

Flora of the Sierra Nevada Aquatic Research Laboratory

Annotated Catalog of Vascular Plants

Updated June 2013

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This updated catalog for the flora of the Sierra Nevada Aquatic Research Laboratory (SNARL) includes all vascular plants identified during field studies conducted from 1978 through spring 2013. Taxonomic nomenclature is mainly consistent with *The Jepson Manual*, Second Edition (Baldwin et al. 2012). The families, genera, and species are arranged alphabetically. The scientific name of each species is followed by a common name of popular usage. No attempt was made to determine all common names that might apply to a given species. Scientific names of native species are in **bold** type; those of introduced species are in plain type. Annotations for all taxa include: 1) life form (e.g., annual herb, perennial herb, etc.); 2) flower color; and 3) the general abundance and distribution at SNARL. For flowering plants, the approximate flowering period in the eastern Sierra is given. Locations of most landscape features mentioned in the text (e.g., headquarters building, stream control structure 3, etc.) and numbering of the stream control structures, are as shown on current maps of SNARL. The most recent previously applied scientific name is given in brackets. A voucher specimen deposited at a herbarium participating in the Consortium of California Herbaria (CCH) is cited for most taxa. A set of duplicate herbarium specimens is housed at SNARL.

DIVISION SPHENOPHYTA

Equisetaceae. Horsetail Family

Equisetum laevigatum A. Braun. Smooth Scouring Rush.

Rhizomatous perennial herb. Occasional in moist areas near Convict Creek, near the laboratory and other buildings. Also in sagebrush scrub at the east end of the reserve, and elsewhere. [*E. kansanum* J. Schaffn.] *Howald 1968* (UCR222933)

DIVISION PTEROPHYTA

Ophioglossaceae. Adder's Tongue Family

Botrychium simplex E. Hitchc. Yosemite Moonwort. Little Grape Fern.

Fern. Uncommon in meadow north of stream control structure 5. To be looked for in other meadow areas at SNARL. Most evident when fronds are mature in June to early July. No collection.

DIVISION CONIFEROPHYTA

Cupressaceae. Cypress Family

Juniperus grandis R.P. Adams. Western Juniper. Sierra Juniper.

Evergreen tree; leaves scale-like. Several individuals among the aspens west of the laboratory. [*J. occidentalis* Hook. ssp. *australis* (Vasek) A. & N. Holmgren] *Howald 2769* (UCR in progress)

Pinaceae. Pine Family

Pinus jeffreyi Grev. & Balf. Jeffrey Pine.

Evergreen tree; needles 3 per bundle. One tree east of building Q2; possibly planted. Native along Convict Creek upstream from SNARL. *Orr 417* (UCSB in progress)

DIVISION ANTHOPHYTA

Class Dicotyledonae

Amaranthaceae. Amaranth Family

Amaranthus blitoides S. Watson. Prostrate Amaranth. Procumbent Pigweed.

Annual herb, flowers green to reddish. First collected at SNARL in 1998. Common in areas of recent disturbance, especially near buildings and constructed stream channels. June to September. [*A. graecizans* L.] *Howald 1983* (UCR240393)

Apiaceae. Carrot Family

Angelica lineariloba A. Gray. Sierra Angelica. Sierra Soda Straw.

Perennial herb, corollas greenish white. Possibly not native to SNARL. Formerly, one plant in flower bed in front of laboratory, apparently a volunteer. In 1999, one plant observed in sagebrush vegetation near entrance road. July to August. No collection.

Lomatium nevadense (S. Watson) Coult. & Rose. Nevada Lomatium.

Perennial herb, corollas white. Uncommon in sagebrush scrub near southwestern corner of reserve. June to July. No collection.

Sphenosciadium capitellatum A. Gray. Ranger's Buttons. Swamp Whiteheads.

Perennial herb, flower heads white. Occasional along wet banks of Convict Creek. July to August. *Howald 2616* (UCR222447)

Asclepiadaceae. Milkweed Family

Asclepias speciosa Torrey. Showy Milkweed.

Perennial herb, flowers rose-pink. Several plants in dry soil at edge of meadow northeast of control structure 4. June to July. [*A. giffordii* Eastw.] *Howald 2019* (UCR in progress)

Asteraceae. Sunflower Family

Achillea millefolium L. White Yarrow. Yarrow Milfoil.

Perennial herb; ligules white. Common in moist areas of streambank woodland and in meadows. Late June to late August. [var. *lanulosa* (Nuttall) Piper] *Howald 2579* (UCR222900)

Agoseris monticola E. Greene. Mountain Agoseris.

Perennial herb; ligules yellow. Common in damp soil of meadows. Mid-June to late July. [*Agoseris glauca* (Pursh) Raf. var. *monticola* (E. Greene) Q. Jones] No collection.

Agoseris parviflora (Nuttall) D. Dietr. Short-beaked Agoseris.

Perennial herb; ligules yellow. Common in damp soil of meadows, especially at east end of reserve. Mid-June to late July. [*Agoseris glauca* (Pursh) Raf. var. *laciniata* (D. Eaton) Smiley] *Howald 2573* (UCR222904)

Ambrosia acanthicarpa Hook. Annual Bur-sage

Annual herb; heads greenish. One plant in vegetative condition observed near manmade stream channels in September 2010. *Howald 2656* (UCR223937)

Antennaria rosea E. Greene ssp. *confinus* (E. Greene) R. Bayer. Rosy Everlasting. Pussytoes.

Perennial, mat-forming; phyllaries pink. Uncommon, in wet soil along banks of Convict Creek on east island near control structure 6, and elsewhere at east end. Late May to early July. *Howald 2872* (UCR in progress)

Arnica parryi A. Gray. Nodding Arnica.

Perennial, rhizomatous; ligules yellow; pappus pale brown. Occasional to common in moist meadows near eastern boundary. Late June to late August. [*Arnica parryi* A. Gray ssp. *sonnei* (E. Greene) Maguire] *Howald 2005* (UCR223228)

Artemisia cana Pursh ssp. *bolanderi*. (A. Gray) G. Ward. Silver or Hoary Sagebrush.

Evergreen shrub, heads light green. Uncommon, southwest of stream control structure 5, and in the vicinity of stream control structure 6 (east end of reserve). August to September. *Howald 2626* (UCR224270)

Artemisia ludoviciana Nuttall ssp. *candicans* (Rydb.) Keck. Silver Wormwood.

Herbaceous perennial, rhizomatous; heads greenish. First collected at SNARL in 1998. Occasional in sagebrush scrub and drier meadow margins, especially in northeast corner. August to September. *Howald 2620* (UCR222453)

Artemisia tridentata Nuttall ssp. ***tridentata***. Great Basin Sagebrush. Big Sagebrush.

Evergreen shrub; heads greenish. Common, dominant of sagebrush scrub, in dry, well-drained soils; throughout much of SNARL. August to October. *Howald 2478* (UCR223229)

Chaenactis douglasii (Hook.) Hook. & Arn. var. ***douglasii***. Dusty Maidens.

Biennial to short-lived perennial; disk flowers cream. Occasional in open sites in sagebrush scrub, esp. southeast corner. July to August. [var. *rubricaulis* (Rydb.) Ferris] *Howald 2611* (UCR222446)

Chrysothamnus viscidiflorus (Hook.) Nuttall ssp. ***viscidiflorus***. Sticky Rabbit-brush.

Evergreen shrub; ray flowers bright golden yellow. Occasional in sagebrush scrub. August to October. *Howald 2646* (UCR223921)

Cirsium congdonii Moore & Franklin. Dwarf Thistle.

Stemless perennial; disk flowers ranging from bright pink to cream. Common in moist areas in meadows. A distinctive segregate from *C. scariosum* Nuttall. June to August. [*C. drummondii* Torrey & A. Gray] *Howald 2759* (UCR in progress)

Cirsium vulgare (Savi) Ten. Bull Thistle.

Annual herb; disk flowers dark pink. Uncommon, one small colony along north bank of flood bypass channel. First noted in 1980; not observed in 1998; observed in 2011-12. June to August. *Howald 2651* (UCR223926). Native to Europe. Noxious weed. Cal-IPC rates ecological impacts to wildlands as Moderate (Cal-IPC 2006). This species is C-rated by California Department of Food and Agriculture, meaning that it is a pest of known economic or environmental detriment, and is widespread (CDFA 2013).

Crepis intermedia A. Gray. Intermediate Hawksbeard.

Tap-rooted perennial; ray flowers bright yellow. Uncommon, a few plants in sagebrush vegetation near fence along southern boundary. July to August. Collection from outside SNARL fenceline, southwest corner. *Howald 2938* (UCR in progress)

Dieteria canescens (Pursh) Nutt. ssp. ***canescens***. Hoary Aster.

Suffrutescent perennial; ray flowers purple, disk flowers yellow. Uncommon, in dry soil near edge of aspen grove at west end and in vicinity of constructed stream channels. July to September. [*Machaeranthera canescens* (Pursh) A. Gray ssp. *canescens*] *Howald 2654* (UCR223924)

Ericameria nauseosa (Pallas) G. Nesom & G. Baird var. ***oreophila*** (A. Nelson) G. Nesom & G. Baird. Great Basin Rabbit-brush.

Evergreen shrub; disk flowers bright golden-yellow. Common at SNARL, especially near buildings, along the entrance road, and on meadow margins. August to October. [*Chrysothamnus nauseosus* (Pallas) Britton ssp. *consimilis* (E. Greene) Hall & Clem.] *Howald 2477* (UCR222945)

***Erigeron canadensis* L.** Horseweed.

Annual herb; ray flowers inconspicuous, disk and ray flowers cream to light yellow. Occasional to common in disturbed areas, especially in open ground around headquarters building, and along trails west of the laboratory. June to August. [*Conyza canadensis* (L.) Cronq.] *Howald 2657* (UCR223927)

***Erigeron divergens* Torr. & A. Gray.** Spreading Fleabane

Annual herb; ray flowers light purple, disk flowers yellow. Uncommon. Observed only in "lawn" north of headquarters building. First detected in 2010. June to July. *Howald 2633* (UCR224278)

Erigeron glacialis* (Nutt.) A. Nelson var. *glacialis Wandering Fleabane.

Rhizomatous perennial; ray flowers purple, disk flowers yellow. Occasional on moist banks of Convict Creek and in meadows. July to September. [*Erigeron peregrinus* (Pursh) E. Greene var. *callianthemus* (E. Green) Cronq.] *Howald 2622* (UCR222451)

***Erigeron lonchophyllus* Hooker.** Short-rayed Aster.

Perennial herb, rhizomatous; disk flowers yellow, ray flowers pale lavender. Scattered along banks of Convict Creek, west island, and in wet meadows at east end of SNARL. August to September. [*Trimorpha lonchophylla* (Hook.) G. Nesom] *Howald 2638* (UCR223946)

***Gnaphalium palustre* Nuttall.** Pearly Everlasting.

Annual herb; heads fuzzy. Occasional in moist open sites and along moist banks of Convict Creek. July to August. *Howald 2627* (UCR224274)

***Lactuca serriola* L.** Prickly Lettuce.

Annual herb; ray flowers light yellow. Native to Europe. Uncommon, a few plants in disturbed area within sagebrush scrub, approximately 50 meters east of building Q2. First collected in 1980. June to August. *Orr 401* (UCSB in progress)

***Pleiocanthus spinosus* (Nuttall) Rydb.** Thorny Skeletonweed.

Subshrub; ray flowers light pink. First identified at SNARL in 1998. Uncommon in sagebrush scrub along road to constructed stream channels. August to September. [*Stephanomeria spinosa* (Nuttall) Tomb.] *Howald 2011* (UCR223221)

***Senecio hydrophilus* Nuttall.** Alkali-marsh Butterweed.

Perennial herb; disk and ray flowers yellow. Common in wettest parts of meadows at east end and along wet banks of Convict Creek. August to September. *Howald 2621* (UCR222452)

***Solidago elongata* Nuttall.** West Coast Canada Goldenrod.

Perennial herb; disk flowers golden-yellow. Common in moist sites, especially near Convict Creek. August to October. [*Solidago canadensis* L. ssp. *elongata* (Nuttall) Keck] *Howald 2006* (UCR223224)

***Stephanomeria exigua* Nuttall var. *exigua*.** Small Wire-lettuce.

Annual herb; ray flowers white to light pink. Occasional in sagebrush scrub, southeast corner. July-August. *Howald 2605* (UCR222445)

***Stephanomeria pauciflora* (Nuttall) Nelson var. *pauciflora*.** Few-flowered Wire-lettuce.

Occasional in sagebrush scrub, especially along southern border. Late July to mid-September. No collection.

Symphotrichum spathulatum* (Lindl.) G.L. Nesom var. *spathulatum Western Mountain Aster.

Rhizomatous perennial; ray flowers purple, disk flowers yellow. Occasional in wet meadows at east end of SNARL. [*Aster occidentalis* (Nutt.) Torr. & A. Gray] *Howald 2908* (UCR in progress)

***Taraxacum officinale* L.** Common Dandelion.

Perennial with deep tap root; ray flowers yellow. Common in meadow areas, especially at east end, and near buildings. May to July. [*T. laevigatum* (Willd.) DC.] *Howald 2552* (UCR222968). Native to Europe. Invasive weed. Reviewed by Cal-IPC (2006) but not listed because it was considered primarily a turf weed in California. However, in eastern California it is a serious invader of meadows.

***Tetradymia canescens* DC.** Spineless Horsebrush.

Shrub; disk flowers light yellow. First collected at SNARL in 1998. Uncommon in sagebrush scrub. August to September. *Howald 2625* (UCR222448)

***Tragopogon dubius* Scop.** Goat's Beard.

Tap-rooted annual or biennial herb; ray flowers light yellow. First observed at SNARL in 1996. Large patch in northeast corner of reserve was removed in 1998. June to July. *Howald 1966* (UCR222935). Native to Europe. Invasive weed. Reviewed by Cal-IPC (2006) but not listed because it was identified as a minor component of disturbed areas. In eastern California it infests dry meadow margins, especially those that are grazed.

Betulaceae. Birch Family

***Betula occidentalis* Hook.** Copper or Water Birch.

Large shrub, evergreen; bark coppery; inflorescences greenish. Common on banks of Convict Creek. May to June. [*B. fontinalis* Sarg.] *Howald 2476* (UCR222946)

Boraginaceae. Borage Family

***Cryptantha circumscissa* (Hook. & Arn.) I. Johnston var. *circumscissa*.** Cushion Cryptantha.

Compact cushion-like annual herb; corollas white, flowers very small. Common in sagebrush scrub, especially open sites. Late May to July. *Howald 2610* (UCR 222423)

Cryptantha simulans E. Greene. Pinewoods Cryptantha.

Annual herb; corollas white. Common in open sites along roads and in sagebrush scrub. June to July. *Howald 2589* (UCR222905)

Lappula redowskii (Hornem.) E. Greene var. ***redowskii***. Western Stickseed.

Annual herb; corollas white. Common in disturbed sites in sagebrush scrub, near buildings and along roads. June to early August. *Howald 2584* (UCR222897)

Tiquilia nuttallii (Hook.) A. Richardson. Nuttall's Coldenia. Annual Tiquilia.

Annual herb; corollas light pink. Common in open or disturbed sites in sagebrush scrub, especially near roads and buildings and in vicinity of constructed stream channels. Late May to August. [*Coldenia n.* Hook.] *Howald 2587* (UCR222438)

Brassicaceae. Mustard Family

Arabis eschscholtziana Ledeb. Hairy Rockcress.

Biennial to perennial herb; petals white to pink. Occasional in meadows north of Convict Creek. June to July. [*Arabis hirsuta* (L.) Scop. var. *glabrata* Torrey & A. Gray] *Howald 1961* (UCR222926)

Boechera puberula (Nutt.) Dorn. Silver Rockcress.

Perennial herb; petals white to lavender. Uncommon in patches of sagebrush scrub north of control structure 3. July to early August. [*Arabis puberula* Torrey & A. Gray] *Howald 2559* (UCR222964)

Boechera pulchra (S. Watson) W.A. Weber. Beautiful Rockcress.

Perennial, woody at the base; petals purple to white. Uncommon in sagebrush scrub in southwestern part of SNARL. June to July. [*Arabis pulchra* M. Jones] *Howald 2560* (UCR222963)

Caulanthus pilosus S. Watson. Chocolate Drops.

Annual herb; corollas brownish-purple. First identified at SNARL in 1990. Uncommon in sagebrush scrub in southwest corner of reserve. May to June. *Howald 1750* (UCR222939)

Descurainia longipedicellata (E. Fourn.) O.E. Schulz. Tansy Mustard.

Annual herb; petals yellow. Common in disturbed sites in sagebrush scrub, near buildings, along trails and entrance road. Mid-May to June. [*Descurainia incisa* (A. Gray) Britton ssp. *filipes* (A. Gray) Rollins] *Howald 2590* (UCR222425)

Erysimum perenne (Coville) Abrams. Sierra Wallflower.

Perennial herb; petals bright yellow. Occasional in sagebrush vegetation in southeast part of property. May to June. [*Erysimum capitatum* (Douglas) E. Greene ssp. *perenne* (Cov.) R. Price] *Howald 2556* (UCR222969)

Lepidium densiflorum Schrad. Peppergrass.

Annual herb; petals white. Common in disturbed areas along entrance road and around buildings. May to August. [*L. d.* Schrad. var. *macrocarpum* G. Mulligan] *Orr 196* (UCSB in progress)

Lepidium virginicum L. Virginia Peppergrass.

Annual herb; petals white. Common in “lawn” west of headquarters building and in other disturbed sites. June to July. *Howald 2586* (UCR222436)

Rorippa sphaerocarpa (A. Gray) Britton. Yellow-cress.

Decumbent annual herb; petals light yellow. Uncommon on exposed sandy shore of Convict Creek, and in wet low-lying areas in eastern meadow. June to September. [*R. obtusa* (Nuttall) Britton] *Howald 2637* (UCR223945)

Sisymbrium altissimum L. Tumble-mustard.

Annual herb; petals yellow. Common in disturbed areas, especially along entrance road, near constructed stream channels, and near buildings. May to August. *Howald 2549* (UCR222959). Native to Europe. Invasive weed in the Great Basin.

Cactaceae. Cactus Family

Opuntia polyacantha Haw. var. *erinacea* (Engelm. & J.M. Bigelow) B.D. Parfitt. Mojave Prickly-pear.

Stem succulent; petals shiny, light yellow. A few individuals in sagebrush scrub in southwestern section of Reserve. Occasional in sagebrush scrub south of SNARL boundary fence. June to July. [*Opuntia erinacea* Engelm. & Bigel. var. *utahensis* (Engelm.) L. Benson] *Orr s.n.* (UCSB in progress)

Caprifoliaceae. Honeysuckle Family

Symphoricarpos rotundifolius A. Gray var. *rotundifolius*. Snowberry.

Shrub; corollas white and pink. Uncommon, a few plants in sagebrush scrub near the eastern boundary. June to July. [*S. vaccinoides* Rydb.] *Howald 2545* (UCR222961)

Caryophyllaceae. Pink Family

Silene vulgaris (Moench) Garcke. Bladder Campion.

Annual herb; corollas white. Uncommon, one plant seen in 1996 near steps to east dormitory entrance. Native to Europe. Possibly brought in by visitor from Central Valley or San Francisco Bay Area since this introduced plant is not noted from the eastern Sierra in *The Jepson Manual, Second Edition* (Baldwin et al. 2012). No collection.

Stellaria longipes Goldie ssp. *longipes*. Long-stalked Starwort.

Perennial herb; corollas white. Occasional in wet soil along banks of Convict Creek and in low-lying wet meadow areas. June to July. *Howald 2575* (UCR222426)

Chenopodiaceae. Goosefoot Family

Chenopodium hians Standl. Goosefoot.

Annual herb; flowers green, scurfy. Common in disturbed areas, especially along roads and dirt trails. July to August. [*Chenopodium incognitum* Wahl.] *Howald 2632* (UCR224279)

Dysphania botrys L. Jerusalem-oak.

Annual herb; flowers green. Occasional in disturbed areas. June to August. Native to Europe. [*Chenopodium botrys* L] *Howald 2817* (UCR in progress)

Monolepis spathulata A. Gray. Club-leaved Monolepis.

Prostrate annual herb; flowers green and red. Common in wet open sites in meadows, especially on soil recently churned by pocket gophers, and along banks of flood bypass channel. June to August. *Howald 2595* (UCR222432)

Salsola tragus L. Tumbleweed. Russian Thistle.

Annual herb. Occasional along entrance road, near buildings and in vicinity of constructed stream channels. First collected in 1980. Management goal is to remove new infestations promptly. July to October. [*S. iberica* Sennin & Pau] *Howald 2911* (UCR in progress). Native to Eurasia. Highly invasive weed. Cal-IPC (2006) rates the impacts to wildlands (on a statewide basis) as Limited because this species is restricted to eastern California.

Cornaceae. Dogwood Family

Cornus sericea ssp. *sericea*

Deciduous shrub. First collected at SNARL, in vegetative condition, in 2010, at small bridge over Convict Creek, north of residence building Q3. *Howald 2639* (UCR223947)

Elaeagnaceae. Oleaster Family

Shepherdia argentea (Pursh) Nuttall. Buffalo-berry.

Evergreen large shrub, flowers greenish. First collected at SNARL in July 2010, in northwest corner of property, near Convict Creek. *Howald 2592* (UCR222437)

Euphorbiaceae. Spurge Family

Chamaesyce serpyllifolia (Pers.) Small. ssp. *serpyllifolia*. Thyme-leaved Spurge.

Prostrate to ascending annual; floral appendages white. Common in dry disturbed areas near buildings, cracks in asphalt, and along trail to west end. July to September. [*Euphorbia* s. Pers.] *Howald 2474* (UCR223227)

Fabaceae. Pea Family

Astragalus canadensis L. var. *brevidens* (Gand.) Barneby. Canada Milkvetch.

Perennial herb; corollas cream-colored. Common near Convict Creek, on meadow borders and in moist sites in sagebrush scrub. Identification determined by Dr. Rupert C. Barneby, New York Botanical Garden. July to August. *Howald 2580* (UCR222907)

Astragalus purshii Hook. var. *tinctus* M.E. Jones. Woolly-pod.

Prostrate, woody-rooted perennial herb; corollas reddish-purple. Occasional in open sites in sagebrush scrub, especially near eastern end. Common outside northern fence in drier sagebrush sites. [var. *longilobus* M.E. Jones] *Howald 2557* (UCR222966)

Lupinus argenteus Pursh var. *argenteus*. Spurred Lupine.

Perennial herb; corollas blue-violet, banner spot white. First collected at SNARL in 1998. Uncommon in sagebrush scrub at east end. July to August. [var. *tenellus* (G. Don) D. Dunn] *Howald 1984* (UCR222944)

Lupinus argenteus Pursh var. *meionanthus* (A. Gray) Barneby. Silver Lupine.

Perennial herb; corollas blue-violet, banner spot white. First identified at SNARL in 1996. Formerly, a few plants along road, just inside entrance to SNARL, but these were eliminated during repaving in 1998. Uncommon along Mt. Morrison Road, east of entrance to SNARL (outside property boundary). July to August. [*L. m.* A. Gray] Collection from Mt. Morrison Road, outside of SNARL. *Howald 2948* (UCR in progress)

Lupinus lepidus Douglas var. *confertus* (Kellogg) C. Smith. Kellogg's Prairie Lupine.

Perennial herb; corollas blue-violet, banner spot white. Abundance has fluctuated since the 1970s from very common in some years to sparse in others. Found in understory of aspen groves and riparian woodland, drier sites in meadows and, formerly, near buildings, especially in disturbed areas with moist to dry soil. Plants with pink flowers have been seen. July to August. *Howald 1756* (UCR222929)

Lupinus nevadensis A. Heller. Nevada Lupine.

Perennial herb; corollas blue-violet. Uncommon, in sagebrush scrub at east end of property. July. *Howald 1985* (UCR222943)

Lupinus polyphyllus Lindley var. *burkei* (S. Watson) C. Hitchc. Meadow Lupine.

Perennial herb; corollas dark blue-violet. Common in wet places in meadows and especially on banks of Convict Creek. July to August. [ssp. *superbus* (Heller) Munz] *Howald 2576* (UCR222902)

Melilotus alba Medikus. White Sweet-clover.

Annual herb; corollas white. A few plants formerly along trail near stream control structure 1. Native to Eurasia. July to August. This species has become much more common in the Eastern Sierra in recent years. No collection.

Trifolium longipes Nuttall var. *nevadense* Jepson. Long-stalked Clover.

Perennial herb; corollas white to pink. Common in moist understory of streambank woodland and in meadows. June to July. *Howald 2600* (UCR222419)

Trifolium wormskioldii Lehm. Cow Clover.

Perennial herb; corollas reddish-purple. Occasional in wet places. June to July. *Howald 2574* (UCR222903)

Vicia americana Willd. ssp. *americana*. American Vetch.

Sprawling perennial; corollas reddish-purple. Formerly, several plants in flower beds in front of laboratory. July to August. [*V. a.* Muhl. var. *americana*] *Orr 198* (UCSB in progress)

Gentianaceae. Gentian Family

Gentianopsis holopetala (A. Gray) H. Iltis. Sierra Gentian.

Annual or perennial herb; corollas deep blue-violet. Scattered colonies in wet soil of eastern meadows. August to September. [*Gentiana h.* (A. Gray) Holm.] *Howald 2643* (UCR223929)

Grossulariaceae. Gooseberry Family

Ribes cereum Douglas var. *cereum*. Wax Currant.

Evergreen shrub; corollas light pink. Occasional in sagebrush scrub. June to July. *Howald 2565* (UCR222913)

Hydrophyllaceae. Waterleaf Family

Nama densum Lemmon. Matted Nama.

Annual herb; corollas dull white. Common along sides of entrance road and in other open disturbed sites. June to July. *Howald 2551* (UCR222957)

Phacelia bicolor S. Watson var. *bicolor*. Bicolored Phacelia.

Annual herb; corollas yellow at base, blue distally. Common in open sites in sagebrush scrub, also along edges of aspen grove at the western end. A few individuals with white and yellow corollas have been seen in southwest corner. Late May to July. *Howald 2548* (UCR222956)

Lentibulariaceae. Bladderwort Family

Utricularia minor L. Lesser Bladderwort.

Submerged carnivorous aquatic plant with bladders that trap aquatic invertebrates. Uncommon, found in a few small pools just south of control structure 6; with *Stuckenia filiformis*. Only sterile material has been collected. Flowering individuals have not been seen. Plants not found in dry years. Most recently observed in 2011. *Orr 405* (UCSB in progress). SNARL is the only documented locality for this species in Mono County (CCH 2013).

Loasaceae. Sandpaper Plant Family

Mentzelia congesta Torrey & A. Gray. Ventana Stick-leaf.

Annual herb; petals shiny, bright yellow with orange spot at base; inflorescence bracts white-scarious more than half their length. Occasional in sagebrush scrub, especially along southern border, growing with the more common *M. montana*. June to July. *Howald 1962* (UCR222925)

Mentzelia montana (Davidson) Davidson. Sandpaper Plant.

Annual herb; petals shiny, yellow; bracts with small white area at base. Common in sagebrush scrub, growing with the less common *M. congesta*. May to July. *Howald 1963* (UCR222938)

Malvaceae. Mallow Family

Malva neglecta Wallr. Common Mallow.

Annual herb; corollas pink. Occasional in disturbed areas near buildings. June to August. Native to Eurasia. No collection.

Montiaceae. Miner's Lettuce Family

Calyptridium roseum S. Watson. Rosy Calyptridium.

Annual herb; plant pink. Uncommon, in gravel west of laboratory. First collected at SNARL in 2013. May. *Howald 2946* (UCR in progress)

Onagraceae. Evening-Primrose Family

Epilobium ciliatum Raf. ssp. *ciliatum*. American Willow-herb.

Perennial herb; corollas rose-purple. Occasional in moist to wet soil near Convict Creek. June to July. [*E. adenocaulon* Hausskn.] *Howald 2635* (UCR224276)

Epilobium oregonense Hausskn. Oregon Willow-herb.

Perennial herb; corollas pink. In early 1980s, occasional in wet soil of fish observation ponds. More recently, observed on wet banks of Convict Creek, northeast corner of property. June to July. *Howald 2619* (UCR222454)

Gayophytum diffusum Torrey & A. Gray ssp. *parviflorum* Lewis & Szweykowski.

Diffuse Gayophytum.

Annual herb; corollas white and pink. Common in moist open areas near aspen groves, and along roads and trails. Late June to mid-August. *Howald 2473* (UCR224976)

Oenothera californica (S. Watson) S. Watson ssp. *avita* W.M. Klein. California Evening-primrose.

Perennial herb; petals white, fading pink; flowers open in evening. Uncommon, in scattered small patches in sagebrush scrub. A few plants near concrete fish tanks west of the laboratory. Also along Mt. Morrison Road east of SNARL boundary. Late May to early August. [*O. a.* (Klein) Klein] *Howald 2540* (UCR222951)

Oenothera elata Kunth ssp. ***hirsutissima*** (S. Watson) W. Dietr.
Hooker's or Yellow Evening-primrose.

Perennial herb; petals yellow; flowers open in the evening. Occasional to common along entrance road and trails, on the banks of Convict Creek, and in moist ground in other open sites. Late June to late August. [*O. hookeri* Torrey & A. Gray ssp. *angustifolia* (Gates) Munz] *Howald 2631* (UCR223949)

Papaveraceae. Poppy Family

Argemone munita Durand & Hilg. Prickly Poppy. Fried Egg Flower.

Biennial to short-lived perennial herb; petals white, crinkled. Several plants along entrance road, more common outside reserve near Highway 395. July to August. [ssp. *rotundata* (Rydb.) Ownbey] *Howald 2758* (UCR in progress)

Parnassiaceae. Grass-of-Parnassus Family

Parnassia parviflora DC. Small-flowered Grass-of-Parnassus.

Delicate perennial herb; petals cream. Uncommon; in wet soil along streamlets in meadow areas at eastern end of reserve. July to August. [*Parnassia californica* (A. Gray) E. Greene] *Howald 2644* (UCR223928). Designated by the California Native Plant Society (CNPS) and the California Natural Diversity Database (CNDDB) as California Rare Plant Rank 2.2, meaning that it is rare and endangered in California, and more common in other states where it occurs.

Polemoniaceae. Phlox Family

Aliciella leptomeria (A. Gray) J.M. Porter. Sand Gilia.

Annual herb; corolla pink. Uncommon, dry, sandy, open sites in sagebrush scrub. [*Gilia leptomeria* A. Gray] *Howald 2566* (UCR222916)

Allophyllum gilioides (Benth.) A.D. & V. Grant ssp. ***violaceum*** (Heller) Day.
Straggling Allophyllum.

Annual herb; corollas deep blue-violet. Common in moist open areas in aspen groves west of laboratory. June to July. [*A. v.* (A. Heller) A. & V. Grant] *Orr 189* (UCSB in progress)

Eriastrum wilcoxii (A. Nels.) Mason. Wilcox's Eriastrum.

Annual herb; corollas light blue. Common in sagebrush scrub, especially in open areas and lightly disturbed soils. Late May to July. *Howald 2585* (UCR222906)

Linanthus pungens (Torrey) J.M. Porter & L.A. Johnson. Prickly Phlox.

Low shrub; corollas white. Uncommon in sagebrush scrub. Late May to July. [*Leptodactylon pungens* (Torrey) Rydb] No collection.

Phlox stansburyi (Torrey) Heller. Stansbury Phlox.

Perennial herb; corollas pink and white. Common in sagebrush scrub, especially in southwestern corner of SNARL. Mid-May to July. *Howald 2537* (UCR222952)

Polygonaceae. Buckwheat Family

Chorizanthe brevicornu Torrey var. *spathulata* (Rydb.) Hitchc. Brittle Spineflower.

Annual herb; flowers yellow-green. Occasional near constructed stream channels, and in open sites in sagebrush scrub near southern boundary of reserve. Late May to July. *Howald 2609* (UCR222427)

Eriogonum baileyi S. Watson var. *baileyi*. Bailey's Wild Buckwheat.

Annual herb; corollas pink and white. Common in sagebrush scrub, especially along roads and trails and in disturbed sites around buildings. July to early September. *Howald 1972* (UCR222932)

Eriogonum spergulinum A. Gray var. *reddingianum* (M.E. Jones) J. Howell.
Spurrey Wild Buckwheat.

Annual herb; corollas pink. Occasional in open or disturbed areas in sagebrush scrub, especially in southeastern section of reserve. July to August. *Howald 2608* (UCR222442)

Eriogonum umbellatum Torrey var. *nevadense* Gand. Nevada Sulfur Buckwheat.

Evergreen sub-shrub; corollas bright yellow. Occasional in sagebrush scrub, mainly in southeastern section. More common east of SNARL boundary. July to September. No collection.

Polygonum aviculare L. ssp. *depressum* (Meisn.) Arcang. Common Knotweed.

Annual herb; flowers red and green. Occasional in disturbed ground near constructed stream channels and headquarters building. Native to Europe. July to September. [*Polygonum arenastrum* Boreau] *Howald 1987* (UCR222941)

Polygonum sawatchense Small ssp. *sawatchense*. Douglas's Knotweed.

Annual herb; flowers green and white. Common in moist to dry sites along edges of meadows and especially in disturbed areas near aspen groves west of laboratory. July to August. [*Polygonum douglasii* E. Greene var. *johnstonii* (Munz) J. Hickman] *Howald 2615* (UCR222456)

Rumex paucifolius S. Watson. Alpine Sheep Sorrel.

Perennial herb; flowers green. Formerly, a few plants in empty fish observation ponds. Not observed since the 1980s. July to September. No collection.

Rumex triangulivalvis (Danser) Rech. f. Willow Dock.

Perennial herb; flowers green. Occasional in moist meadow areas. July to August. [*Rumex salicifolius* J.A. Weinm. var. *triangulivalvis* (Danser) Hitchc.] No collection.

Ranunculaceae. Buttercup Family

Aconitum columbianum Nuttall. Monkshood.

Perennial herb; flowers blue-violet to white streaked with purple. Occasional along Convict Creek, especially on edges of willow thickets. July to August. No collection.

Aquilegia formosa DC. Red Columbine.

Perennial herb; flowers red and yellow. Occasional along banks of Convict Creek, especially near the western end. July to August. [var. *truncata* (F. & M.) Baker] *Howald 2594* (UCR222441)

Ranunculus aquatilis L. var. *diffusus* With. Aquatic Buttercup.

Floating and submerged aquatic herb; petals white. Common in constructed stream channels; uncommon in Convict Creek. July to August. [*Ranunculus aquatilis* L. var. *subrigidus* (Drew) Breitung] *Howald 1988* (UCR222940)

Ranunculus cymbalaria Pursh. Alkali Buttercup.

Stoloniferous perennial; petals bright yellow. Uncommon in low open sites in meadows in eastern half of the reserve. May to June. [*R. c.* var. *saximontanus* Fernald] *Howald 2554* (UCR222967)

Thalictrum fendleri A. Gray var. *fendleri*. Mountain Meadow-rue.

Perennial herb; flowers green. Occasional in moist soil near Convict Creek. Late June to July. *Orr 249* (UCSB in progress)

Rosaceae. Rose Family

Cercocarpus ledifolius Nuttall. Curl-leaf Mountain Mahogany.

Evergreen shrub; flowers greenish-brown. Uncommon. A few individuals in sagebrush scrub. Late May to June. *Howald 2876* (UCR in progress)

Drymocallis hansenii (E. Greene) Keck. Sticky Cinquefoil.

Perennial herb; petals cream to pale yellow. Uncommon, moist areas near Convict Creek and flood bypass channel. June to August. [*Potentilla glandulosa* Lindley ssp. *hansenii* (E. Greene) Keck] *Orr 357* (UCSB in progress)

Horkeliella congdonis (Rydb.) Rydb. Congdon's Little Horkelia.

Perennial herb; corollas white. Uncommon in moist sagebrush scrub. One colony along road west of the laboratory; also found at eastern end of reserve. July to August. [*Ivesia purpurascens* (S. Watson) Keck ssp. *c.* (Rydb.) Keck] *Howald 1965* (UCR222936)

Potentilla biennis E. Greene. Greene's Cinquefoil.

Biennial herb; petals light yellow. Occasional in moist, open, sandy areas of sagebrush scrub and meadows, and along trails to western end of reserve. Late May to August. *Howald 2753* (UCR in progress)

Potentilla gracilis Hook. var. *elmeri* (Rydb.) Jepson. Five-finger Cinquefoil.

Perennial herb; petals bright yellow. Common in moist places. June to August. [*P. pectinisecta* Rydb.; *P. flabelliformis* Lehm. var. *inyoensis* Jepson] *Howald 2578* (UCR222901)

Prunus andersonii A. Gray. Desert Peach.

Deciduous shrub; petals rose-pink. Several plants in sagebrush scrub near eastern and western boundaries of reserve. More common in sagebrush scrub outside of SNARL boundaries. May to June. *Howald 2562* (UCR222910)

Purshia tridentata (Pursh) DC. var. *tridentata*. Antelope Bitterbrush.

Evergreen shrub; petals pale yellow. Common dominant of sagebrush scrub. May to June. *Howald 2535* (UCR223220)

Rosa woodsii Lindley ssp. *ultramontana* (S. Watson) R.L. Taylor & MacBryde. Interior Wild Rose.

Deciduous shrub; petals rose-pink. Common in understory of aspen groves and in moist areas along and near Convict Creek. June to July. [*R. w.* Lindl. var. *ultramontana* (S. Watson) Jeps.] *Howald 2577* (UCR222911)

Salicaceae. Willow Family

Populus tremuloides Michaux. Quaking Aspen.

Deciduous tree; flowers greenish. Common near Convict Creek in a large grove west of the laboratory. May to June. *Howald 2757* (UCR in progress)

Populus trichocarpa Hooker. Black Cottonwood.

Deciduous tree; flowers greenish. Scattered along the flood bypass channel. May to June. [*P. balsamifera* L. ssp. *trichocarpa* (Torrey & A. Gray) Brayshaw] *Howald 2652* (UCR223923)

Salix exigua Nuttall. Narrow-leaved Willow.

Deciduous shrub; clonal from root shoots; twigs yellow to red-brown. Common. Forms dense thickets in wet places near Convict Creek. May to June. *Howald 2541* (UCR222953)

Salix lasiandra Benth. var. *caudata* (Nutt.) Sudw. Tail-leaf Willow.

Deciduous shrub; twigs yellow, gray, or red-brown; stipules leaf-like, glandular. Uncommon. One shrub observed on bank of Convict Creek, west end of reserve. May to June [*Salix lucida* Muhl. ssp. *caudata* (Nutt.) E. Murray] *Howald 2910* (UCR in progress)

Salix lutea Nuttall. Yellow Willow.

Deciduous shrub; twigs yellow-gray or yellow or gray-brown. Common in wet places near Convict Creek, especially in dense thickets north of the creek. May to June. [var. *watsonii* (Bebb) Jepson] *Howald 2020A, 2020B* (UCR223157, UCR223156)

Scrophulariaceae (sensu lato). Figwort Family

Castilleja chromosa Nelson. Desert Indian Paintbrush.

Perennial herb; bracts dark red. Very uncommon. Collected in sagebrush scrub in 1975 (*Howald 561*). Not seen 1980 through 2012. June to July. [*Castilleja angustifolia* (Nuttall) G. Don]

Castilleja miniata Hook. ssp. ***miniata***. Meadow Paintbrush.

Perennial herb; bracts scarlet. Common along Convict Creek; occasional in wet areas of meadows. Late June to early August. *Howald 2624* (UCR222450)

Mimulus floribundus Lindley. Floriferous Monkeyflower.

Annual herb; foliage hairy and slimy; corollas light yellow. Occasional in wet areas, especially in openings between willow thickets and in aspen grove west of the laboratory. Not seen since 1980s. June to July. *Orr 242* (UCSB in progress)

Mimulus guttatus DC. Common Monkeyflower.

Annual to rhizomatous perennial herb; corollas bright yellow. Formerly common in wet areas near Convict Creek. June to August. [*M. nasutus* E. Greene] *Orr 243* (UCSB in progress)

Mimulus mephiticus E. Greene. Skunk Monkeyflower.

Annual herb; corollas fuchsia. One plant found at SNARL, in sagebrush scrub, in July 1998, west of constructed stream channels. More common in open pumice soil from Mammoth area north to the Mono Basin. Late May to July. No collection.

Mimulus primuloides Benth. ssp. ***primuloides***. Primrose Monkeyflower.

Perennial herb with delicate rhizomes and stolons; corollas yellow. Occasional in wet, open sites in meadows, especially on the north side of Convict Creek. Late June to August. *Howald 2596* (UCR222429)

Pedicularis crenulata Benth. forma ***candida*** Macbr. Scalloped-leaved Lousewort.

Perennial herb, rhizomatous; corollas white. First recorded at SNARL in 1978. Censused annually 1980 to 1985; 1990 to 2012. Searches in likely habitat have found no plants outside SNARL boundaries within Convict Creek drainage or elsewhere in California. Late June to early August. *Howald 1755* (UCR222930). Designated by the CNPS and CNDDB as California Rare Plant Rank 2.2, meaning that it is considered rare and endangered in California, but is more common in other states where it occurs. The SNARL location is the only known location for this species in California.

Penstemon rostriflorus Kellogg. Scarlet Penstemon.

Perennial herb; corollas scarlet. Uncommon, a few plants have been observed along trail near western fork of Convict Creek (near control structure 1). July to August. [*P. bridgesii* A. Gray] *Orr 231* (UCSB in progress)

Penstemon rydbergii Nelson var. ***oreocharis*** (E. Greene) N. Holmgren. Meadow Penstemon.

Perennial herb; corollas violet. Occasional in moist, higher areas of meadows, especially in northeast corner near fenceline. More common just outside the northern boundary of the reserve. Usually violet-flowered, but a few pink-flowered individuals have been seen in northeast corner near fence. Mid-June to July. [*P. o.* E. Greene] *Howald 1964* (UCR222937)

Verbascum thapsus L. Woolly Mullein.

Perennial herb; corollas light yellow. Commonly establishing from seed in disturbed areas, especially along entrance road, near buildings, in flood bypass channel, on gopher-churned soil in meadows, and near constructed stream channels. Native to Eurasia. Invasive weed. Observations in Mono County indicate this species has the potential to invade relatively undisturbed meadows. Control efforts at SNARL are ongoing. July to August. No collection. Cal-IPC (2006) has rated its impacts to wildlands as Limited, based on the determination that these impacts are minor. However, at SNARL this species rapidly occupies open microsites created by mountain pocket gophers that otherwise would be colonized by a variety of native plant species, some more or less restricted to this ephemeral microhabitat.

Solanaceae. Nightshade Family

Nicotiana attenuata Torr. ex S. Watson. Coyote Tobacco.

Annual herb; corolla tube greenish, lobes white. Occasional along entrance road and in open sites in sagebrush scrub, and common in recently disturbed sites. July to August. *Howald 2607* (UCR222443)

Violaceae. Violet Family

Viola nephrophylla Greene. LeConte Violet.

Perennial herb; corollas blue-violet. Occasional along banks of streamlets in northeastern meadow. June to July. *Orr 406* (UCSB in progress)

Viola purpurea Kellogg ssp. *mohavensis* (M.S. Baker & J.C. Clausen) J.C. Clausen. Mojave Mountain Violet.

Perennial herb; upper 2 petals deep lemon yellow, lower 3 petals veined dark purple-brown. Uncommon in open sites in sagebrush scrub, near southern boundary fence. June. *Howald 2563* (UCR222909)

Viola purpurea Kellogg ssp. *venosa* (S. Watson) M.S. Baker & J.C. Clausen. Wild Mountain Violet.

Perennial herb; upper 2 petals deep lemon yellow, lower 3 petals veined dark purple-brown. Occasional in open sites in sagebrush scrub. More common outside of eastern boundary. Late May to June. [ssp. *geophyta* Baker & Clausen] *Howald 2544* (UCR222962)

Zygophyllaceae. Caltrop Family

Tribulus terrestris L. Puncture Vine. Goats' Heads.

Annual herb; petals yellow. First collected at SNARL in 1998; one plant found west of laboratory. July to early September. *Howald 1982* (UCR240394). Native to Mediterranean region. Invasive weed. Toxic to livestock. Now biologically controlled by introduced weevils. CDFA (2010) currently gives this species a "C" rating, meaning that it is a widespread detrimental weed whose control is at the discretion of the county agricultural commissioner.

DIVISION ANTHOPHYTA

Class Monocotyledonae

Cyperaceae. Sedge Family

Carex aurea Nutt. Golden Sedge.

Perennial herb; perigynium round, golden yellow-orange. Uncommon, moist meadows at east end of reserve. June. *Howald 2164* (UCR in progress)

Carex buxbaumii Wahlenb. Buxbaum's Sedge.

Perennial herb, rhizomatous; front of leaf sheath fibrous on lower leaves. A few colonies in boggy depressions and along the banks of Convict Creek. July to September. *Howald 2645* (UCR223944). Designated by the CNPS and CNDDDB as California Rare Plant Rank 4.2 (a "watch" list), meaning that it is not currently considered rare or endangered but could become so in the future if conditions change. SNARL is the only known location for this species in Mono County.

Carex douglasii Boott. Douglas's Sedge.

Perennial herb, rhizomatous. Common in moist to dry open areas around western aspen groves and in disturbed soils; also in moister portions of sagebrush scrub. May to July. *Howald 2877* (UCR in progress)

Carex pellita Willd. Woolly Sedge.

Rhizomatous perennial herb: perigynia hairy. Occasional in moist areas near Convict Creek and flood bypass channel. [*Carex lanuginosa* Michaux] *Howald 2647* (UCR223922)

Carex nebrascensis Dewey. Nebraska Sedge.

Rhizomatous perennial; rooted aquatic plant at SNARL; perigynia dark-striped. Uncommon, growing in water, flood bypass channel, near bridge to constructed stream channels. August to September. *Howald 2658* (UCR223918)

Carex utriculata Boott. Southern Beaked Sedge.

Rhizomatous perennial; perigynia flattened, dark-striped. Uncommon, saturated soil or shallow standing water, meadows at east end of reserve. August to September. [*C. rostrata* Stokes] *Howald 2630* (UCR224280)

Cyperus squarrosus L. Umbrella-sedge.

Annual herb; flowers light green. Occasional in open sites in meadows and along wet banks of flood bypass channel. [*C. aristatus* Rottb.] July to August. *Howald 2628* (UCR224273)

Eleocharis macrostachya Britton. Needle Spikerush.

Perennial, with rhizomes. Uncommon, man-made depression near picnic area. Not observed at SNARL since late 1970s. July to August. *Orr 274* (UCSB in progress)

Hydrocharitaceae. Waterweed Family

Elodea nuttallii (Planchon) H. St. John. Nuttall's Waterweed.

Floating and submerged aquatic herb; petals white. Common in Convict Creek at west end and in larger constructed stream channels. July to August. *Howald 1989* (UCR223226)

Iridaceae. Iris Family

Iris missouriensis Nuttall. Western Blue Flag. Wild Iris.

Rhizomatous perennial herb; rhizome short, thick; petals pale blue-violet, with dark veining. Common in meadows and sagebrush scrub bordering meadows. May to mid-June. *Howald 2553* (UCR222970)

Sisyrinchium halophilum E. Greene. Nevada Blue-eyed Grass.

Rhizomatous perennial herb; petals pale blue-violet. Common in low-lying meadows north of Convict Creek. May to June. *Howald 2597* (UCR222440)

Juncaceae. Rush Family

Juncus macrandrus Cov. Long-anthered Rush.

Rhizomatous perennial herb. Occasional in low-lying marshy area at eastern end, also along borders of Convict Creek and streamlets within meadows. July to August. No collection.

Juncus mexicanus Willd. Mexican Rush.

Rhizomatous perennial herb. Common in sagebrush scrub south of dormitory, wet clearings near aspen and willows in northwest corner and, formerly, around edges of fish observation ponds. June to August. *Howald 2558* (UCR222965)

Juncus orthophyllus Cov. Straight-leaved Rush.

Rhizomatous perennial herb. Occasional in moist to wet areas near Convict Creek. July to August. *Howald 2163* (UCR240395)

Liliaceae (sensu lato). Lily Family

Allium atrorubens S. Watson var. *cristatum* (S. Watson) D. McNeal. Dark Red Onion.

Bulb-forming perennial herb; corollas dark rose-pink. Very uncommon, openings in sagebrush scrub near southwestern corner. Not collected at SNARL since 2000 (CCH 2013). Late May to June. [var. *inyonis* (Jones) Ownbey & Aase] *Orr 171* (UCSB in progress). Designated by the CNPS and the CNDDB as CRPR 4.3, meaning it is not considered endangered at present, but its status should be monitored.

Allium bisceptrum S. Watson var. *bisceptrum*. Aspen Onion.

Bulb-forming perennial herb; corollas light pink. Common in understory of aspen groves and moist areas at western end of reserve. May to July. *Howald 2538* (UCR222949)

Calochortus bruneaunis Nelson & J.F. Macbr. Segoe Lily.

Bulb-forming perennial herb; petals white tinged lilac with dark red or purple arch above yellow nectary; stamens yellow to purple. Occasional in sagebrush scrub, especially along road to constructed stream channels. Mid-June to July. [*C. nuttallii* Torrey var. *b.* (Nels. & Macbr.) Ownbey] *Howald 1960* (UCR222928)

Fritillaria pinetorum Davidson. Mountain Fritillary.

Bulb-forming perennial herb; petals mottled green and brown. Very uncommon, a few plants found along eastern edge of aspen grove (west of laboratory) near tool shed. May to mid-June. No collection. Designated by the CNPS and the CNDDB as CRPR 4.3, meaning it is not considered endangered at present, but its status should be monitored.

Lilium kelleyanum Lemmon. Kelley's Lily.

Bulb-forming perennial herb; petals orange with black spots. Occasional on wet banks of Convict Creek. July to early August. *Howald 2593* (UCR222439)

Maianthemum stellata (L.) Desf. False Solomon's Seal.

Rhizomatous perennial; corollas white. Very common, forming colonies in drier sites on edges of meadows near Convict Creek. May to mid-July. [*Smilacina stellata* (L.) Desf.] *Howald 2536* (UCR222954)

Toxicoscordion paniculatum (Nuttall) Rydb. Sand-corn.

Bulb-forming perennial; corollas white. Very uncommon in sagebrush scrub along southern border. May to June. [*Zigadenus paniculatus* (Nuttall) S. Watson] *Orr 183* (UCSB in progress)

Orchidaceae. Orchid Family

Platanthera sparsiflora (S. Watson) Schltr. Sparse-flowered Bog-orchid.

Perennial herb; corollas light green. Occasional in moist sites in meadows and in moist soil near irrigation ditch running beside trail from laboratory to western fork of Convict Creek. June to July. [*Habenaria s.* S. Watson] *Howald 1967* (UCR222934)

Poaceae. Grass Family

Agropyron cristatum (L.) Gaertn. ssp. *pectinatum* (M. Bieb.) Tzvelev. Crested Wheatgrass.

Annual grass. A few plants observed in the 1980s. Invasive weed. Native to Europe, Mediterranean, Asia. July. [*Agropyron desertorum* (Fisch. ex Link) Schultes] No collection.

Agrostis scabra Willd. Rough Bent-grass.

Perennial grass, stems tufted. Uncommon in meadows. July. *Orr 441* (UCSB in progress)

Agrostis stolonifera L. Creeping Bent.

Perennial grass, stoloniferous. Uncommon, on wet banks of Convict Creek at western end of reserve. July to August. *Howald 2636* (UCR224275)

Bromus tectorum L. Cheat Grass. Downy Brome.

Annual grass. Formerly uncommon, along entrance road and near buildings. Now common in all disturbed sites, especially around constructed stream channels. Apparently increasing throughout the Eastern Sierra. Invasive weed that increases fire frequency in sagebrush scrub. Native to Eurasia. May to June. *Howald 2550* (UCR222958)

Deschampsia cespitosa (L.) P. Beauv. ssp. *cespitosa*. Tufted Hairgrass.

Perennial grass, stems tufted. Occasional in moist soil of large meadow at eastern end. Late July to September. *Howald 2598* (UCR222421)

Elymus cinereus Scribn. & Merr. Great Basin Wild-rye.

Clumped perennial grass. Common in dry soil of sagebrush scrub and in open areas. June to July. [*Leymus cinereus* (Scribn. & Merr.) A. Love] *Howald 2601* (UCR222430)

Elymus elymoides (Raf.) Swezey ssp. *elymoides*. Bottlebrush Squirreltail.

Perennial grass, stems clumped. Occasional in dry sites in sagebrush scrub near northern fence. May to August. [*Sitanion hystrix* (Nuttall) J.G. Sm.] *Howald 2655* (UCR223925)

Elymus triticoides Buckley. Creeping Wildrye. Beardless Wildrye.

Perennial grass, with creeping rhizomes. Common in moist to dry soil in sagebrush and riparian areas at western end of reserve. June to August. [*Leymus triticoides* (Buckley) Pilger ssp. *triticoides*] *Howald 2581* (UCR222435)

Eragrostis species. Love Grass.

Annual grass. Very uncommon, on edge of entrance road near headquarters building. September to October. *Howald 2475* (UCR222948)

Festuca rubra L. Red Fescue.

Perennial grass, with short rhizomes. Occasional, in meadow on north side of stream control structure 4. July. First collected at SNARL in 2010. *Howald 2599* (UCR222420)

Muhlenbergia andina (Nuttall) Hitchc. Hairy or Foxtail Muhly.

Perennial grass, with creeping rhizomes. Occasional in sandy soil in sagebrush-meadow transition zone near northeastern corner of reserve. July to August. No collection.

Muhlenbergia asperifolia (Trin.) Parodi. Scratchgrass.

Perennial grass, rhizomatous. Common in moist soil near Convict Creek at western end of reserve, in understory of aspen grove west of laboratory, and near constructed stream channels. July to August. *Howald 2606* (UCR222444)

Muhlenbergia minutissima (Steud.) Swall. Small Muhly

Annual grass. Uncommon, in dry meadow near northeast corner of reserve, and in moist sand near flood bypass channel. July to September. *Howald 2629* (UCR224272)

Muhlenbergia richardsonis (Trin.) Rydb. Mat Muhly.

Mat-forming perennial grass, rhizomatous. Occasional in sagebrush scrub and dry sites in meadows. July to September. *Howald 2602* (UCR22434)

Phleum pratense L. Timothy Hay.

Annual grass. Uncommon, in sandy soil of sagebrush-meadow transition area in northeastern corner, and in meadows elsewhere. Widely cultivated for forage. Native to Eurasia. Late June to September. *Howald 2640* (UCR223948)

Poa palustris L. Fowl Bluegrass.

Perennial grass, tufted or with stolons. Common in moist soil at western end of reserve around aspens and willows, and elsewhere. Native to Europe. June to August. *Howald 2569* (UCR222915)

Poa pratensis L. ssp. *pratensis* Kentucky Bluegrass.

Perennial grass, rhizomatous. Scattered in moist meadows near Convict Creek. Native to Mediterranean Eurasia. June to July. *Howald 2591* (UCR222433). Designated a wildland weed of limited ecological impact by the California Invasive Plant Council (Cal-IPC 2006).

Sporobolus cryptandrus (Torr.) A. Gray. Sand dropseed.

Perennial, stems tufted. Uncommon, scattered in irrigated "lawn" west of headquarters building. July to August. *Howald 2634* (UCR224277)

Stipa comata Trin. & Rupr. ssp. *comata*. Needle-and-thread.

Perennial grass, stems clumped. Occasional in sagebrush scrub. May to July. [*Hesperostipa comata* (Trin. & Rupr.) Barkworth ssp. *comata*] *Howald 2555* (UCR222971)

Stipa hymenoides Roemer & Schultes. Indian Rice Grass.

Perennial bunchgrass. Occasional in sagebrush scrub. May to June. [*Achnatherum hymenoides* (Roemer & Schultes) Barkworth] *Howald 2543* (UCR222955)

Stipa hymenoides Roemer & Schultes X ***Stipa nevadensis*** B. Johnson. Hybrid Needlegrass.

Perennial grass, stems tufted. Encountered regularly in sagebrush scrub sites where both parents occur. June to July. *Howald 2604* (UCR222432)

Stipa nevadensis B. Johnson. Nevada Needlegrass.

Perennial grass, stems tufted. Occasional in sagebrush scrub. June to August. [*Achnatherum nevadensis* (B. Johnson) Barkworth] *Howald 1973* (UCR222931)

Potamogetonaceae. Pondweed Family

Stuckenia filiformis Pers. Slender-leaved Pondweed.

Floating aquatic plant. Uncommon, in several very small seasonal “ponds” on the south side of control structure 6; with *Utricularia minor*. Flowering has not been observed at SNARL.

[*Potamogeton filiformis* Pers.] Orr 404 (UCSB in progress). Designated by the CNPS and the CNDDDB as CRPR 2.2, meaning that it is rare and endangered in California, and is more common in other states. Other Mono County collection locations are at June Lake, Larkin Lake and Hot Creek (CCH 2013).