth.) D.M.Post]

#### GERANIACEAE – GERANIUM FAMILY

*Erodium cicutarium* (L.) L'Hér. – RED-STEMMED FILAREE. Occasional weedy annual along the trail and on the upper strand of the lake. Late Mar–Sept.

#### GROSSULARIACEAE – GOOSEBERRY FAMILY

[In *Saxifragaceae* in some floras]

- 1 Stems without spines at the nodes; flowers ± numerous in racemes ..... *Ribes nevadense*  
 1 Stems with nodal spines; flowers 1 or a few, not in racemes ..... *Ribes roezlii*

*Ribes nevadense* Kellogg – MOUNTAIN PINK CURRANT. Uncommon shrub along the trail between the trailhead and the 0.5 mile post. Early Apr. [*Oswald 2344*]

*Ribes roezlii* Regel var. *roezlii* – SIERRA GOOSEBERRY. Occasional small shrub on brushy banks and forest floor. Late Mar–Apr.

#### HYDROPHYLLACEAE – WATERLEAF FAMILY

*Phacelia heterophylla* Pursh ssp. *virgata* (Greene) Heckard – VIRGATE PHACELIA. Biennial on disturbed banks and roadsides. Mid May–Jul.

#### HYPERICACEAE – ST. JOHN'S-WORT FAMILY

- 1 Petals much longer than the sepals; styles long.  
 2 Sepals linear-deltoid, acuminate; stems with sterile shoots in lower leaf axils .....  
 ..... *Hypericum perforatum*  
 2 Sepals ovate to inversely ovate, acute to obtuse; stems without sterile shoots .....  
 ..... *Hypericum concinnum*  
 1 Petals not distinctly longer than sepals; styles short ..... *Hypericum anagaloides*

*Hypericum anagaloides* Cham. & Schltld. – TINKER'S-PENNY. Prostrate herbaceous perennial on a seepy bank on the west side of the Mosquito Creek arm. Early Jul.

*Hypericum concinnum* Benth. – GOLDWIRE. Locally common herbaceous perennial on roadside banks. Early Jun–Jul.

*Hypericum perforatum* L. – KLAMATHWEED. Common herbaceous perennial along the trail. Early Jun–Jul.

## LAMIACEAE – MINT FAMILY

## [Labiatae]

- 1 Corolla regular or nearly so.
  - 2 Flowers in axillary whorls..... *Mentha* sp.
  - 2 Flowers in terminal heads ..... *Monardella sheltonii*
- 1 Corolla strongly 2-lipped.
  - 3 Calyx 2-lipped, the upper lip truncate ..... *Prunella vulgaris*
  - 3 Calyx 5-toothed.
    - 4 Flowering whorls crowded, forming a short densely flowered spike..... *Stachys pycnantha*
    - 4 Flowering spikes becoming elongated and interrupted..... *Stachys ajugoides*

*Mentha* sp. – MINT. An unidentified, vegetative mint was noted on the upper bank of the lake near the boat launch areas in mid May.

*Monardella sheltonii* Torr. – SHELTON'S COYOTE-MINT. Locally common perennial on the serpentine outcrop. Early Jul. [*M. villosa* Benth. ssp. *sheltonii* (Torr.) Epling]

*Prunella vulgaris* L. var. *lanceolata* (Barton) Fernald – MOUNTAIN SELFHEAL. Locally abundant herbaceous perennial in moist places along the trail and on the upper bank of the reservoir. Mid May–Oct.

*Stachys ajugoides* Benth. var. *rigida* (Nutt. ex Benth.) Jeps. & Hoover – RIGID HEDGE NETTLE. Occasional herbaceous perennial in moist places along the trail and on the upper strand of the lake. Mid Jun–Jul. [*Stachys rigida* Nutt. ex Benth.]

*Stachys pycnantha* Benth. – SHORT-SPIKED HEDGE-NETTLE. Occasional herbaceous perennial noted on a springy seep on the west side of the Mosquito Creek arm and also on the upper strand of the lake between boat launch No. 1 and No. 2. Early Jul–Oct.

## LYTHRACEAE – LOOSESTRIFE FAMILY

- 1 Flower-tube short and bell-shaped..... *Lythrum portula*
- 1 Flower-tube cylindrical..... *Lythrum hyssopifolium*

*Lythrum hyssopifolia* L. – HYSSOP LOOSESTRIFE. Annual forb in moist places on the strand of the lake. Mid May–Jul.

*Lythrum portula* (L.) D.A. Webb – WATER PURSLANE. Rare annual forb forming low mats on wet soil at a single location on the strand of the lake between Mosquito and Coutolenc creeks. Late Sep. [*Peplis portula* L.; *Oswald 4019*]

## MOLLUGINACEAE – CARPET-WEED FAMILY

[Aizoaceae in part]

*Mollugo verticillata* L. – INDIAN-CHICKWEED. Uncommon annual forb on the strand of the lake. Mid Aug–Oct.

## ONAGRACEAE – EVENING-PRIMROSE FAMILY

- 1 Petals absent; plants in shallow water or on wet soil..... *Ludwigia palustris*
- 1 Petals present; plants in moist to dry soil.
  - 2 Seeds with a tuft of hairs at one end.
    - 3 Plant annual.
      - 4 Plants usually > 3 dm tall; leaves usually alternate ..... *Epilobium brachycarpum*
      - 4 Plants < 3 dm tall; leaves mostly opposite..... *Epilobium minutum*
    - 3 Plant perennial ..... *Epilobium ciliatum*
  - 2 Seeds lacking a tuft of hairs at one end.
    - 5 Ovary 2-celled; flower-tube not prolonged beyond the ovary .... *Gayophytum heterozygum*
    - 5 Ovary 4-celled; flower-tube prolonged beyond the ovary.
      - 6 Sepals erect; petals small ..... *Epilobium pygmaeum*
      - 6 Sepals reflexed or the tips remaining united and turned to one side at flowering; petals ± large and showy..... *Clarkia rhomboidea*

*Clarkia rhomboidea* Douglas – DIAMOND CLARKIA. Common annual forb on roadside banks. Early Jun–Jul.

*Epilobium brachycarpum* C.Presl – PANICLED WILLOW-HERB. Common annual along the trail and on the upper strand of the lake. Mid Aug–Sep. [*E. paniculatum* Nutt. ex Torr. & A.Gray, together with the varieties and forms]

*Epilobium ciliatum* Raf. ssp. *ciliatum* – FRINGED WILLOW-HERB. Scattered to locally common herbaceous perennial on the strand of the lake, mostly in moist or seepy places. Mid Jul–Oct. [*E. adenocaulon* Hausskn. and varieties]

*Epilobium minutum* Lindl. ex Lehm. – MINUTE WILLOW-HERB. Locally common annual on the serpentine outcrop. Late Apr.

*Epilobium pygmaeum* (Spreng.) P.Hoch & Raven. – SMOOTH SPIKE-PRIMROSE. Locally abundant annual on the strand of the lake. Mid Jun–Oct. [*Boisduvalia glabella* (Nutt.) Walp.]

*Gayophytum heterozygum* F.H.Lewis & Szweyk. – ZIGZAG GROUND-SMOKE. Annual forb noted in a single location along the trail past boat launch No. 2. Mid Jul.

*Ludwigia palustris* (L.) Elliot – MARSH-PURSLANE. Locally common herbaceous perennial in shallow water and on moist soil along Mosquito and Coutolenc creeks. Mid Jun–Sep. [Includes var. *americana* (DC.) Fernald & Griscom and var. *pacifica* Fernald & Griscom]

**PAPAVERACEAE – POPPY FAMILY**[Includes *Fumariaceae*]

*Dicentra formosa* (Haw.) Walp. – PACIFIC BLEEDINGHEARTS. Common herbaceous perennial on shaded to semi-open banks along the trail. Late Apr–Jul.

**PLANTAGINACEAE – PLANTAIN FAMILY**

- 1 Leaves lanceolate to lancet-oblong; stamens and stigma becoming conspicuously exerted.....  
 ..... *Plantago lanceolata*
- 1 Leaves broadly elliptic to ovate; stamens and stigma not conspicuously exerted.....  
 ..... *Plantago major*

*Plantago lanceolata* L. – ENGLISH PLANTAIN. Common herbaceous perennial in disturbed places. Late Apr–Sep.

*Plantago major* L. – COMMON PLANTAIN. Locally abundant herbaceous perennial where creeks enter the lake. Mid Jun–Jul.

**POLEMONIACEAE – PHLOX FAMILY**

- 1 Calyx growing with the capsule and not ruptured by it, becoming papery with age.....  
 ..... *Collomia heterophylla*
- 1 Calyx at length ruptured by the maturing capsule.
- 2 Calyx lobes unequal; leaves and bracts with spined lobes ..... *Navarretia divaricata*
- 2 Calyx lobes almost equal; leaves and bracts without spined lobes..... *Gilia capitata*

*Collomia heterophylla* Douglas ex Hook. – VARIABLE-LEAVED COLLOMIA. Common annual along banks and in disturbed areas. Mid May–Jul.

*Gilia capitata* Sims ssp. *pedemontana* V.E. Grant – FOOTHILL GLOBE GILIA. Locally abundant annual on the serpentine outcrop and scattered on banks near the end of the trail Mid May–Jul.

*Navarretia divaricata* (Torr. ex A. Gray) Greene ssp. *divaricata* – MOUNTAIN NAVARRETIA. Uncommon annual on the upper strand of the lake at boat launch No. 1 and on the roadbed near the end of the trail. Mid May–Jun.

**POLYGALACEAE – MILKWORT FAMILY**

*Polygala cornuta* Kellogg var. *cornuta* – SIERRA MILKWORT. Common herbaceous perennial on brushy banks and forest floor. Early Jul–Oct. [Oswald 4017]

**POLYGONACEAE – BUCKWHEAT FAMILY**

- 1 Leaves without stipules.
- 2 Plants annual ..... *Eriogonum vimineum*
- 2 Plants perennial ..... *Eriogonum nudum*
- 1 Leaves with evident stipular sheaths.
- 3 Calyx 5-parted, the segments similar.
- 4 Flowers in the axils of the leaves..... *Polygonum arenastrum*

- 4 Flowers in terminal spike-like racemes.
  - 5 Stipules entire or torn, not fringed with cilia or bristles ..... *Polygonum lapathifolium*
  - 5 Stipules fringed with bristly cilia ..... *Polygonum persicaria*
- 3 Calyx 6-parted, the outer 3 herbaceous, the inner 3 larger and forming valves over the nutlets.
  - 6 Plants low, slender, acid to the taste, the sexes separate; valves small, without tubercles .....  
..... *Rumex acetosella*
  - 6 Plants tall, not acid to the taste, with both pistillate and staminate flowers; at least one valve with a tubercle.
    - 7 Plants without basal leaves even when young ..... *Rumex salicifolius*
    - 7 Plants with basal leaves when young.
      - 8 Edge of valves entire ..... *Rumex crispus*
      - 8 Edge of valves toothed ..... *Rumex obtusifolius*

*Eriogonum nudum* Douglas ex Benth. var. *pubiflorum* Benth. – HAIRY-FLOWERED BUCKWHEAT. Common herbaceous perennial along the trail and on the upper strand of the lake. Mid Jul–Sep.

*Eriogonum vimineum* Douglas ex Benth. – WICKER BUCKWHEAT. Locally abundant annual on the serpentine outcrop. Early Jul–Sep.

*Polygonum arenastrum* Jord. ex Boreau – COMMON KNOTWEED. Common annual along the trail and at scattered locations on the upper strand of the lake. Hickman (in *The Jepson Manual*) does not recognize the similar *P. aviculare* L. for California. Mid Jul–Oct.

*Polygonum lapathifolium* L. WILLOW-WEED. Occasional annual on the strand of the lake past boat launch No. 1. Mid Jul–Oct.

*Polygonum persicaria* L. – LADY’S-THUMB. Locally common annual on moist soil along streams and on seeps on the upper strand of the lake. Mid Aug–Oct.

*Rumex acetosella* L. – SHEEP SORREL. Herbaceous perennial in scattered locations along the trail. Early Jul–Aug. [*R. angiocarpus* Murb.]

*Rumex crispus* L. – CURLY DOCK. Occasional herbaceous perennial on the upper strand of the lake. Mid May–Jun.

*Rumex obtusifolius* L. – BITTER DOCK. Herbaceous perennial in a few scattered locations along the trail. Early Jul.

*Rumex salicifolius* Weinm. var. *salicifolius* – WILLOW DOCK. Herbaceous perennial on an open, high bank of the lake just upstream from the 3-mile post and also on the upper strand of the lake near the end of the trail. Mid May–Jul.

#### PORTULACACEAE – PURSLANE FAMILY

- 1 Calyx fused with the lower part of the ovary, its lobes coming off the summit of the capsule .....  
..... *Portulaca oleracea*
- 1 Calyx and ovary free.
  - 2 Basal leaves largely linear to inversely lanceolate to spatulate ..... *Claytonia parviflora*
  - 2 Basal leaves ovate to deltoid ..... *Claytonia rubra*

*Claytonia parviflora* Douglas ex Hook. ssp. *parviflora* – SMALL-FLOWERED MINER'S-LETTUCE. Common annual forb on shaded banks and trail edges. Late Apr–Jun. [*Montia perfoliata* (Donn ex Willd.) Howell forma *parviflora* (Douglas ex Hook.) J.T.Howell]

*Claytonia rubra* (Howell) Tidestr. ssp. *rubra* – RED-STEMMED MINER'S-LETTUCE. Annual forb on the serpentine outcrop. Some of the plants are typical while others tend toward *C. parviflora*. Mid Apr–May. [*M. perfoliata* (Donn ex Willd.) Howell var. *depressa* (A.Gray) Jeps., misapplied]

*Portulaca oleracea* L. – COMMON PURSLANE. Locally abundant annual on the strand of the lake. Late Aug–Sep.

#### PRIMULACEAE – PRIMROSE FAMILY

*Trientalis latifolia* Hook. – PACIFIC STARFLOWER. Common herbaceous perennial on more or less shaded banks and forest floor. Late Apr–Jun.

#### RANUNCULACEAE – BUTTERCUP FAMILY

- 1 Pistils few–many-flowered, becoming follicles when ripe.
  - 2 Flowers red with yellow spurs..... *Aquilegia formosa*
  - 2 Flowers mostly blue..... *Delphinium* sp.
- 1 Pistils 1-ovuled, becoming one-seeded akenes..... *Ranunculus occidentalis*

*Aquilegia formosa* Fisch. – CRIMSON COLUMBINE. Scattered herbaceous perennial on brushy trail-side banks and forest floor. Mid Jun–Jul. [Includes var. *truncata* (Fisch. & C.A.Mey.) Baker]

*Delphinium* sp. – LARKSPUR. A single flowering plant of the *hesperium* - *hansenii* type was noted on a roadside bank near the 0.5-mile post. The plant was not relocated, and seed-bearing fruits are necessary for a firm identification. Mid May.

*Ranunculus occidentalis* Nutt. – WESTERN BUTTERCUP. Herbaceous perennial noted at the serpentine outcrop and several other locations along the trail. Late Mar–Jun. [Includes var. *eisenii* (Kellogg) A.Gray & var. *ultramontanus* Greene]

#### RHAMNACEAE – BUCKTHORN FAMILY

- 1 Fruit fleshy and drupe-like..... *Rhamnus rubra*
- 1 Fruit a dry capsule.
  - 2 Plants prostrate, forming mats; flowers in lateral umbels..... *Ceanothus prostratus*
  - 2 Plants ± erect; flowers in simple or compound panicles.
    - 3 Leaves entire, deciduous; flowers blue or white..... *Ceanothus integerrimus*
    - 3 Leaves minutely gland-toothed, evergreen; flowers blue..... *Ceanothus lemmonii*

*Ceanothus integerrimus* Hook. & Arn. – DEERBRUSH. Common shrub in brushy places. Mid May–Oct.

*Ceanothus lemmonii* Parry – LEMMON'S CEANOTHUS. Common low shrub on brushy banks and forest floor. Mid May–Jul.

*Ceanothus prostratus* Benth. – MAHALA-MATS. Common prostrate shrub in openings on forest floor. Late Apr–May.

*Rhamnus rubra* Greene – SIERRA COFFEEBERRY. Occasional shrub in brushy openings. Early May–Jun, some plants blooming again in late summer and fall. [ssp. *rubra* and ssp. *obtusissima* (Greene) C.B. Wolf not clearly distinct]

### ROSACEAE – ROSE FAMILY

- 1 Fruit a pome (apple)..... *Malus*
- 1 Fruit of 1-seeded akenes or fleshy drupelets.
- 2 Fruit of dry akenes, these sometimes on the surface of a fleshy receptacle (strawberry) or enclosed in a fleshy cup-shaped hip (rose).
- 3 Plants herbaceous.
- 4 Fruit a strawberry..... *Fragaria vesca*
- 4 Fruit of dry akenes.
- 5 Petals absent..... *Sanguisorba minor*
- 5 Petals present.
- 6 Petals white..... *Horkelia tridentata*
- 6 Petals cream to yellow.
- 7 Basal leaf with 3 leaflets; petals yellow..... *Potentilla norvegica*
- 7 Basal leaf with 5 or more leaflets; petals cream to pale yellow.....  
..... *Potentilla glandulosa*
- 3 Woody shrubs; fruit a hip.
- 8 Pedicels covered with stiff, gland-tipped bristles; sepals and styles shed as hip matures; thorns usually numerous, needle-like, distributed all along stem..... *Rosa gymnocarpa*
- 8 Pedicels without gland-tipped bristles; sepals and styles persistent on hip; thorns less numerous to absent, usually thicker at base, located mostly at or near the nodes.
- 9 Leaves irregularly serrate with gland-tipped teeth..... *Rosa bridgesii*
- 9 Leaves usually uniformly serrate, the teeth lacking glandular tips.... *Rosa pisocarpa*
- 2 Fruit of drupelets aggregated to form a "blackberry" or "raspberry."
- 10 Leaves simple, palmately lobes; stems without prickles..... *Rubus parviflorus*
- 10 Leaves mostly 3–5-foliolate; stems mostly prickly.
- 11 Leaves green above, distinctly white-tomentose below.
- 12 Canes 5-angled; fruit a blackberry, the drupelets adhering to a fleshy receptacle.....  
..... *Rubus discolor*
- 12 Canes round; fruit a raspberry, the drupelets forming a hollow cone that separates from the receptacle..... *Rubus leucodermis*
- 11 Leaves ± green on both sides, not white-tomentose below; fruit a blackberry.
- 13 Leaflets deeply cut or dissected..... *Rubus laciniatus*
- 13 Leaflets toothed but not deeply cut or dissected..... *Rubus ursinus*

*Fragaria vesca* L. – WOODLAND STRAWBERRY. Herbaceous perennial forming occasional colonies on brushy banks and forest floor. Mid May–Jun. [*F. californica* Cham. & Schltld.; *F. vesca* ssp. *californica* (Cham. & Schltld.) Staudt]

*Horkelia tridentata* Torr. - THREE-TOOTHED HORKELIA. Scattered herbaceous perennial on trail-side banks and in brushy openings in forest. Late Apr-Jul.

*Malus sylvestris* Mill. - APPLE. A single, small tree was noted on the bank of the lake between the trailhead and the 0.5-mile marker.

*Potentilla glandulosa* Lindl. ssp. *glandulosa* - STICKY CINQUEFOIL. Occasional herbaceous perennial on banks and forest floor. Mid May-Jun.

*Potentilla norvegica* L. - NORWEGIAN CINQUEFOIL. Common herbaceous annual to short-lived perennial along the trail, especially in moist soil along Mosquito and Coutolenc creeks on the downstream side of the trail. Early Jul-Oct. [Includes ssp. *monspeliensis* (L.) Asch. & Graebn.; *Oswald* 4356 & 4443]

*Rosa bridgesii* Crép. - BRIDGES' ROSE. Low shrub in a localized population between boat launch No. 1 and No. 2. Mid Jun (in fruit).

*Rosa gymnocarpa* Nutt. - BALD-HIP ROSE. Common shrub on roadside banks and forest floor. Mid May-Jun.

*Rosa pisocarpa* A.Gray - CLUSTER ROSE. Uncommon shrub noted along the unnamed streamlet near the end of the trail. Mid Jun.

*Rubus discolor* Weihe & Nees - HIMALAYAN BLACKBERRY. Weedy bramble along the trail. Mid May-Aug. [*R. procerus* P.J.Müll.]

*Rubus laciniatus* Willd. - CUT-LEAVED BLACKBERRY. Occasional bramble on disturbed trail edges. Mid May-Jul, sometimes blooming again in the fall.

*Rubus leucodermis* Douglas ex Torr. & A.Gray - WHITE-STEMMED RASPBERRY. Common shrub with erect to arching canes on moist banks between the trailhead and Doon Creek. Mid May.

*Rubus parviflorus* Nutt. - THIMBLEBERRY. Common shrub between the trailhead and Doon Creek. Mid May-Jun.

*Rubus ursinus* Cham. & Schtdl. - CALIFORNIA BLACKBERRY. Locally abundant perennial with creeping canes beside the trail near Doon Creek. The calyxes and pedicels bear pinhead glands, which is characteristic of the var. *macropetalus* (Douglas ex Hook.) R.Br. Late Apr-Jun. [*Oswald* 2853]

*Sanguisorba minor* Scop. ssp. *muricata* Briq. - GARDEN BURNET. Uncommon herbaceous perennial on the brushy edge of the Coutolenc arm of the lake. Mid Jun.

#### RUBIACEAE - MADDER FAMILY

- 1 Leaves 4 in a whorl; ovary and fruit glabrous or slightly hairy but not bristly. *Galium bolanderi*  
 1 Leaves 5-8 in a whorl; ovary and fruit bristly-hairy.  
 2 Flowers several on each side branch, the whole upper part of plant forming an open panicle; fruit ca. 1 mm broad..... *Galium parisiense*  
 2 Flowers 2-3 in small axillary cymes; fruit larger.

- 3 Annual; stems with sharp, backward-directed bristles on the angles, often clinging to other vegetation; flowers 2–5 in axillary cymes..... *Galium aparine*
- 3 Herbaceous perennial; stems smooth to scabrous, not clinging to other vegetation; axillary peduncles 3-forked or 3-flowered..... *Galium triflorum*

*Galium aparine* L. – CLEAVERS. Occasional annual on trail-side banks. Mid May.

*Galium bolanderi* A.Gray – BOLANDER'S BEDSTRAW. Herbaceous perennial on forest floor from Mosquito Creek to the end of the trail. Mid May–Jul.

*Galium parisiense* L. – WALL BEDSTRAW. Annual forb along the trail near the boat launch areas. Mid May–Jun.

*Galium triflorum* Michx. – SWEET-SCENTED BEDSTRAW. Herbaceous perennial on shaded banks. Mid Jun.

#### SALICACEAE – WILLOW FAMILY

- 1 Buds with numerous bud scales; leaves deltate..... *Populus fremontii*
- 1 Buds with a single bud scale; leaves narrow, not deltate.
- 2 Leaf blades entire or nearly so.
  - 3 Leaves glabrous beneath.
    - 4 Tree; catkins appearing with the leaves..... *Salix gooddingii*
    - 4 Shrub; catkins appearing before the leaves..... *Salix lasiolepis*
  - 3 Leaves definitely pubescent beneath.
    - 5 Leaves linear to lance linear, 3–6 mm wide, tapering at both ends, grayish-green on both surfaces; catkins appearing with the leaves..... *Salix exigua*
    - 5 Leaves lanceolate to oblanceolate or obovate, mostly > 10 mm wide, dark-green above, paler below; catkins appearing before the leaves..... *Salix lasiolepis*
- 2 Leaf blades distinctly toothed.
  - 6 Leaves permanently pubescent beneath..... *Salix exigua*
  - 6 Leaves glabrous although sometimes lighter-colored below.
    - 7 Shrubs; capsule with soft shaggy to silky hairs..... *Salix gooddingii*
    - 7 Trees; capsule glabrous..... *Salix laevigata*

*Populus fremontii* S.Watson ssp. *fremontii* – FREMONT'S COTTONWOOD. Occasional small trees on the border of the lake. Not seen in flower.

*Salix exigua* Nutt. – SANDBAR WILLOW. Small shrubby tree on the bank of Doon Creek just downstream from the trail and also near the boat launch areas. Not seen in flower. [*Salix hindsiana* Benth.]

*Salix gooddingii* C.R.Ball – BLACK WILLOW. Occasional small to medium-sized trees on the upper bank of the lake. Mid May (in fruit). [Includes var. *variabilis* C.R.Ball]

*Salix laevigata* Bebb – RED WILLOW. Several small trees grow along the Mosquito Creek arm of the lake and near the end of the trail. Not flowering.

*Salix lasiolepis* Benth. – ARROYO WILLOW. Shrubby willow scattered along streams and along the edge of the lake. Not seen in flower.

## SAXIFRAGACEAE – SAXIFRAGE FAMILY

- 1 Leaves umbrella-like, 1–4 dm wide; plants of stream edges ..... *Darmera peltata*  
 1 Leaves not umbrella-like; plants of outcrops and shaded banks ..... *Tellima grandiflora*

***Darmera peltata*** (Torr. ex Benth.) Voss – INDIAN-RHUBARB. Herbaceous perennial on the edge of Mosquito Creek upstream from the trail. Late Apr. [*Peltiphyllum peltatum* (Torr. ex Benth.) Engl.]

***Tellima grandiflora*** (Pursh) Douglas ex Lindl. – FRINGECUPS. Herbaceous perennial on shaded metavolcanic outcrops between the 0.5-mile post and Doon Creek. Mid May.

## SCROPHULARIACEAE – FIGWORT FAMILY

- 1 Fertile stamens 5; corolla nearly regular ..... *Verbascum thapsus*  
 1 Fertile stamens 4 or 2; corolla ± 2-lipped.  
 2 Stamens 2; flowers nearly regular, blue ..... *Veronica americana*  
 2 Stamens 4.  
 3 Stigmas united, head- or dot-like.  
 4 Corolla spurred or sac-like on lower side of base.  
 5 Flower pedicels, at least the lower ones, subtended by thread-like branchlets, these usually prehensile or bearing flowers ..... *Antirrhinum vexillo-calyculatum*  
 5 Flower pedicels not subtended by thread-like branchlets ..... *Antirrhinum cornutum*  
 4 Corolla not spurred or sac-like at base.  
 6 Corolla red; anther cells equal in size and position ..... *Pedicularis densiflora*  
 6 Corolla blue; anther cells unequally placed, the upper attached by its middle, the lower attached at the base ..... *Penstemon laetus*  
 3 Stigmas distinct, flattened or plate-like.  
 7 Corolla small and inconspicuous, whitish with a yellow tube; plants growing in mud of drying pools ..... *Gratiola ebracteata*  
 7 Corolla larger, conspicuous; plants usually not in mud of drying pools.  
 8 Corolla pale rose or pinkish ..... *Mimulus torreyi*  
 8 Corolla yellow.  
 9 Corolla with dark lines in the throat; leaves often slimy ..... *Mimulus moschatus*  
 9 Corolla with spots rather than lines in throat; leaves not slimy.  
 10 Bracts of inflorescence united into round disks ..... *Mimulus glaucescens*  
 10 Bracts only partially united, not forming round disks ..... *Mimulus guttatus*

***Antirrhinum cornutum*** Benth. – SPURRED SNAPDRAGON. Locally abundant annual on the strand of the lake near the end of the trail. Late Aug–Nov.

***Antirrhinum vexillo-calyculatum*** Kellogg ssp. *intermedium* D.M. Thomps. – WIRY SNAPDRAGON. Annual forb forming localized populations on the edge of the trail at several locations between the trailhead and boat launch No. 1. Mid Aug. [*A. breweri* A. Gray, in part]

***Gratiola ebracteata*** Benth. – BRACKETLESS HEDGE-HYSSOP. Locally abundant on wet soil on the strand of the lake between Doon Creek and the boat launch areas. Late Apr–Aug. [*Oswald 4173*]

*Mimulus glaucescens* Greene – SHIELD-BRACTED MONKEY-FLOWER. Locally abundant annual on the serpentine outcrop; also noted along Mosquito Creek downstream from the trail. Late Apr–Jul. CNPS Inventory List 4.

*Mimulus guttatus* Fisch. ex DC. – COMMON MONKEY-FLOWER. Annual to short-lived perennial along Coutolenc Creek downstream from the trail and on the strand of the lake near the end of the trail. Mid Jun–Aug.

*Mimulus moschatus* Douglas – MUSK MONKEY-FLOWER. Herbaceous perennial forming colonies in Coutolenc Creek near the trail and in a springy drainage on the west side of the Mosquito Creek arm of the lake. Although varieties are not recognized in *The Jepson Manual*, these plants are the var. *sessilifolius* A.Gray Early Jul–Sep.

*Mimulus torreyi* A.Gray – TORREY'S MONKEY-FLOWER. Locally abundant annual on the upper strand of the lake from boat launch No. 1 to the end of the trail. Mid May–Aug.

*Pedicularis densiflora* Benth. ex Hook. – INDIAN-WARRIOR. Herbaceous perennial in brushy woodland between Mosquito Creek and the 2-mile post. Late Mar.

*Penstemon laetus* A.Gray var. *leptosepalus* Greene ex A.Gray – GAY PENSTEMON. Herbaceous perennial scattered on brushy banks from boat launch No. 1 to the end of the trail. Mid Jun–Jul.

*Verbascum thapsus* L. – WOOLLY MULLEIN. Common biennial on the upper strand of the lake and along the trail. Early Jul–Oct.

*Veronica americana* (Raf.) Schwein. ex Benth. – AMERICAN BROOK-LIME. Herbaceous perennial growing on a seep on the upper strand on the west side of the Mosquito Creek arm. Mid May.

#### VERBENACEAE – VERVAIN FAMILY

*Verbena lasiostachys* Link var. *scabrida* Moldenke – WESTERN VERVAIN. Locally abundant weed on disturbed roadside at the boat launch areas. Mid May–Oct. [*V. robusta* Greene]

#### VIOLACEAE – VIOLET FAMILY

- 1 Leaves and flowers scattered along the stems..... *Viola purpurea*  
 1 Leaves and flowers crowded at ends of stems, which are naked below ..... *Viola lobata*

*Viola lobata* Benth. ssp. *lobata* – PINE VIOLET. Scattered to locally common herbaceous perennial on forest floor. Most are typical but some approach the ssp. *integrifolia* (S.Watson) J.R.Little. Late Apr–Jul.

*Viola purpurea* Kellogg ssp. *purpurea* – MOUNTAIN VIOLET. Uncommon herbaceous perennial on forest floor near Coutolenc Creek. Late Apr–May.

## VITACEAE – GRAPE FAMILY

*Vitis californica* Benth. – CALIFORNIA WILD GRAPE. Climbing woody vine at scattered locations along the lake. Early Jun.

## MONOCOT FLOWERING PLANTS

## ALISMATACEAE – WATER-PLANTAIN FAMILY

*Alisma plantago-aquatica* L. – WATER-PLANTAIN. Occasional to locally common herbaceous perennial on the upper strand where Mosquito and Coutolenc creeks enter the lake. Early Jul–Oct. [Includes var. *americana* Schult. & Schult.f.; *A. triviale* Pursh]

## CYPERACEAE – SEDGE FAMILY

- 1 Flowers unisexual; akenes surrounded by a sac-like perigynium.
  - 2 Spikelet one on each stem..... *Carex multicaulis*
  - 2 Spikelets several to many on each stem.
    - 3 Styles 2; akenes lens-shaped.
      - 4 Perigynia spongy-thickened at base, the margin rounded or sharp-edged but not winged. .... *Carex deweyana*
      - 4 Perigynia not spongy-thickened at base, the margin winged.
        - 5 Leaf sheaths green-striate on the side opposite the blade ..... *Carex feta*
        - 5 Leaf sheaths white-translucent on the side opposite the blade..... *Carex subfusca*
    - 3 Styles 3; akenes triangular ..... *Carex amplifolia*
- 1 Flowers with both stamens and pistil or some with stamens only; akenes naked.
  - 6 Scales of spikelet 2-ranked..... *Cyperus eragrostis*
  - 6 Scales of spikelet overlapping spirally.
    - 7 Style 2-branched; akenes flattened, without horizontal lines.
      - 8 Annual with fibrous roots ..... *Eleocharis obtusa*
      - 8 Perennial with rhizomes..... *Eleocharis macrostachya*
    - 7 Style 3-branched; akenes plump or triangular, with many fine horizontal lines ..... *Eleocharis acicularis*

*Carex amplifolia* Boott – AMPLE-LEAVED SEDGE. Herbaceous perennial along Mosquito Creek near the trail and also on a springy seep on the west side of the Mosquito Creek arm of the lake. Mid May.

*Carex deweyana* Schwein. ssp. *leptopoda* (Mack.) Calder & R.L.Taylor – SHORT-SCALED SEDGE. Cespitose perennial on the edge of Doon Creek. Early Jun.

*Carex feta* L.H.Bailey – GREEN-SHEATHED SEDGE. Locally abundant perennial along the upper strand of the lake. Mid May.

*Carex multicaulis* L.H.Bailey – MANY-STEMMED SEDGE. Common tufted perennial on trailside banks and forest floor. Late Mar.

*Carex subfusca* W.Boott – RUSTY SLENDER SEDGE. Cespitose perennial found on the upper strand of the Coutolenc Creek arm of the lake. Mid Jun.

*Cyperus eragrostis* Lam. – TALL CYPERUS. Occasional herbaceous perennial along creeks and on the strand of the lake. Mid Jun.

*Eleocharis acicularis* (L.) Roem. & Schult. – NEEDLE SPIKE-RUSH. Common to locally abundant delicate perennial in moist to wet places on the strand of the lake. Late Sep.

*Eleocharis obtusa* (Willd.) Schult. var. *engelmannii* (Steud.) Gilly – ENGELMANN'S SPIKE-RUSH. Locally abundant annual in moist places on the strand of the lake. Late Sep. [*E. ovata* (Roth) Roem. & Schult.]

*Eleocharis macrostachya* Britton ex Small – PALE SPIKE-RUSH. Rhizomatous perennial forming colonies in moist places on the strand of the lake. Late Apr. [*Eleocharis palustris* (L.) Roem. & Schult.]

#### IRIDACEAE – IRIS FAMILY

*Iris hartwegii* Baker ssp. *hartwegii* – HARTWEG'S IRIS. Herbaceous perennial scattered in brushy openings on forest floor. Late Apr–Jun.

#### JUNCACEAE – RUSH FAMILY

- 1 Leaves soft, flat, and grass-like, the leaf-sheaths closed..... *Luzula comosa*
- 1 Leaves stiff, cylindrical to flat, the leaf-sheaths open.
  - 2 Inflorescence seemingly lateral, the lowest bract cylindrical and exactly like a continuation of the stem.
    - 3 Stamens 3; capsule strongly 3-angled..... *Juncus effusus*
    - 3 Stamens 6; capsule almost spheric..... *Juncus patens*
  - 2 Inflorescence seemingly terminal, the lowest bract not like a continuation of the stem.
    - 4 Stamens 3..... *Juncus acuminatus*
    - 4 Stamens 6..... *Juncus articulatus*

*Juncus acuminatus* Michx. – SHARP-FRUITED RUSH. Locally abundant herbaceous perennial on the strand of the lake, especially near the mouths of creeks. Mid May.

*Juncus articulatus* L. – JOINTED RUSH. Herbaceous perennial found in the bed of Coutolenc Creek on the upper stand of the lake. Mid Jul.

*Juncus effusus* L. var. *pacificus* Fernald & Wieg. – PACIFIC RUSH. Cespitose perennial along the trail and on the upper strand of the lake. Mid Jun.

*Juncus patens* E.Mey. – SPREADING RUSH. Uncommon cespitose perennial along the edge of the trail. Mid Jun.

*Luzula comosa* E.Mey. var. *subsessilis* S.Watson – SESSILE WOOD-RUSH. Scattered in sunnier exposures on banks and forest floor. Late Mar. [*L. subsessilis* (S.Watson) Buchenau]

#### LILIACEAE – LILY FAMILY

[Includes *Amaryllidaceae* of some floras]

- 1 Flowers in a scape-like umbel subtended by membranous sheathing bracts.
  - 2 Perianth segments separate to base or nearly so..... *Allium membranaceum*
  - 2 Perianth segments united into a definite basal tube.
    - 3 Flowers blue.

- 4 Stamens 3 ..... *Dichelostemma multiflorum*
- 4 Stamens 6 ..... *Dichelostemma capitatum*
- 3 Flowers white or yellow.
  - 5 Flowers white ..... *Triteleia hyacinthina*
  - 5 Flowers yellow ..... *Triteleia ixioides*
- 1 Flowers not in a scape-like umbel.
  - 6 Plant a thorny vine ..... *Smilax californica*
  - 6 Plant herbaceous, not a thorny vine.
    - 7 Stem scape-like, the leaves basal.
      - 8 Flowers bractless, nodding; leaves 2 ..... *Erythronium multiscapoideum*
      - 8 Flowers with scarious bracts, not nodding; leaves numerous ..... *Chlorogalum pomeridianum*
    - 7 Stem leafy.
      - 9 Plant with a creeping rhizome; flowers white ..... *Smilacina racemosa*
      - 9 Plant from a bulb or corm; flowers of various colors.
        - 10 Perianth segments unlike, the outer often sepal-like, the inner petal-like ..... *Calochortus tolmiei*
        - 10 Perianth segments alike, petal-like.
          - 11 Flowers orange; anthers with filaments attached at the center... *Lilium humboldtii*
          - 11 Flowers scarlet or yellowish- to greenish-red.
            - 12 Flowers scarlet, checkered yellow ..... *Fritillaria recurva*
            - 12 Flowers yellowish- or greenish-red, not distinctly checkered ..... *Fritillaria eastwoodiae*

*Allium membranaceum* Ownbey ex Traub – PAPERY ONION. Common herbaceous perennial on shaded banks and north-facing openings in forest. Mid May–Jun.

*Calochortus tolmiei* Hook. & Arn. – PUSSY-EARS. Locally common herbaceous perennial on more or less open forest floor. Late Mar–May.

*Chlorogalum pomeridianum* (DC.) Kunth – WAVY-LEAVED SOAP-PLANT. Uncommon herbaceous perennial in brushy places near Coutolenc Creek and the unnamed drainage to the west. Mid Jul.

*Dichelostemma capitatum* A.W.Wood ssp. *capitatum* – BLUEDICKS. Locally abundant herbaceous perennial on the serpentine outcrop. Late Apr–May. [*Dichelostemma pulchellum* (Salisb.) A.Heller; *Brodiaea pulchella* (Salisb.) Greene]

*Dichelostemma multiflorum* (Benth.) A.Heller – ROUND-TOOTHED OOKOW. Herbaceous perennial in small openings in forest near the end of the trail. Mid Jun. [*Brodiaea multiflora* Benth.]

*Erythronium multiscapoideum* (Kellogg) A.Nelson & P.B.Kenn. – SIERRA FAWN-LILY. Herbaceous perennial localized on the serpentine outcrop. Mid Apr. [*E. hartwegii* S.Watson]

*Fritillaria* sp. – FRITILLARY. A single post-flowering plant was noted on the serpentine in late May. No fruits were developing, a condition that is common in *F. eastwoodiae*.

*Lilium humboldtii* Roehl & Leichtlin ex Duch. – HUMBOLDT LILY. Uncommon perennial on dry, brushy banks and forest floor. Mid Jul.

*Smilacina racemosa* (L.) Desf. – WESTERN FALSE SOLOMON'S-SEAL. Occasional herbaceous perennial on shaded banks between the trailhead and the 0.5-mile post. Mid May. [Includes var. *amplexicaulis* (Nutt.) S.Watson and var. *glabra* (J.F.Macbr.) H.St.John]

*Smilax californica* (A.DC.) A.Gray – CALIFORNIA GREENBRIER. Prickly vine climbing on brush in moist places near Mosquito and Coutolenc creeks. Late May–Jun.

*Triteleia hyacinthina* (Lindl.) Greene – WILD HYACINTH. A single plant was seen on the serpentine outcrop. Early Jun. [*Brodiaea hyacinthina* (Lindl.) Baker]

*Triteleia ixioides* (W.T.Aiton) Greene ssp. *anilina* (Greene) L.W.Lenz – MOUNTAIN PRETTYFACE. Uncommon herbaceous perennial on forest floor near the end of the trail. Mid Jun. [*Brodiaea lutea* (Lindl.) C.V.Morton var. *anilina* (Greene) Munz]

#### ORCHIDACEAE – ORCHID FAMILY

- 1 Leaves reduced and scale-like; plant not green.
  - 2 Plant white..... *Cephalanthera austiniae*
  - 2 Plant brownish, purplish, or reddish..... *Corallorhiza maculata*
- 1 Leaves not reduced and scale-like; plant green.
  - 3 Lip with a spur..... *Piperia elongata*
  - 3 Lip without a spur..... *Goodyera oblongifolia*

*Cephalanthera austiniae* (A.Gray) A.Heller – PHANTOM ORCHID. Uncommon saprophyte on brushy, north-facing banks and forest floor between the trailhead and the 0.5-mile post. Late Apr–Jun. [*Eburophyton austiniae* (A.Gray) A.Heller]

*Corallorhiza maculata* Raf. – SPOTTED CORALROOT. Uncommon saprophyte on forest floor near the 0.5-mile post. Early Jul.

*Goodyera oblongifolia* Raf. – RATTLESNAKE-PLANTAIN. Uncommon perennial on shaded forest floor between Coutolenc Creek and the end of the trail. Mid Jul.

*Piperia elongata* Rydb. – DENSE-FLOWERED PIPERIA. Rare perennial on dry forest floor near the end of the trail. Mid Jul. [*Habenaria elegans* (Lindl.) Bol., in part]

#### POACEAE – GRASS FAMILY

##### [Gramineae]

- 1 Spikelets with the glumes persistent, the spikelet axis jointed above them.
  - 2 Spikelets sessile or nearly so (barley tribe).
    - 3 Inflorescence with 1 spikelet at each node..... *Elymus stebbinsii*
    - 3 Inflorescence with 2–4 spikelets at all or most nodes.
      - 4 Sheaths and blades glabrous..... *Elymus glaucus* ssp. *glaucus*
      - 4 Sheaths and blades pubescent..... *Elymus glaucus* ssp. *jepsonii*

- 2 Spikelets upon distinct pedicels.
- 5 Spikelets 1-flowered (agrostis tribe, in part).
  - 6 Lemma hardened when mature, closely embracing the grain ..... *Achnatherum lemmonii*
  - 6 Lemma transparent or membranaceous when mature.
    - 7 Palea evident, at least half as long as lemma.
      - 8 Rachilla prolonged beyond the palea as a small bristle ..... *Agrostis avenacea*
      - 8 Rachilla not prolonged.
        - 9 At least some branches of panicle bearing spikelets from the base; ligule 3–6 mm long ..... *Agrostis stolonifera*
        - 9 Branches of panicle naked at base; ligule 1–2 mm long ..... *Agrostis capillaris*
    - 7 Palea obsolete or a minute scale ..... *Agrostis exarata*
- 5 Spikelets 2–many-flowered.
  - 10 Lemma usually shorter than the empty glumes; awn dorsal and usually bent (oat tribe).
    - 11 Florets 2, one perfect, the other male ..... *Holcus lanatum*
    - 11 Florets 2 or more, all alike except the reduced upper ones.
      - 12 Lemmas 2-cleft at the apex, awned or abruptly pointed between the lobes ..... *Danthonia californica*
    - 12 Lemmas toothed but not 2-cleft and awned between the lobes.
      - 13 Lemma keeled, awned above middle ..... *Trisetum canescens*
      - 13 Lemma convex, awned below middle.
        - 14 Axis of spikelet prolonged behind the upper floret; lemmas squared and irregularly toothed at summit ..... *Deschampsia elongata*
        - 14 Axis of spikelet not prolonged; lemmas tapering into 2 slender teeth ..... *Aira caryophyllea*
  - 10 Lemma usually longer than the empty glumes; awn terminal and straight or none (fescue tribe).
    - 15 Spikelets of two forms, sterile and fertile intermixed ..... *Cynosurus echinatus*
    - 15 Spikelets all alike in the same inflorescence.
      - 16 Glumes papery; upper florets sterile, often reduced to rudiments enfolded by the broad upper lemmas.
        - 17 Lemmas awned ..... *Melica aristata*
        - 17 Lemmas not awned ..... *Melica harfordii*
      - 16 Glumes not papery; upper florets like the others.
        - 18 Nerves of lemma parallel, not converging at the summit or but slightly so ..... *Glyceria elata*
        - 18 Nerves of lemma converging toward the summit, the lemmas narrowed at the apex.
          - 19 Lemmas awned from a minutely cleft apex.
            - 20 Plants annual.
              - 21 Spikelets strongly flattened; terminal teeth of lemmas < 0.5 mm long ..... *Bromus carinatus*
              - 21 Spikelets ± cylindrical; terminal teeth of lemmas > 0.5 mm long.
                - 22 Lemmas broad, rounded apically ..... *Bromus hordeaceus*
                - 22 Lemmas narrow, tapering apically.
                  - 23 Panicle erect ..... *Bromus madritensis*
                  - 23 Panicle open, with spreading or drooping branches.
                    - 24 Panicle conspicuously drooping to one side *Bromus tectorum*
                    - 24 Panicle not conspicuously drooping to one side.
                      - 25 Lemmas 25–30 mm long ..... *Bromus diandrus*
                      - 25 Lemmas 17–20 mm long ..... *Bromus sterilis*
          - 20 Plants perennial.
            - 26 Panicle branches ascending at first but rigidly spreading in fruit ..... *Bromus orcuttianus*
            - 26 Panicle branches drooping ..... *Bromus vulgaris*

- 19 Lemmas entire, awnless or awned from the tip.  
 27 Lemmas awned.  
 28 Plants annual.  
 29 Glumes glabrous, lemmas hairy ..... *Vulpia microstachys* var. *microstachys*  
 29 Both glumes and lemmas glabrous ..... *Vulpia microstachys* var. *pauciflora*  
 28 Plant perennial ..... *Festuca occidentalis*  
 25 Lemmas not awned.  
 30 Plants annual.  
 31 Lemmas with a tuft of cobwebby hairs at base ..... *Poa howellii*  
 31 Lemmas without a tuft of cobwebby hairs at base ..... *Poa annua*  
 30 Plant perennial.  
 32 Creeping rhizomes present; stems conspicuously flattened ..... *Poa compressa*  
 32 Creeping rhizomes absent ..... *Poa secunda*  
 1 Spikelets falling from the pedicels entire, jointed below the glumes.  
 33 Lemma and palea leathery or papery, very different in color and appearance from the glumes (panicum tribe).  
 34 Plant annual; second glume and sterile lemma glabrous ..... *Panicum capillare*  
 34 Plant perennial; second glume and sterile lemma with soft, shaggy hairs ..... *Panicum acuminatum*  
 33 Lemma and palea thin, transparent, much more delicate in texture than the glumes (agrostis tribe, in part).  
 35 Glumes long-awned ..... *Polypogon monspeliensis*  
 35 Glumes awnless ..... *Crypsis schoenoides*

*Achnatherum lemmonii* (Vasey) Barkworth – LEMMON'S NEEDLE-GRASS. Occasional tufted perennial on roadside banks and open forest floor. Late Apr. [*Stipa lemmonii* (Vasey) Scribn.]

*Agrostis avenacea* J.G.Gmel. – AVENS BENTGRASS. Locally abundant perennial on the strand of the lake. Mid May.

*Agrostis capillaris* L. – COLONIAL BENTGRASS. Perennial grass on the edge of the trail between the 0.5-mile post and Doon Creek and on the bank of the lake at Coutolenc Creek. Early Jul. [*A. tenuis* Sibth.; *Oswald 4357*]

*Agrostis exarata* Trin. – SPIKED BENTGRASS. Locally abundant perennial in a seepy area on the upper strand of the west side of Mosquito Creek. Early Jun.

*Agrostis stolonifera* L. – CREEPING BENTGRASS. Perennial grass between boat launch No. 1 and the end of the trail. Mid Jun. [Includes var. *palustris* (Huds.) Farw.]

*Aira caryophyllea* L. – SILVER EUROPEAN HAIRGRASS. Occasional delicate annual along the trail. Late Apr.

*Bromus carinatus* Hook. & Arn. var. *carinatus* – CALIFORNIA BROME. Locally common annual along the trail. Mid May.

*Bromus diandrus* Roth – RIPGUT BROME. Annual weed scattered along the trail. Late Apr.

*Bromus hordeaceus* L. – SOFT CHESS. Locally abundant annual along the trail and on the serpentine outcrop. Late Apr. [*Bromus mollis* L., *B. mollis* var. *leiostachys* Hartm., *B. racemosus* L.]

*Bromus madritensis* L. ssp. *rubens* (L.) Husn. – RED BROME. Common annual trailside weed. Late Apr.

*Bromus orcuttianus* Vasey – ORCUTT'S BROME. Occasional perennial in openings in brush along the trail. Mid May.

*Bromus sterilis* L. – POVERTY BROME. Weedy annual forming local colonies on the serpentine outcrop and at the 3-mile post. Late Apr.

*Bromus tectorum* L. – CHEATGRASS. Weedy annual on the serpentine outcrop. Late Apr.

*Bromus vulgaris* (Hook.) Shear – NARROW-FLOWERED BROME. Rare perennial found on a brushy bank near Mosquito Creek. Mid May.

*Crypsis schoenoides* (L.) Lam. – SWAMP PRICKLEGRASS. Tufted annual noted on moist grass bordering a drying pool on the border of the lake between boat launch No. 1 and Coutolenc Creek. Late Aug. [*Heleochloa schoenoides* (L.) Host]

*Cynosurus echinatus* L. – HEDGEHOG DOGTAIL. Annual weed along the trail. Mid May.

*Danthonia californica* Bol. var. *americana* (Scribn.) Hitchc. – CALIFORNIA OATGRASS. Perennial on the upper strand of the lake and on disturbed trail at the boat launch areas. Mid Jun.

*Deschampsia elongata* (Hook.) Munro – SLENDER HAIRGRASS. Perennial on trailside banks from boat launch No. 1 to the end of the trail. Early Jun.

*Elymus glaucus* Buckley var. *glaucus* – BLUE WILD-RYE. Tufted perennial at scattered locations along the trail. Late Apr.

*Elymus glaucus* ssp. *jepsonii* (Burt Davy) Gould – JEPSON'S WILD-RYE. Found at several locations along the hiking trail. Early Jun.

*Elymus stebbinsii* Gould – STEBBINS' WHEATGRASS. Locally abundant perennial in a small trailside opening past Coutolenc Creek. Mid Jun. [*Agropyron parishii* Scribn. & Sm. *A. laeve* (Scribn. & Sm.) Hitchc.]

*Festuca occidentalis* Hook. – WESTERN FESCUE. Common tufted perennial on trailside banks and open forest floor. Early Jun.

*Glyceria elata* (Nash) M.E. Jones – TALL MANNAGRASS. Rare grass on the edge of Mosquito Creek on the upstream side of the trail. Late Apr.

*Holcus lanatus* L. – COMMON VELVETGRASS. Common perennial along the edges of the trail and on the upper strand of the lake. Mid May.

*Melica aristata* Thurb. ex Bol. – AWNEED MELIC. Tufted perennial on forest floor at one location approaching Coutolenc Creek. Mid Jun.

*Melica harfordii* Bol. – HARFORD'S MELIC. Common perennial on trailside banks. Mid May.

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*Panicum acuminatum* Sw. var. *acuminatum* – WESTERN PANICUM. Tufted perennial on the upper strand of the lake at the boat launch areas. Mid May.

*Panicum capillare* L. – WITCHGRASS. Common annual forming extensive patches in moist places on the strand of the lake. Mid Jul.

*Poa annua* L. – ANNUAL BLUEGRASS. Common weedy annual along the trail. Mid Apr.

*Poa compressa* L. – CANADIAN BLUEGRASS. Locally abundant rhizomatous grass in loamy soil along Mosquito and Coutolenc Creeks just downstream from the trail. Mid Jun. [Oswald 4018]

*Poa howellii* Vasey & Scribn. – HOWELL'S BLUEGRASS. Rare annual found on a roadside bank near Coutolenc Creek. Mid Jun. [*P. bolanderi* Vasey ssp. *howellii* (Vasey & Scribn.) D.D.Keck; Oswald 4299]

*Poa secunda* J.Presl ssp. *secunda* – ONE-SIDED BLUEGRASS. Locally abundant tufted perennial on trailside banks between the 0.5-mile post and Doon Creek. Late Apr. [*P. scabrella* (Thurb.) Benth. ex Vasey]

*Polypogon monspeliensis* (L.) Desf. – ANNUAL BEARDGRASS. Locally common annual along drainages and on the seepy upper strand on the west side of the Mosquito Creek arm of the lake. Early Jul.

*Trisetum canescens* Buckley – NODDING OATGRASS. Occasional perennial on roadside banks at the boat launch areas. Mid May.

*Vulpia microstachys* (Nutt.) Munro var. *microstachys* – SMALL FESCUE. Locally abundant on roadside banks. Mid May. [*Festuca microstachys* Nutt.]

*Vulpia microstachys* var. *pauciflora* (Scribn. ex Beal) Lonard & Gould – FEW-FLOWERED FESCUE. Locally abundant annual on trail edges and banks. Late Apr. [*Festuca pacifica* Piper & *F. reflexa* Buckley]

#### TYPHACEAE – CATTAIL FAMILY

*Typha latifolia* L. – BROAD-LEAVED CATTAIL. Uncommon perennial forming small colonies on seeps and along creeks. Early Jul.

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| <i>Dichelostemma</i> , 33 | <i>Fumariaceae</i> , 23 | Hoary-mustard, 13        |
| Dock, 24                  | <i>Galium</i> , 28      | <i>Holcus</i> , 37       |
| Dogbane, 7                | <i>Gayophytum</i> , 22  | Honeysuckle, 14          |
| Dogbane family, 7         | <i>Genista</i> , 18     | Honeysuckle family, 14   |
| Dogtail, 37               | Gentian family, 20      | <i>Horkelia</i> , 27     |

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| Horsetail, 4             | Loosestrife, 21         | Monkey-flower, 30         |
| Horsetail family, 4      | Loosestrife family, 21  | Morning-glory, 16         |
| Horseweed, 10            | <i>Lotus</i> , 18       | Morning-glory family, 16  |
| Hound's-tongue, 13       | Lovage, 6               | Mugwort, 10               |
| Hyacinth, Wild, 34       | <i>Ludwigia</i> , 22    | Mule's-ears, 12           |
| Hydrophyllaceae, 20      | Lupine, 19              | Mullein, 30               |
| Hypericaceae, 20         | <i>Lupinus</i> , 19     | Mustard family, 13        |
| <i>Hypericum</i> , 20    | <i>Luzula</i> , 32      | Mustard, Hoary, 13        |
| <i>Hypochoeris</i> , 11  | Lythraceae, 21          | <i>Nasturtium</i> , 14    |
| Incense-cedar, 4         | <i>Lythrum</i> , 21     | <i>Navarretia</i> , 23    |
| Indian's-dream, 4        | Madder family, 27       | Needlegrass, 36           |
| Indian-chickweed, 22     | <i>Madia</i> , 12       | Oak, 19                   |
| Indian-pink, 15          | Madrone, 17             | Oak family, 19            |
| Indian-rhubarb, 29       | Mahala-mats, 26         | Oatgrass, 37, 38          |
| Indian-warrior, 30       | <i>Mahonia</i> , 12     | Old-man-in-the-spring, 12 |
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| <i>Iris</i> , 32         | <i>Malus</i> , 27       | Onion, 33                 |
| Iris family, 32          | Mannagrass, 37          | Ookow, 33                 |
| Jewelflower, 14          | Manzanita, 17           | Orchid family, 34         |
| Juncaceae, 32            | Maple, 5                | Orchid, Phantom, 34       |
| <i>Juncus</i> , 32       | Maple family, 5         | Orchidaceae, 34           |
| Klamathweed, 21          | Marsh-purslane, 22      | <i>Osmorhiza</i> , 6      |
| Knotweed, 24             | <i>Matricaria</i> , 10  | <i>Panicum</i> , 38       |
| Labiatae, 21             | Mayweed, 10             | Papaveraceae, 23          |
| <i>Lactuca</i> , 11      | <i>Medicago</i> , 19    | Pea, 18                   |
| Lady's-thumb, 24         | Medick, 19              | Pea family, 18            |
| Lamiaceae, 21            | Melic, 37               | <i>Pedicularis</i> , 30   |
| Larkspur, 25             | <i>Melica</i> , 37      | <i>Penstemon</i> , 30     |
| <i>Lathyrus</i> , 18     | <i>Melilotus</i> , 19   | <i>Peplis</i> , 21        |
| Leguminosae, 18          | <i>Mentha</i> , 21      | <i>Perideridia</i> , 6    |
| <i>Leontodon</i> , 11    | Milkweed, 7             | <i>Phacelia</i> , 20      |
| Lettuce, Wild, 11        | Milkweed family, 7      | Phlox family, 23          |
| <i>Libocedrus</i> , 4    | Milkwort, 23            | Pinaceae, 5               |
| <i>Ligusticum</i> , 6    | Milkwort family, 23     | Pine, 5                   |
| Liliaceae, 32            | <i>Mimulus</i> , 30     | Pine family, 5            |
| <i>Lilium</i> , 33       | Miner's-lettuce, 25     | Pineapple-weed, 10        |
| Lily, 33                 | Mint, 21                | Pinedrops, 17             |
| Lily family, 32          | Mint family, 21         | Pink, 15                  |
| <i>Lithocarpus</i> , 19  | <i>Minuartia</i> , 15   | Pink family, 14           |
| <i>Lithospermum</i> , 13 | Molluginaceae, 22       | <i>Pinus</i> , 5          |
| <i>Logfia</i> , 11       | <i>Mollugo</i> , 22     |                           |
| <i>Lonicera</i> , 14     | <i>Monardella</i> , 21  |                           |
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| <i>Piperia</i> , 34    | Rhamnaceae, 25           | Sow-thistle, 12            |
| Pipevine family, 7     | <i>Rhamnus</i> , 26      | <i>Spergularia</i> , 15    |
| Pipsissewa, 17         | <i>Rhododendron</i> , 17 | Spicebush, 14              |
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| <i>Plantago</i> , 23   | <i>Ribes</i> , 20        | Spike-rush, 32             |
| Plantain, 23           | <i>Rorippa</i> , 13      | Spurge, 17                 |
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| <i>Poa</i> , 38        | Rosaceae, 26             | St. John's-wort family,    |
| Poaceae, 34            | Rose, 27                 | 20                         |
| Poison-oak, 6          | Rose family, 26          | <i>Stachys</i> , 21        |
| Polemoniaceae, 23      | Rosinweed, 10            | Starflower, 25             |
| <i>Polygala</i> , 23   | Rubiaceae, 27            | Star-thistle, 10           |
| Polygalaceae, 23       | <i>Rubus</i> , 27        | <i>Stellaria</i> , 16      |
| Polygonaceae, 23       | <i>Rumex</i> , 24        | <i>Stephanomeria</i> , 12  |
| <i>Polygonum</i> , 24  | Rush, 32                 | Sticktight, 10             |
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| <i>Polypogon</i> , 38  | Salicaceae, 28           | Strawberry, 26             |
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| Poppy family, 23       | Salsify, 12              | Sumac family, 6            |
| <i>Populus</i> , 28    | Sandspurry, 15           | Sunflower family, 7        |
| <i>Portulaca</i> , 25  | Sandwort, 15             | Sweet-cicely, 6            |
| Portulacaceae, 24      | <i>Sanguisorba</i> , 27  | Sweet-clover, 19           |
| <i>Potentilla</i> , 27 | Sanicle, 6               | <i>Swertia</i> , 20        |
| Prettyface, 34         | <i>Sanicula</i> , 6      | Sword fern, 4              |
| Pricklegrass, 37       | Saxifragaceae, 29        | <i>Symphoricarpos</i> , 14 |
| Primrose family, 25    | Saxifrage family, 29     | Tan-oak, 19                |
| Primulaceae, 25        | Scrophulariaceae, 29     | <i>Taraxacum</i> , 12      |
| <i>Prunella</i> , 21   | Sedge, 31                | Tarweed, 12                |
| <i>Pseudotsuga</i> , 5 | Sedge family, 31         | <i>Tauschia</i> , 6        |
| <i>Pteridium</i> , 4   | Selfheal, 21             | Taxaceae, 5                |
| <i>Pterospora</i> , 17 | <i>Senecio</i> , 12      | <i>Taxus</i> , 5           |
| Purslane, 25           | <i>Silene</i> , 15       | <i>Tellima</i> , 29        |
| Purslane family, 24    | <i>Smilacina</i> , 34    | Thimbleberry, 27           |
| Pussy-ears, 33         | <i>Smilax</i> , 34       | Thistle, Bull, 10          |
| <i>Pyrolaceae</i> , 16 | Snapdragon, 29           | Thistle, Sow, 12           |
| <i>Quercus</i> , 19    | Snowberry, 14            | Thistle, Star, 10          |
| Ragwort, 12            | Soap-plant, 33           | Tinker's-penny, 20         |
| Ranunculaceae, 25      | <i>Solidago</i> , 12     | <i>Toxicodendron</i> , 6   |
| <i>Ranunculus</i> , 25 | Solomon's-seal, False,   | <i>Tragopogon</i> , 12     |
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| Rattlesnake-plantain,  | <i>Sonchus</i> , 12      | <i>Trientalis</i> , 25     |
| 34                     | Sorrel, 24               | <i>Trifolium</i> , 19      |

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| <i>Trisetum</i> , 38  | Violaceae, 30          | Willow-weed, 24        |
| <i>Triteleia</i> , 34 | Violet, 30             | Windmill-pink, 15      |
| Turkey-pea, 6         | Violet family, 30      | Wintercress, 13        |
| <i>Typha</i> , 38     | Vitaceae, 31           | Wintergreen family, 16 |
| Typhaceae, 38         | <i>Vitis</i> , 31      | Witchgrass, 38         |
| Umbelliferae, 6       | <i>Vulpia</i> , 38     | Wood-rush, 32          |
| Velvetgrass, 37       | Watercress, 14         | Woolly-sunflower, 11   |
| <i>Verbascum</i> , 30 | Waterleaf family, 20   | <i>Wyethia</i> , 12    |
| <i>Verbena</i> , 30   | Water-plantain, 31     | <i>Xanthium</i> , 12   |
| Verbenaceae, 30       | Water-plantain family, | Yampah, 6              |
| <i>Veronica</i> , 30  | 31                     | Yarrow, 9              |
| Vervain, 30           | Waterwort, 16          | Yellowcress, 13        |
| Vervain family, 30    | Waterwort family, 16   | Yew, 5                 |
| Vetch, 19             | Willow, 28             | Yew family, 5          |
| <i>Vicia</i> , 19     | Willow family, 28      |                        |
| <i>Viola</i> , 30     | Willow-herb, 22        |                        |

