



Vascular Plants of
Hog Lake Plateau

Bureau of Land Management



VASCULAR PLANTS OF HOG LAKE PLATEAU

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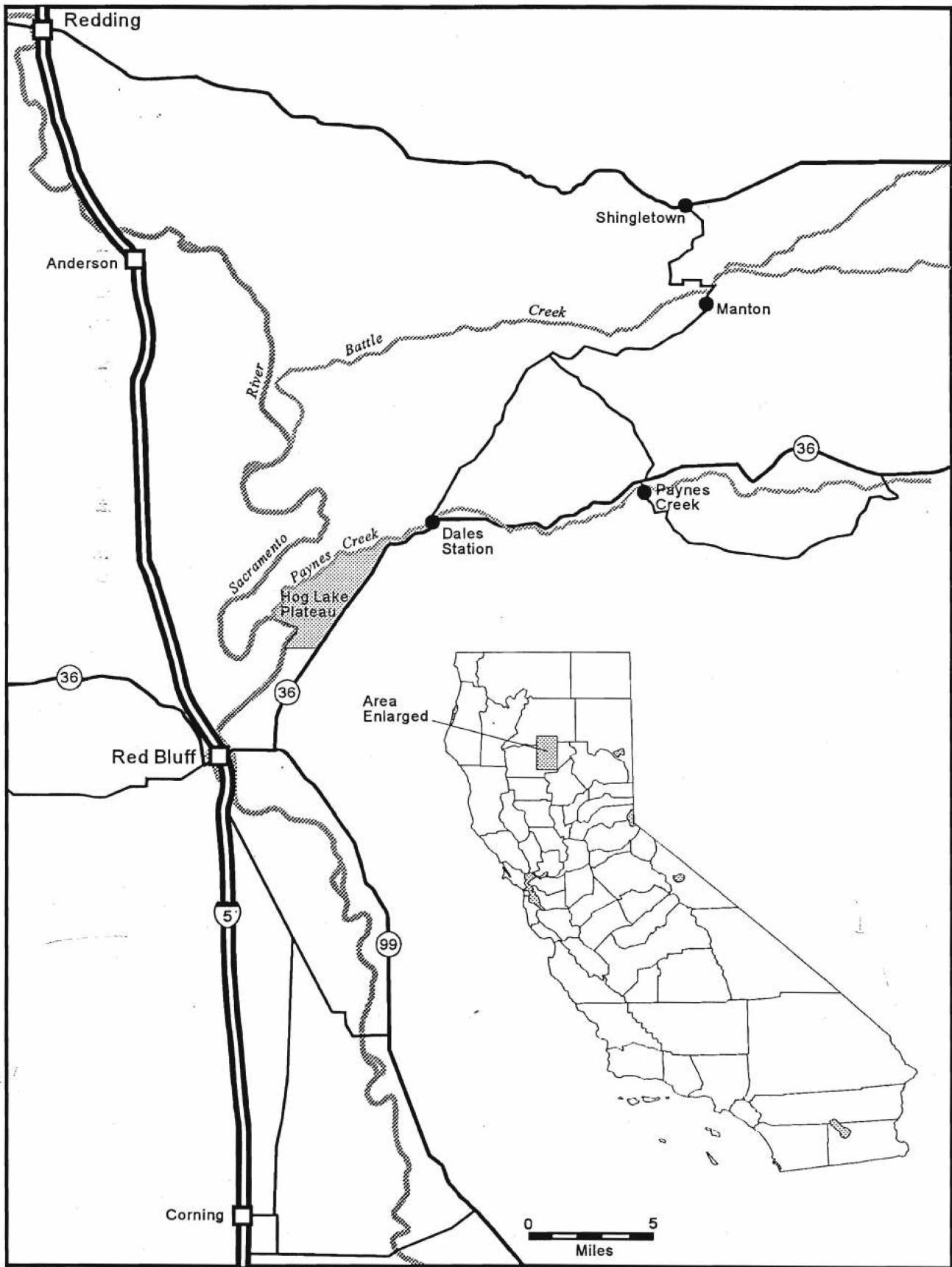


FIGURE 1. Location of Hog Lake Plateau.

INTRODUCTION

Hog Lake Plateau is a 5300 acre (approximately 8 square mile) parcel located in the Cascade Range foothills of Tehama County about 7 miles northeast of Red Bluff, California (figure 1). It is bordered on the east by Hwy. 36, on the north by Paynes Creek, on the west by the Sacramento River, and on the south by a fence crossing the Sevenmile Creek watershed (figure 2). Hog Lake, a large vernal pool, is easily visible to travelers on Hwy. 36 during winter and spring. Hog Lake Plateau is public land owned by the United States Department of the Interior and administered by the Redding Resource Area of the Bureau of Land Management. Formerly known as Hog Lake Ranch and used as winter range for livestock, the parcel was acquired in 1994 by land exchange. It is contiguous with Paynes Creek Recreation Area, another large BLM holding on the northwest side of Paynes Creek, and the recently acquired Bald Hill Parcel on the west side of the Sacramento River (figure 2). Hog Lake Plateau is open to the public, and a parking lot is provided near Hog Lake. A gravel road, not open to vehicles, extends from the parking lot to Paynes Creek. During the construction of Bend Bridge on the Sacramento River, this road was the only outside access for the community of Bend. A temporary bridge on this road at Paynes Creek has since been removed.

The topography of the area is a gently sloping plateau, upon which Hog Lake is located, that is deeply dissected by Paynes Creek and its tributaries on the northwest, the Sacramento River on the west, and Sevenmile Creek on the south. Elevation ranges between 255 ft at the Sacramento River to 866 ft at Hog Lake. The land consists of pyroclastic rocks of the Tuscan Formation, which was formed by volcanic mudflows during the Pliocene. Soils are mostly thin and consist of stony Tuscan loams. Because of an underlying hardpan of cemented mudflow, water tends to accumulate in depressions during the rainy season, forming pools and shallow wetlands. The deepest and largest of these is Hog Lake. A more shallow unnamed pool lies to the west of Hog Lake. Sevenmile Vernal Pool is located on a BLM parcel east of Hwy. 36, but it was not included in this survey.

The climate of the area is "Mediterranean, warm summer," which applies to all of the Sacramento Valley and the adjacent foothills. Dry hot summers are followed by cool, wet winters. Rainfall (based upon records at Red Bluff) averages 22 inches per year, the rainy season usually running from October to April.

Vegetation is correlated to topography, soils, and climate. Gently sloping flats tend to be open grassland, while ridges and canyon slopes are covered with blue oak woodland, interspersed with patches of brush. Narrow bands of riparian woodland occur along the edges of Paynes Creek and the Sacramento River.

The survey forming the basis for this report was conducted from early March to early September, 1996 (eleven visits). During the study, 506 species and varieties of vascular plants distributed among 285 genera in 77 families were documented (Table 1). No study of this type is ever complete—additional plants are still to be found on the property.

TABLE 1. Numerical analysis of the vascular flora of Hog Lake Plateau.

FAMILIES	GENERA	SPECIES	VARIETIES	TOTAL TAXA	NON-NATIVE	CNPS LISTED
77	285	491	15	506	134 (26%)	11

Non-native species (indicated by a *non-serif typeface* in the plant list) make up 26 percent of the flora. These aliens are typically weedy and many are restricted to disturbed sites along roads and on the flood plain of Paynes Creek. Non-native grasses, however, are generally distributed throughout the area and account for more than one-quarter of the alien species.

Eleven species of plants at Hog Lake Plateau are listed in the *CNPS Inventory of Rare and Endangered Vascular Plants of California* (Table 2). Boggs Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), slender orcuttia (*Orcuttia tenuis*), Ahart's nailwort (*Paronychia ahartii*), and Sanford's arrowhead (*Sagittaria sanfordii*) are in CNPS List 1B, plants that are rare, threatened, or endangered in California and elsewhere. Boggs Lake hedge-hyssop and slender orcuttia are also State listed endangered, while slender orcuttia is federally proposed threatened. With the exception of Ahart's nailwort, all are restricted to Hog Lake. However, recent data indicate that Boggs Lake hedge-hyssop and Sanford's arrowhead are more common than originally thought, and both are being considered for down-grading to List 4 in the 6th edition of the CNPS Inventory. Hog Lake Plateau is ideal habitat for Ahart's nailwort, which occurs in scattered populations of sometimes thousands of plants (see figure 2). Large-flowered bluecup (*Githopsis pulchella* ssp. *campestris*), an attractive annual in the Campanulaceae, is tentatively being considered for inclusion in the 6th edition of the CNPS Inventory.

The flowering interval is indicated for most plants. Each month is divided into three parts: early (day 1 through 10), mid (day 11 through 20) and late (day 21 onward), and the onset of flowering is indicated accordingly. The end of the flowering period is indicated only by the last month in which flowers were noted. In a few groups, e.g., grasses,

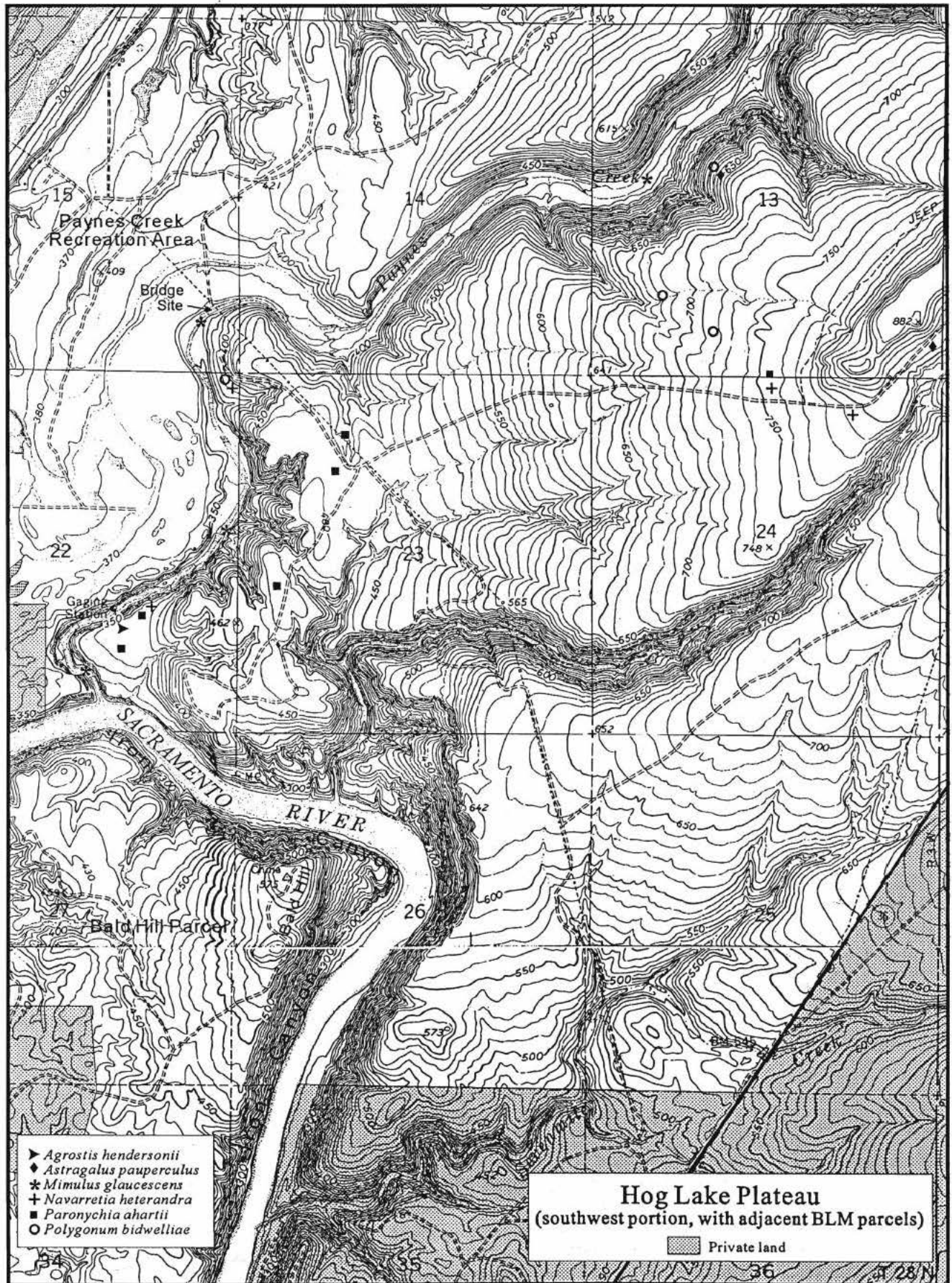
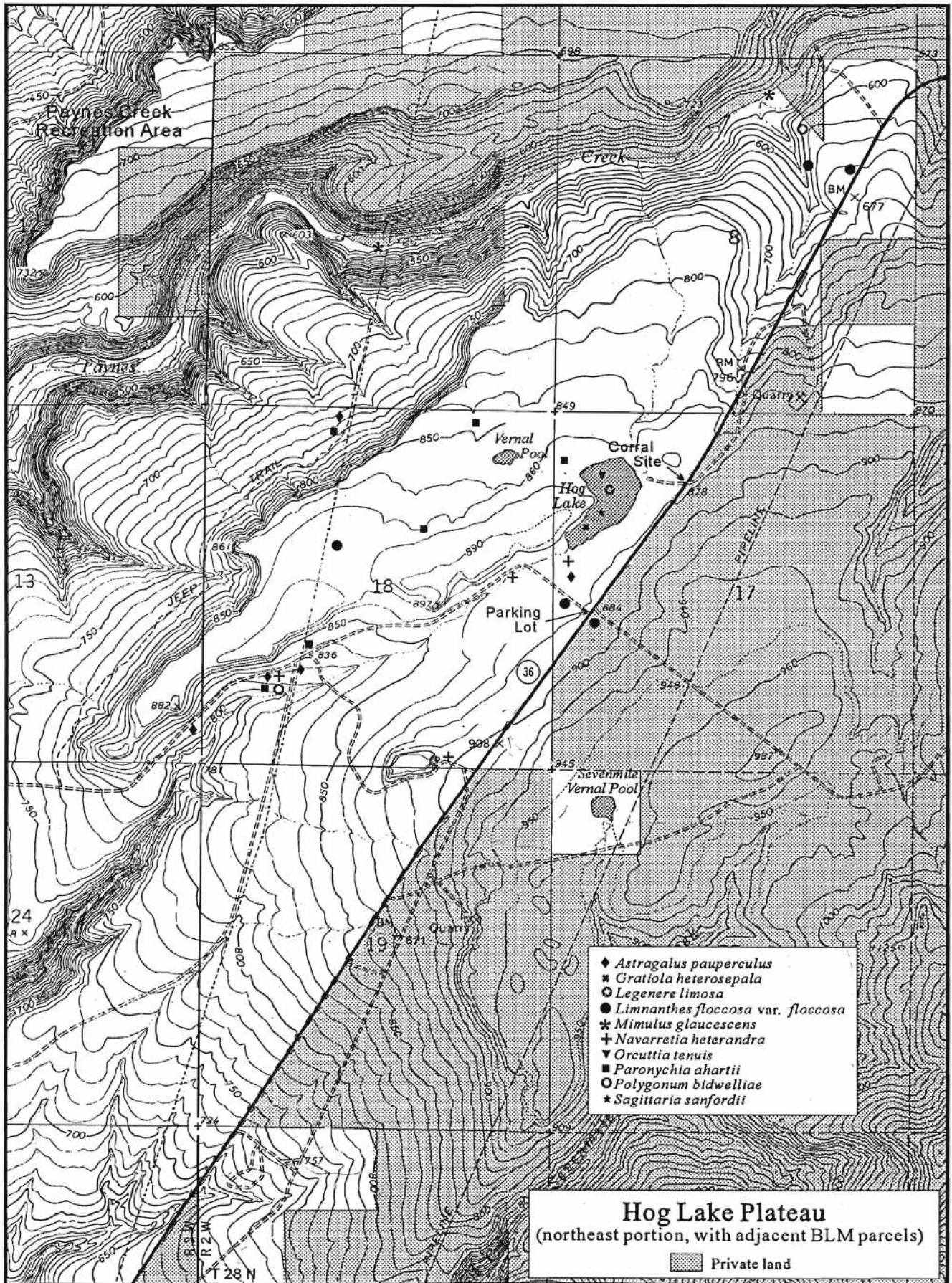


FIGURE 2. Topography of Hog Lake Plateau, with the distribution of CNPS-listed plants. The grid consists of sections



(each one mile square = 640 acres).

sedges, and rushes where anthesis is not always obvious, the date indicates the presence of a well-developed inflorescence. Flowering intervals are based upon limited observations and should be considered to be positive but not necessarily inclusive statements, i.e., additional field work would certainly show that some plants bloom earlier or later than indicated. Variations can also be expected from year to year, depending upon the amount and distribution of rainfall during the growing season. Many of the plants flowering in September on our last visit will probably continue to bloom into autumn (indicated Sep... in the annotated plant list).

TABLE 2. Rare plants growing at Hog Lake Plateau.

<i>Agrostis hendersonii</i> Hitchc., List 3.	CNPS LISTS
<i>Astragalus pauperculus</i> Greene, List 4.	1B Rare, threatened, or endangered in California and elsewhere.
<i>Gratiola heterosepala</i> Mason & Bacig., List 1B, CE.	2 Rare, threatened, or endangered in California, but more common elsewhere.
<i>Legenere limosa</i> (Greene) McVaugh, List 1B.	3 Plants about which we need more information—a review list.
<i>Limnanthes floccosa</i> Howell ssp. <i>floccosa</i> , List 2.	4 Plants of limited distribution—a watch list.
<i>Mimulus glaucescens</i> Greene, List 4.	
<i>Navarretia heterandra</i> H.Mason, List 4.	STATE AND FEDERAL LISTS
<i>Orcuttia tenuis</i> Hitchc., List 1B, CE, PT	CE State listed, endangered.
<i>Paronychia ahartii</i> Ertter, List 1B.	PT Federally proposed, threatened.
<i>Polygonum bidwelliae</i> S.Watson, List 4.	
<i>Sagittaria sanfordii</i> Greene, List 1B.	

Nomenclature is based upon *The Jepson Manual* (Hickman 1993). Some synonyms used in older floras are indicated in brackets. Author abbreviations follow Brummitt and Powell (1992) and may deviate from those in *The Jepson Manual*. There are no accepted standards for common plant names. When available, common names correspond to those in *The Jepson Manual* and in the 5th edition of the *CNPS Inventory* (Skinner and Pavlik 1994). The remaining common names are mostly those of Abrams (1923-60). Words describing the abundance of a plant such as rare, common, abundant, etc. are entirely subjective.

Voucher specimens of many of the plants found during this study are deposited in the herbarium of California State University, Chico (CHSC) and are indicated by collector(s) and collection number (e.g., *Oswald & Ahart 8272*) in the annotated plant list.

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ACKNOWLEDGMENTS

We wish to thank Joe Molter, Natural Resource Specialist, Bureau of Land Management, Redding Resource Area, for maps and other information dealing with Hog Lake Plateau. He also provided us with a key so that we could access the area by vehicle along the gravel road. Hog Lake Plateau is such a large area that we would otherwise not have been able to survey the remote areas of the parcel.

ANNOTATED PLANT LIST¹

FERNS AND FERN ALLIES

ISOETACEAE – QUILLWORT FAMILY

Isoetes howellii Engelm. – HOWELL'S QUILLWORT. Common along the margins of Hog Lake and in the vernal pool to the west. Winter and spring. *Oswald & Ahart 7412*: SW¼ NW¼ Sect 17. Hog Lake. 23 Apr 96.

Isoetes nuttallii A. Braun ex Engelm. – NUTTALL'S QUILLWORT. Open grassland. Winter and spring.

SELAGINELLACEAE – SPIKE-MOSS FAMILY

Selaginella hansenii Heron. – HANSEN'S SPIKE-MOSS. Eroded mudflow in grassland; outcrops on ridges. Active during the wet season and after late spring and summer rains. [*S. rupestris* (L.) Spring var. *hansenii* (Hieron.) Jeps.]

MARSILEACEAE – MARSILEA FAMILY

Marsilea vestita Hook. & Grev. ssp. *vestita* – HAIRY PEPPERWORT. Growing in shallow water and later on mud along the margins of Hog Lake. Active during the wet season but persisting into fall. [*M. mucronata* A. Braun] *Oswald & Ahart 8272*: NW¼ NW¼ Sect. 17. Hog Lake. 04 Sep 96.

Pilularia americana A. Braun – AMERICAN PILLWORT. Growing in shallow water and later on mud along the margins of Hog Lake. Active during the wet season.

POLYPODIACEAE – FERN FAMILY

Cystopteris fragilis (L.) Bernh. – FRAGILE FERN. Moist and shaded places on outcrops. Active during the wet season.

Pellaea mucronata (D.C. Eaton) D.C. Eaton var. *mucronata* – COMMON BIRD'S-FOOT FERN. Rocky bluffs along Sacramento River, rocky banks of intermittent streams.

Pentagramma triangularis (Kaulf.) Yatsk., Windham, & E. Wollenw. ssp. *triangularis* – GOLD-BACKED FERN. Outcrops and rocky places. Active late winter and spring. [*Gymnogramme triangularis* Kaulf., *Pityrogramma triangularis* (Kaulf.) Maxon] *Oswald & Ahart 7578*: SW¼ NE¼ Sect. 8. Scattered plants on the rocky and brushy banks of an intermittent stream at this location. 20 May 96.

Polypodium calirhiza S.A. Whitmore & A.R. Sm. – INTERMEDIATE POLYPODY. Shaded outcrops. Active

during winter and spring. [*P. californicum* Kaulf. in part] *Oswald, Ahart, & Molter 7273*: SE¼ SE¼ Sect. 15. S bank of Paynes Creek at the end of the gravel road. 25 Mar 96.

CONIFERS

PINACEAE – PINE FAMILY

Pinus sabiniana Douglas ex D. Don – GRAY PINE. Along Sevenmile Creek downstream from Hwy. 36, along Paynes Creek near the Sacramento River.

DICOT FLOWERING PLANTS

AMARANTHACEAE – AMARANTH FAMILY

Amaranthus albus L. – TUMBLEWEED. Beds of intermittent streams, gravel bars along Paynes Creek. Native to tropical Amer. Early Jun–Sep... *Oswald & Ahart 7692.4*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Amaranthus retroflexus L. – RED-ROOTED AMARANTH. Occasional weed in disturbed places. Native to tropical Amer. Early Jul.

ANACARDIACEAE – SUMAC FAMILY

Rhus trilobata Nutt. ex Torr. & A. Gray – SKUNK-BRUSH. Brushy woodland, riparian zone along Paynes Creek. Early Apr. [Includes vars. *anisophylla* (Greene) Jeps., *malacophylla* (Greene) Jeps. & *quinata* Jeps.] *Oswald & Ahart 7517*: NW SW¼ Sect. 13. Common along the bank of Paynes Creek. 06 May 96.

Toxicodendron diversilobum (Torr. & A. Gray) Greene – WESTERN POISON-OAK. Rocky ridges, brushy slopes, riparian zones. Early Apr. [*Rhus diversiloba* Torr. & A. Gray]

APIACEAE – CARROT FAMILY

[*Umbelliferae*]

Anthriscus caucalis M. Bieb. – BUR-CHERVIL. Shaded banks, outcrops, brushy places, riparian zones. Native to Eurasia. Early Apr–May. [*A. neglecta* Boiss. & Reut. var. *scandix* (Scop.) Hyl., *A. scandicina* (G. Weber) Mansf., *A. vulgaris* (L.) Pers.] *Oswald & Ahart 7417*: SW¼ NW¼ Sect 17. Rocky slope on the W side of Hog Lake. 23 Apr 96.

Conium maculatum L. – POISON-HEMLOCK. Sandy flood plain of Paynes Creek. Native to Eur. Late May–Jun. *Oswald & Ahart 7710*: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi downstream from the bridge site. 03 Jun 96.

Daucus pusillus Michx. – RATTLESNAKE-WEED. Grassy slopes. Early May. *Oswald & Ahart 7564*: SE¼ NE¼ Sect. 8. Locally abundant on a grassy and rocky flat in blue oak woodland in the NE end of the parcel. 20 May 96.

¹ Non-native plants are indicated by an italic, non-serif typeface (*Bromus tectorum*); plant names that appear in non-italic boldface (*Orcuttia tenuis*) are listed in the 5th edition of the CNPS Inventory (Skinner and Pavlik, 1994). Underlined names are plants being considered for updating in the 6th edition of the CNPS Inventory.

Eryngium articulatum Hook. – BEE-THISTLE. Rocky flood channels along Paynes Creek. In bud early Jun.

Eryngium castrense Jeps. – COYOTE-THISTLE. Shallow water and later on the drying beds of vernal pools and other wetlands. Early Jun–Sep. [*E. castrense* Jeps. var. *vallicola* Jeps., *E. vaseyi* var. *castrense* (Jeps.) Hoover ex Mathias and Constance, *E. vaseyi* var. *vallicola* (Jeps.) Munz] *Oswald & Ahart* 7988; NW¼ NW¼ Sect. 17. Common on the drying strand of Hog Lake. 08 Jul 96.

Lomatium caruifolium (Hook. & Arn.) J.M.Coult. & Rose var. *denticulatum* Jeps. – FOOTHILL LOMATIUM. Widespread in grassland and open savanna. Late Feb–Apr. [*L. humile* (J.M.Coult. & Rose) Hoover ex Mathias & Constance]

Lomatium dasycarpum ssp. *tomentosum* (Benth.) W.L.Theob. – WOOLLY-FRUITED LOMATIUM. Rocky margins of Sevenmile and Paynes creeks. Mid Mar–Apr. [*L. tomentosum* (Benth.) J.M.Coult. & Rose]

Lomatium marginatum var. *purpureum* (Jeps.) Jeps. – PURPLE-FLOWERED LOMATIUM. Locally common on north-facing slopes of Paynes Creek Canyon. Mid Mar–Apr. *Oswald & Ahart* 7595.1: NW¼ NE¼ Sect. 8. Paynes Creek in the NE end of the parcel. 20 May 96.

Lomatium utriculatum (Nutt. ex Torr. & A.Gray) J.M.Coult. & Rose – BLADDER LOMATIUM. Locally common on the upper banks and margins of streams, on rocky slopes. Mid Mar–May. *Oswald & Ahart* 7585: NW¼ NE¼ Sect. 8. Banks of the intermittent stream in the NE corner of the parcel. 20 May 96.

Perideridia kelloggii (A.Gray) Math. – KELLOGG'S YAMPAH. Rocky beds of intermittent streams, rocky flood channels of Paynes Creek. Early Jul. *Oswald & Ahart* 7957: SW¼ NE¼ Sect. 8. Intermittent stream in the NE end of the parcel. 08 Jul 96.

Perideridia oregana (S.Watson) Math. – OREGON YAMPAH. Dry slopes, rocky beds of intermittent streams. Late May–Jul. *Oswald & Ahart* 7953: SW¼ NE¼ Sect. 8. Intermittent stream in the NE end of the parcel. 08 Jul 96.

Sanicula bipinnata Hook. & Arn. – POISON SANICLE. Common and widespread under or near blue oak. Mid Mar–Apr. *Oswald & Ahart* 7336: SW¼ SE¼ Sect. 22. NE side of the grassy plateau on the E side of Paynes Creek at the Sacramento River. 08 Apr 96.

Sanicula bipinnatifida Douglas ex Hook. – PURPLE SANICLE. Riparian woodland, blue oak savanna. Late Mar–Apr. *Oswald & Ahart* 7321: NE¼ SE¼ Sect. 22. Upper flood plain of Paynes Creek ca. midway between the bridge site and the Sacramento River. 08 Apr 96.

Sanicula crassicaulis Poepp. ex DC. – PACIFIC SANICLE. Brushy places along Paynes Creek. Late Mar–May.

Scandix pecten-veneris L. – SHEPHERD'S-NEEDLE. Common and locally abundant along Paynes Creek and its tributaries. Native to the Medit. Late Apr–May. *Oswald & Ahart* 7436: NE¼ SW¼ Sect 7, 485 ft. Grassy bank of Paynes Creek just downstream from the powerline at this location. 23 Apr 96.

Tauschia hartwegii (A.Gray) J.F.Macbr. – HARTWEG'S TAUSCHIA. Brushy slopes near rim rock. Late Apr. (flowers and fruits). *Oswald & Ahart* 7453: NE¼ NW¼ Sect 18. Localized population in thick brush on the north-facing slope above the Jeep Trail at the powerline. 23 Apr 96.

Torilis arvensis ssp. *purpurea* (Ten.) Hayek – PURPLE HEDGE-PARSLEY. Locally abundant around rocks and brush. Native to central and southern Europe. Early May–Jun. *Oswald & Ahart* 7566: SE¼ NE¼ Sect. 8. Flat in blue oak woodland near the NE end of the parcel. 20 May 96.

Torilis nodosa (L.) Gaertn. – KNOTTED HEDGE-PARSLEY. Grassy places in blue oak woodland. Native to Eurasia, especially Medit. Mid May. *Oswald & Ahart* 7563: SE¼ NE¼ Sect. 8. Flat in blue oak woodland near the NE end of the parcel. 20 May 96.

Yabea microcarpa (Hook. & Arn.) Koso-Pol. – FALSE HEDGE-PARSLEY. Rocky ridges, grassy slopes. Mid Apr. *Oswald & Ahart* 7429: NW¼ NE¼ Sect 18. Edge of the plateau overlooking Paynes Creek Canyon N of the unnamed vernal pool. 23 Apr 96.

APOCYNACEAE – DOGBANE FAMILY

Apocynum cannabinum L. – INDIAN-HEMP. Brushy and grassy flats along Paynes Creek. Late May–Jun. [Includes vars. *glaberrimum* A. DC. & *pubescens* (Mitchell) A. DC., *A. sibiricum* Jacq. var. *salignum* (Greene) Fern., *A. suksdorfii* Greene, *A. cannabinum* var. *suksdorfii* (Greene) Bég. & Belos-erky] *Oswald & Ahart* 7708: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.4 mi S of the bridge site. 03 Jun 96.

ARISTOLOCHIACEAE – PIPEVINE FAMILY

Aristolochia californica Torr. – CALIFORNIA PIPEVINE. Climbing on brush on rocky ridges and in riparian zones. Feb–Mar. [*Oswald, Ahart, & Molter* 7266: SE¼ NW¼ Sect. 8. Riparian woodland along Paynes Creek in the NE corner of the parcel. 25 Mar 96.

ASCLEPIADACEAE – MILKWEED FAMILY

Asclepias eriocarpa Benth. – INDIAN MILKWEED. Along the banks of Paynes Creek. Mid Jun.

Asclepias fascicularis Decne. – NARROW-LEAVED MILKWEED. Flood plain of Paynes Creek. Post flower in early Sep.

ASTERACEAE – SUNFLOWER FAMILY

[*Compositae*]

Achillea millefolium L. – YARROW. Scattered populations on grassy and brushy slopes in blue oak

woodland. Late Apr–May. [*Achillea lanulosa* Nutt., *A. millefolium* var. *lanulosa* (Nutt.) Piper] Oswald & Ahart 7580: SW¼ NE¼ Sect. 8. Slope bordering the intermittent stream in the NE corner of the parcel. 20 May 96.

Achyraea mollis Schauer – BLOW-WIVES. Common in deeper soils on grassy slopes and flats. Early Apr.

Agoseris heterophylla (Nutt.) Greene – ANNUAL AGOSERIS. Scattered plants on grassy slopes and flats. Early Apr–May. Oswald & Ahart 7533: SE¼ NW¼ Sect. 13. Robust plant growing on a gopher mound on an open grassy flat N of the gravel road and W of the Jeep Trail. 06 May 96.

Artemisia douglasiana Besser – MUGWORT. Common on the flood plain of Paynes Creek. Late Aug–Sep... Oswald & Ahart 8259: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Baccharis salicifolia (Ruiz & Pav.) Pers. – MULE'S-FAT. Moist gravelly edge of Paynes Creek. Early Apr. [*B. viminea* DC., *B. glutinosa* Pers.]

Bidens frondosa L. – STICKTIGHT. Gravel bars. Late Aug–Sep... Oswald & Ahart 8260: SE NE¼ Sect. 14. Scattered plants on the flood plain of Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Blennosperma nanum (Hook.) S.F. Blake var. *nanum* – YELLOW-CARPET. Widespread in grassland and open savanna. Late Feb–Apr.

Brickellia californica (Torr. & A. Gray) A. Gray – CALIFORNIA BRICKELLBUSH. Shrubby perennial on sand and gravel bars. Early Jul–Sep. Oswald & Ahart 8254: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Calycadenia ciliosa Greene – KLAMATH CALYCADENIA. Localized populations in dry grassy upland. Late May–Sep... [Included in *C. fremontii* (see next) in the Jepson Manual.] Oswald & Ahart 7686: NW¼ NE¼ Sect. 24. N side of the gravel road ca. 0.1 mi E of the Jeep Trail.

Calycadenia fremontii A. Gray – FREMONT'S CALYCADENIA. Locally abundant in thin, gravelly soils on eroded mudflow. Early May–Jun. Oswald & Ahart 7535: SE¼ SE¼ Sect. 13. S side of the gravel road 1.4 mi W of the parking lot. 06 May 96.

Calycadenia truncata DC. – ROSINWEED. Oak savanna and gravelly flood channels along Paynes Creek. Early Jun–Sep... [Includes ssp. *microcephala* H.M.Hall ex D.D.Keck & ssp. *scabrella* (E.Drew) D.D.Keck] Oswald & Ahart 8252: NE SE¼ Sect. 14. S slope of Paynes Creek Canyon ca. 1 mi upstream from the bridge site. 04 Sep 96.

Centaurea melitensis L. – TOCALOTE. Localized weed on grassy flats along Paynes Creek. Native to S Eur. Late May–Jun. Oswald & Ahart 7717: SE¼ NE¼

Sect. 22. Paynes Creek ca. 0.5 mi SW of the bridge site. 03 Jun 96.

Centaurea solstitialis L. – YELLOW STAR-THISTLE. Roadsides, deeper soils of slopes and flats. Native to S Eur. Late May–Sep... Oswald & Ahart 7974: SE¼ NE¼ Sect. 8. Hwy. 36 at the NE end of the parcel. 08 Jul 96.

Cichorium intybus L. – CHICORY. Roadsides, flood plains of streams. Native to Eur. Early Jul–Sep.

Cirsium occidentale var. *venustum* (Greene) Jeps. – VENUS THISTLE. Grassy and brushy slopes in blue oak woodland. Late May–Jul. [*C. coulteri* Harv. & A. Gray misapplied, *C. proteanum* J.T. Howell] Oswald & Ahart 7727: SE¼ NE¼ Sect. 22. Wooded slopes near Paynes Creek ca. 0.4 mi S of the bridge site. 03 Jun 96.

Conyza canadensis (L.) Cronquist – CANADIAN HORSEWEED. Roadsides, stream margins. Late Aug–Sep... Oswald & Ahart 8255: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Erigeron annuus (L.) Pers. – ANNUAL DAISY. Flood plain of Paynes Creek. Native to the eastern U.S. Late Aug–Sep.

Eriophyllum lanatum var. *grandiflorum* (A. Gray) Jeps. – LARGE-FLOWERED WOOLLY-SUNFLOWER. Brushy slopes, outcrops and other rocky places along streams. Mid Apr–Jun. Oswald & Ahart 7592: SE¼ NW¼ Sect. 8. N-facing slope in blue oak woodland in the NE corner of the parcel. 20 May 96.

Euthamia occidentalis Nutt. – WESTERN GOLDEN-ROD. Scattered to common in moist places along Paynes Creek. Mid Aug–Sep... [*Solidago occidentalis* (Nutt.) Torr. & A. Gray] Oswald & Ahart 8256: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Filago gallica L. – NARROW-LEAVED FILAGO. Grassy slopes and flats. Native to Medit. Late Apr–May. [*Logfia gallica* (L.) Coss. & Germ.] Oswald & Ahart 7597: NW¼ NE¼ Sect. 8. Growing in sandy gravel in a flood channel along Paynes Creek in the NE corner of the parcel. 20 May 96.

Gnaphalium luteo-album L. – WEEDY CUDWEED. Moist places along Paynes Creek. Native to Eurasia. Late May–Sep... Oswald & Ahart 7707: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.4 mi SW of the bridge site. 03 Jun 96.

Gnaphalium palustre Nutt. – WESTERN MARSH CUDWEED. Gravel bars, moist, sandy places along Paynes Creek. Early May–Jul. Oswald & Ahart 7692.3: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Gnaphalium stramineum Humb., Bonpl. & Kunth – COTTON-BATTING CUDWEED. Seeps on mudflow. Early May. [*G. chilense* Spreng.] Oswald & Ahart

7513: SW¼ SW¼ Sect. 13. Seep on the rocky edge of an intermittent stream at this location. 06 May 96.

Grindelia hirsutula Hook. & Arn. var. *davyi* (Jeps.) M.A.Lane – FOOTHILL GUMPLANT. Rocky creek beds; roadsides. Late May–Jul. [Included in *G. camporum* Greene, *G. robusta* Nutt. var. *davyi* Jeps.] Oswald & Ahart 7956: SW¼ NE¼ Sect. 8. Edge of intermittent stream in the NE end of the parcel. 08 Jul 96.

Hemizonia fitchii A.Gray – FITCH'S SPIKEWEED. Grassy slopes and flats, gravel bars. Mid May–Sep... Oswald & Ahart 7964.1: NW¼ NE¼ Sect. 8. Rocky flood plain along Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Hesperevax acaulis (Kellogg) Greene var. *acaulis* – DWARF EVAX. Thin soils of grassy upland. Late Mar. [Evax acaulis (Kellogg) Greene]

Hesperevax acaulis var. *robustior* Morefield – ROBUST EVAX. Bare soil on brushy banks. Early Apr. Oswald & Ahart 7323: NE¼ SE¼ Sect. 22. Patch of bare soil bordering brush on a high bank of Paynes Creek ca. 2/3 of the way between the bridge site and the Sacramento River. 08 Apr 96.

Hypochoeris glabra L. – SMOOTH CAT'S-EAR. Grassy flats, margins of Paynes Creek. Native to Eur. Early Apr–Jun.

Lactuca saligna L. – WILLOW-LEAVED LETTUCE. Stream banks. Native to Eur. Late Aug–Sep... Oswald & Ahart 8251: SW SW¼ Sect. 13. Seep on the rocky edge of an intermittent stream at this location. 04 Sep 96.

Lactuca serriola L. – PRICKLY LETTUCE. Roadsides, grassy slopes and flats. Plants with strap-shaped rather than pinnately-lobed leaves are sometimes referred to the var. *integrata* Gren. & Godr. (= forma *integrifolia* Bogenh.). Native to Eur. Early Jul–Sep...

Lagophylla glandulosa A.Gray – GLANDULAR HARELEAF. Dry grassland and oak savanna. Early May–Sep... [Includes the spring-flowering ecotype, ssp. *serrata* (Greene) D.D.Keck] Oswald & Ahart 7954: SW¼ NE¼ Sect. 8. Rocky banks of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Lasthenia californica DC. ex Lindl. – CALIFORNIA GOLDFIELDS. Grassland and open savanna. Early Mar–May. [*Baeria chrysostoma* Fisch. & C.A.Mey., including ssp. *gracilis* (DC.) Ferris]

Lasthenia fremontii (Torr. ex A.Gray) Greene – FREMONT'S GOLDFIELDS. Margins of vernal wet ditches and pools. Early Apr–May. [*Baeria fremontii* (Torr. ex A.Gray) A.Gray]

Lasthenia glaberrima DC. – SMOOTH GOLDFIELDS. Locally abundant in shallow water and on the drying margins of deeper vernal pools. Mid Apr–May. Oswald & Ahart 7426: NE¼ NE¼ Sect 18. Unnamed vernal pool W of Hog Lake. 23 Apr 96.

Lasthenia platycarpa (A.Gray) Greene – ALKALI GOLDFIELDS. Thin soils of grassy upland. Mid Mar–May. [*Baeria platycarpa* (A. Gray) A.Gray]

Layia fremontii (Torr. & A.Gray) A.Gray – FREMONT'S TIDYTIPS. Grassy slopes and flats, grassy opening in blue oak savanna. Late Mar–May.

Leontodon taraxacoides ssp. *longirostris* Finch & P.D.Sell – LONG-BEAKED HAWKBIT. Grassy slopes and flats. Native to Eur. Early May–Jun. [*L. leysseri* (Wallr.) Beck in part, *L. nudicaulis* (L.) Mérat ssp. *nudicaulis*]

Lessingia virgata A.Gray – WAND LESSINGIA. Locally abundant in thin, summer-dry soils of grassland and blue oak savanna. Early Jul–Sep... Oswald & Ahart 7986: SE¼ SE¼ Sect. 13. S side of the gravel road 1.4 mi W of the parking lot. 08 Jul 96.

Madia exigua (Sm.) A.Gray – THREAD-STEMMED MADIA. Scattered populations on grassy and rocky slopes in blue oak savanna. Mid May. Oswald & Ahart 7581: SW¼ NE¼ Sect. 8. Near the intermittent stream in the NE corner of the parcel. 20 May 96.

Madia gracilis (Sm.) D.D.Keck – SLENDER TARWEED. Rocky slopes and banks along Paynes Creek, gravel bars. Early May–Jun. Oswald & Ahart 7691: SE¼ SE¼ Sect. 15. Near Paynes Creek at the bridge site. 03 Jun 96.

Madia subspicata D.D.Keck – SPIKED TARWEED. Locally common on rocky and brushy slopes. Early May. Oswald & Ahart 7574: SW¼ NE¼ Sect. 8. Bank of the intermittent stream in the NE corner of the parcel. 20 May 96.

Micropus californicus Fisch. & C.A.Mey. var. *californicus* – SLENDER COTTONWEED. Common and widespread in grassland, open blue oak savanna. Mid Mar–Apr.

Microseris acuminata Greene – SIERRA FOOTHILL MICROSERIS. Thin soils on grassy slopes in blue oak savanna. Late Mar–Apr. Oswald & Ahart 7422: NW¼ NW¼ Sect 17. Locally abundant in upland along the W shore of Hog Lake. 23 Apr 96.

Psilocarphus brevissimus Nutt. var. *brevissimus* – DWARF WOOLLY-MARBLES. Drying beds of pools and ditches. Early Apr–May.

Psilocarphus oregonus Nutt. – OREGON WOOLLY-MARBLES. Drying beds of vernal wetlands. Late Apr.

Senecio vulgaris L. – OLD-MAN-IN-THE-SPRING. Grassland, open oak savanna, disturbed places. Native to Eurasia. Late Feb–Jun.

Silybum marianum (L.) Gaertn. – MILK-THISTLE. Flood channels and margins of Paynes Creek. Native to Medit. Mid May–Jun. Oswald & Ahart 7609: NW¼ NE¼ Sect. 8. Growing in a flood channel along Paynes Creek in the NE corner of the parcel. 20 May 96.

Solidago californica Nutt. – CALIFORNIA GOLDEN-ROD. Rocky margins of drainages, sandy banks along Paynes Creek. Early May–Sep... [Includes var. *nevad-*

ensis A.Gray] *Oswald & Ahart 7515*: SW¼ SW¼ Sect. 13. Seep on the rocky edge of an intermittent stream at this location. 06 May 96.

Soliva sessilis Ruiz & Pav. – LAWN BURWEED. Dry upland, often along paths and trails. Native to S. Amer. Mid Apr–Jun. [*S. pterosperma* (A.Juss.) Less., *S. daucifolia* Nutt.] *Oswald & Ahart 7414*: SW¼ NW¼ Sect 17. Dry upland along the W side of Hog Lake. 23 Apr 96.

Sonchus asper (L.) Hill ssp. *asper* – SPINY-LEAVED SOW-THISTLE. Flood channels along Paynes Creek. Native to Eur. Late Apr–Jun.

Taraxacum officinale Weber – COMMON DANDELION. Wet places along streams. Native to Eur. Early May. [*T. vulgare* (Lam.) Schrank., *T. laevigatum* (Willd.) DC.]

Tragopogon dubius Scop. – YELLOW SALSIFY. Roadside weed along Hwy. 36. Native to Eur. Flowers and fruiting heads early Jul.

Uropappus lindleyi (DC.) Nutt. – SILVERPUFFS. Locally abundant on rocky slopes overlooking Paynes Creek and the Sacramento River. Mid Mar–May. [*U. linearifolius* (DC.) Nutt., *Microseris linearifolia* (Nutt.) Sch.Bip., *M. lindleyi* (DC.) A.Gray] *Oswald & Ahart 7428*: NW¼ NE¼ Sect 18. Rimrock of the plateau N of the unnamed vernal pool. 23 Apr 96.

Xanthium strumarium L. – COCKLEBUR. Ditches, gravel bars, pond margins. Early Jul–Sep... [Includes var. *canadense* (Mill.) Torr. & A.Gray & var. *glabratum* (DC.) Cronquist]

BETULACEAE – BIRCH FAMILY

Alnus rhombifolia Nutt. – WHITE ALDER. Riparian zone of Paynes Creek. Early spring.

BIGNONIACEAE – BIGNONIA FAMILY

Catalpa speciosa (Warder ex Barney) Engelm. – NORTHERN CATALPA. Uncommon small tree on the bank of Paynes Creek. Although not listed in the Jepson Manual, this tree of the eastern United States is naturalized along rivers and streams in the North Valley. In bud mid May.

BORAGINACEAE – BORAGE FAMILY

Amsinckia lycopsoides Lehm. – BUGLOSS FIDDLENECK. Oak savanna, roadsides. Similar to *A. menziesii* var. *intermedia*. Mid Mar–May.

Amsinckia menziesii (Lehm.) A.Nelson & J.F.Macbr. var. *menziesii* – MENZIES' FIDDLENECK. Grassy and rocky slopes. Early Apr. [*A. parviflora* A.Heller, *A. micrantha* Suksd., *A. retrorsa* Suksd.] *Oswald & Ahart 7416*: SW¼ NW¼ Sect 17. Rocky slope on the W side of Hog Lake. 23 Apr 96.

Amsinckia menziesii var. *intermedia* (Fisch. & C.A.Mey.) F.R.Ganders – COMMON FIDDLENECK. Rocky slopes, blue oak savanna. Mid Mar–Apr. [*A. intermedia* Fisch. & C.A.Mey., including var. *echi-*

nata (A.Gray) Wiggins] *Oswald & Ahart 7333*: SW¼ SE¼ Sect. 22. Growing among basalt boulders on a bluff overlooking the Sacramento River just downstream from the mouth of Paynes Creek. 08 Apr 96.

Cryptantha flaccida (Douglas ex Lehm.) Greene – WEAK-STEMMED CRYPTANTHA. Grassy upland. Early May. *Oswald & Ahart 7507*: SE¼ SW¼ Sect. 13. Localized population on a grassy flat at this location. 06 May 96.

Cryptantha intermedia (A.Gray) Greene – COMMON CRYPTANTHA. Flood channels along Paynes Creek. Mid May–Jun. [Includes *C. hendersonii* (A.Nelson) Piper] *Oswald & Ahart 7598*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Cynoglossum grande Douglas ex Lehm. – PACIFIC HOUND'S-TONGUE. Brushy north-facing slopes along Paynes Creek. Late Apr (in fruit).

Heliotropium europaeum L. – EUROPEAN HELIOTROPE. Roadsides, sandy and gravelly flood channels along Paynes Creek, other disturbed places. Native to southern and eastern Eur., N. Afr. Mid May–Jul. *Oswald & Ahart 7701*: NE¼ NE¼ Sect. 22. Gravel bar along Paynes Creek ca. 0.3 mi S of the bridge site. 03 Jun 96.

Pectocarya pusilla (A.DC.) A.Gray – LITTLE PECTOCARYA. Thin, gravelly soils of eroded mudflow. Late Mar (in fruit)–Apr. *Oswald, Ahart, & Molter 7270*: center NE¼ Sect. 8. Localized population on a rocky slope in blue oak savanna in the NE corner of the parcel. 25 Mar 96.

Plagiobothrys austiniiae (Greene) I.M.Johnst. – AUSTIN'S POPCORN-FLOWER. Common in grassland, open oak woodland. Early Mar. [*Allocarya austiniiae* Greene]

Plagiobothrys bracteatus (Howell) I.M.Johnst. – BRACTED POPCORN-FLOWER. Moist soil along Paynes Creek. Early May (flowers and fruits). [*Allocarya bracteata* Howell] *Oswald & Ahart 7525*: NW¼ SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Plagiobothrys canescens Benth. – VALLEY POPCORN-FLOWER. Grassy and brushy slopes and banks along Paynes Creek. Early Apr.

Plagiobothrys fulvus (Hook. & Arn.) I.M.Johnst. – FULVOUS POPCORN-FLOWER. Grassy flats. Early Apr. [*P. fulvus* var. *campestris* (Greene) I.M.Johnst.; *P. campestris* Greene]

Plagiobothrys greenei (A.Gray) I.M.Johnst. – GREENE'S POPCORN-FLOWER. Common to locally abundant in thin, vernal wet soils. Late Apr (in fruit). [*Allocarya greenei* (A.Gray) Greene] *Oswald & Ahart 7423*: NW¼ NW¼ Sect 17. Upland along the W shore of Hog Lake. 23 Apr 96.

Plagiobothrys nothofulvus (A. Gray) A. Gray – COMMON POPCORN-FLOWER. Openings in brush, grassy slopes and flats. Mid Mar–May.

Plagiobothrys scriptus (Greene) I.M. Johnst. – SCRIBE'S POPCORN-FLOWER. Grassland; the first popcorn-flower to bloom in the spring. Late Feb–Mar. [*Allocarya scripta* Greene]

Plagiobothrys shastensis Greene ex A. Gray – SHASTA POPCORN-FLOWER. Open rocky and grassy upland. Mid Mar.

Plagiobothrys stipitatus (Greene) I.M. Johnst. var. *stipitatus* – LARGE-FLOWERED STALKED POPCORN-FLOWER. Growing with var. *micranthus* along Hog Lake and the unnamed vernal pool to the west. Mid Apr–May. [*Allocarya stipitata* Greene]

Plagiobothrys stipitatus var. *micranthus* (Piper) I.M. Johnst. – SMALL-FLOWERED STALKED POPCORN-FLOWER. Vernal pools and vernal wet ditches, moist flats along Paynes Creek. Early Apr–Jul. [*A. stipitata* ssp. *micrantha* Piper] Oswald & Ahart 7538: SW¼ NW¼ Sect. 17. Margin of Hog Lake. 06 May 96.

BRASSICACEAE – MUSTARD FAMILY [Cruciferae]

Arabidopsis thaliana (L.) Heynh. – THALECRESS. Eroded banks along Paynes Creek. Native to Eur. Early Apr–Jun. Oswald & Ahart 7320: SW¼ NW¼ Sect. 22. Paynes Creek downstream from the bridge site. 08 Apr 96.

Athysanus pusillus (Hook.) Greene – PETTY ATHYSANUS. Grassland, oak savanna, outcrops. Late Feb–Mar. Oswald & Ahart 7315: NW¼ NW¼ Sect. 23. Growing in blue oak savanna S of the bridge site. 08 Apr 96.

Barbarea verna (Mill.) Asch. – EARLY WINTER-CRESS. Gravel bars and rocky margins of Paynes Creek. Native to Eurasia. Late Mar–Apr. Oswald, Ahart, & Molter 7264: SE¼ NW¼ Sect. 8. Paynes Creek in the NE end of the parcel. 25 Mar.

Capsella bursa-pastoris (L.) Medik. – SHEPHERD'S-PURSE. Grassland, oak savanna, disturbed places. Native to Eur. Late Feb–Apr. Oswald & Ahart 7332: SW¼ SE¼ Sect. 22. E margin of Paynes near its mouth. 08 Apr 96.

Cardamine californica (Nutt.) Greene var. *californica* – MILKMAIDS. Locally common on the north side of brushy and rocky ridges. Feb–Mar. [*Dentaria californica* Nutt. var. *californica*, *D. integrifolia* Nutt. var. *californica* (Nutt.) Jeps.] Oswald 7226: SE¼ SW¼ Sect. 8. Rim of Paynes Creek Canyon N of Hog Lake. 15 Mar 96.

Cardamine oligosperma Nutt. – WESTERN BITTER-CRESS. Rocky and other moist and protected places. Late Feb–Apr.

Draba verna L. – SPRING WHITFLOW-GRASS. Grassland, oak savanna, rocky ridges, mossy rocks. Late

Feb–Apr. Oswald, Ahart, & Molter 7272: SE¼ SE¼ Sect. 15. S bank of Paynes Creek at the end bridge site. 25 Mar 96.

Hirschfeldia incana (L.) Lagr.-Foss. – MEDITERRANEAN HOARY-MUSTARD. Flood plain of Paynes Creek. Mid Apr–Sep. [*Brassica geniculata* (Desf.) Ball, *Sinapis incana* L.] Oswald & Ahart 7440: NE¼ SW¼ Sect. 7. Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Idahoia scapigera (Hook.) A. Nelson & J.F. Macbr. – FLATPOD. Thin, bare soils on patches of eroded mudflow in oak savanna, apparently rare at Hog Lake Plateau. Late Feb–Mar. Oswald & Ahart 7224: SE¼ Sect. 13. Near the Jeep Trail on the N side of the ridge at this location. 05 Mar 96.

Lepidium nitidum Nutt. var. *nitidum* – SHINING PEPPER-GRASS. Widespread in grassland and open blue oak savanna. Late Feb–Mar.

Raphanus raphanistrum L. – JOINTED CHARLOCK. Roadsides, flood plain of Paynes Creek. Native to Medit. Eur. Mid Mar–May. Oswald & Ahart 7589: NE¼ NW¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Rorippa nasturtium-aquaticum (L.) Hayek – WATERCRESS. Flood channels along Paynes Creek. Early May (with both flowers and fruits)–Jun. Oswald & Ahart 7521: NW SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Thysanocarpus curvipes Hook. var. *curvipes* – CLASPING-LEAVED FRINGEPOD. Oak woodland, rocky ridges, brushy slopes and banks. Mid Mar–Apr. Oswald & Ahart 7319: SW¼ NW¼ Sect. 23. Loam soil on the shaded bank of Paynes Creek downstream from the bridge site. 08 Apr 96.

Thysanocarpus curvipes Hook. var. *elegans* (Fisch. & C.A. Mey.) B.L. Rob. – ELEGANT FRINGEPOD. Moist soil along Paynes Creek. Mid Apr (in fruit). [Varieties not recognized in The Jepson Manual.] Oswald & Ahart 7332.1: SW¼ SE¼ Sect. 22. E margin of Paynes near its mouth. 08 Apr 96.

Thysanocarpus radians Benth. – SPOKEPOD. Open grassland in blue oak woodland. Mid Mar.

CALLITRICHACEAE – WATER-STARWORT FAMILY

Callitriche hermaphroditica L. – NORTHERN WATER-STARWORT. Submersed in Hog Lake. Early May (with fruits). [*C. autumnalis* L.]

Callitriche heterophylla Pursh var. *bolanderi* (Hegelm.) Fassett – VARIABLE-LEAVED WATER-STARWORT. Growing in pools and later on wet sand on flood plain of Paynes Creek. Late Apr (flowers and fruits). [*C. bolanderi* Hegelm., *C. heterophylla* ssp. *bolanderi* (Hegelm.) Calder & Roy Taylor, *C. palustris* L.] Oswald & Ahart 7443: NE¼ SW¼ Sect. 7. Pools along Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Callitriche marginata Torr. – WINGED WATER-STARWORT. Widespread in water of pools and ditches in open grassland. Late Feb–Mar. [*C. longipedunculata* Morong, *C. marginata* var. *longipedunculata* (Morong) Jeps.]

CAMPANULACEAE – BELLFLOWER FAMILY

Downingia bicornuta A. Gray var. *bicornuta* – DOUBLE-HORNED DOWNINGIA. Margins of vernal pools and vernal flooded depressions. Late Apr–Jul.

Downingia cuspidata (Greene) Greene ex Jeps. – TOOTHED DOWNINGIA. Wet drainages, drying margins of vernal pools. Late Apr–May.

Githopsis pulchella Vatke ssp. *campestris* Morin – LARGE-FLOWERED BLUECUP. Localized populations on grassy slopes and stream banks. Early May. Tentative addition to the 6th Edition of the CNPS Inventory. *Oswald & Ahart 7532*: SE¼ NW¼ Sect. 13. Slope above Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96. *Oswald & Ahart 7593*: NW¼ NE¼ Sect. 8. Edge of intermittent stream near Paynes Creek in the NE corner of the parcel. 20 May 96.

Heterocodon rariflorum Nutt. – HETEROCODON. Uncommon along Paynes Creek. Late May–Jun. *Oswald & Ahart 7715*: SE¼ NE¼ Sect. 22. Near Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Legenere limosa (Greene) McVaugh – LEGENERE. In shallow water and on wet mud along the margin of Hog Lake according to Witham (pers. com. 1995) and Molter (pers. com. 1996). We were not able to locate this inconspicuous plant during our survey. CNPS List 1B.

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera interrupta Benth. – CHAPARRAL HONEYSUCKLE. Climbing vine on brushy slopes. Mid May. *Oswald & Ahart 7571*: SW¼ NE¼ Sect. 8. Bank of intermittent stream in the NE end of the parcel. 20 May 96.

Sambucus mexicana C. Presl ex DC. – BLUE ELDERBERRY. Rocky ridges, riparian zone along Paynes Creek. Mid May–Jun. [*S. cerulea* Raf., *S. glauca* Nutt., *S. velutina* Durand & Hilg.] *Oswald & Ahart 7728*: NE corner Sect. 22. Edge of gravel road ca. 0.2 E of the bridge site on Paynes Creek. 03 Jun 96.

CARYOPHYLLACEAE – PINK FAMILY

Cerastium glomeratum Thuill. – STICKY MOUSE-EARED CHICKWEED. Rocky slopes in blue oak savanna, riparian zones. Native to Eur. Late Mar–Jun. [*C. viscosum* L. misapplied]

Herniaria hirsuta L. ssp. *hirsuta* – HERNIARIA. Sandy soil on the flood plain of Paynes Creek. Native to southern Eur., N Afr., southwest Asia. Late Apr–Jul. [*H. cinerea* DC. in part] *Oswald & Ahart 7604.1*: NW¼ NE¼ Sect. 8. Flood channel along Paynes Creek in the NE corner of the parcel. 20 May 1996.

Minuartia californica (A. Gray) Mattf. – CALIFORNIA SANDWORT. Widespread in thinner soils in grassland and open blue oak savanna. Late Feb–Apr. [*Arenaria californica* (A. Gray) W.H. Brewer, *A. pusilla* S. Watson, including var. *diffusa* Maguire]

Paronychia ahartii Ertter – AHART'S NAILWORT. Common, widespread, and locally abundant on vernal wet flats (see figure 2). There is also a small transplant population near the gravel road at Hog Lake. Late Mar–Apr. CNPS List 1B. *Oswald & Ahart 7326*: NW¼ SE¼ Sect. 22. Plateau on the E side of Paynes Creek at the Sacramento River. 08 Apr 96.

Petrorhagia dubia (Raf.) G. López & Romo – GRASS-PINK. Grassy and rocky slopes and flats, gravel bars along Paynes Creek. Native to southern Eur. Early Apr–Jul. [*Kohlrauschia velutina* (Guss.) Reichenb., *Tunica prolifera* (L.) Scop., misapplied] *Oswald & Ahart 7611*: NW¼ NE¼ Sect. 8. Growing in gravel in a flood channel along Paynes Creek. 20 May 96.

Sagina apetala Ard. – DWARF PEARLWORT. Vernal moist flats. Early Apr. [Includes var. *barbata* Fenzl] *Oswald & Ahart 7322*: NE¼ SE¼ Sect. 22. Exposed sheet of mudflow on the upper flood plain of Paynes Creek ca. midway between the bridge site and the Sacramento River. 08 Apr 96.

Saponaria officinalis L. – BOUNCING-BET. Flood plain of Paynes Creek. Native to southern Eur. Vegetative late May, in green fruit early Sep.

Scleranthus annuus L. ssp. *annuus* – KNAWEL. Thin soil on mudflow, disturbed places along Paynes Creek. Native to Eur. Early Apr–Jun. *Oswald & Ahart 7446*: NE¼ SW¼ Sect. 7. In sandy and rocky soil along flood channels of Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Silene gallica L. – WINDMILL-PINK. Grassy upland. Native to Eur. Late Apr–Jun. *Oswald & Ahart 7424.2*: NW¼ NW¼ Sect. 17. Between Hog Lake and the unnamed vernal pool to the W. 23 Apr 96.

Spergularia rubra (L.) J. & C. Presl – RUBY SAND-SPURRY. Roadsides, sandy and gravelly disturbed places. Native to Eur. Early May. *Oswald & Ahart 7522*: NW SW¼ Sect. 13. Rocky flood channel along Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Stellaria media (L.) Vill. – COMMON CHICKWEED. Grassland, open blue oak savanna, rocky places, disturbed places. Native to coastal Eur. Late Feb–May.

Stellaria nitens Nutt. – SHINY STARWORT. Uncommon on outcrops and in other rocky places. Mid Mar.

CHENOPODIACEAE – GOOSEFOOT FAMILY

Chenopodium album L. – LAMB'S-QUARTERS. Sand and gravel bars along Paynes Creek. Native to Eur. Early May–Jun.

Chenopodium ambrosioides L. – MEXICAN-TEA. Flood channels along Paynes Creek. Native to tropical Amer. Late May–Sep... *Oswald & Ahart 8261*: SE NE¼ Sect. 14. On gravel bars along Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Chenopodium botrys L. – JERUSALEM-OAK. Common in sandy soil on the flood plain of Paynes Creek. Native to Eur. Late Apr–Jul. *Oswald & Ahart 7692.2*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Chenopodium pumilio R.Br. – TASMANIAN GOOSEFOOT. Growing in sandy soil on the flood plain of Paynes Creek. Native to Australia. Late Apr–Jun. *Oswald & Ahart 7692.1*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Chenopodium strictum Roth var. *glaucophyllum* (Aellen) Wahl – GLAUCCOUS-LEAVED GOOSEFOOT. Disturbed places. Native to Eurasia. Late Jun–Jul. *Oswald & Ahart 7975*: NE¼ NW¼ Sect. 17. Corral site near Hog Lake. 08 Jul 96.

CONVOLVULACEAE – MORNING-GLORY FAMILY

Calystegia occidentalis (A.Gray) Brummitt ssp. *occidentalis* – WESTERN MORNING-GLORY. Brushy slopes. Mid May. [*Convolvulus occidentalis* A.Gray, *Calystegia polymorpha* (Greene) Munz] *Oswald & Ahart 7579*: SW¼ NE¼ Sect. 8. Along the intermittent stream in the NE corner of the parcel. 20 May 96.

Convolvulus arvensis L. – BINDWEED. Rocky flood plains, roadsides, other disturbed places. Native to Eur. Mid May–Jul. *Oswald & Ahart 7961*: NW¼ NE¼ Sect. 8. Rocky flood plain along Paynes near the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

CRASSULACEAE – STONECROP FAMILY

Crassula aquatica (L.) Schönk. – WATER PYGMY-WEED. Drying beds of hallow pools and ditches. Mid Mar. [*C. saginoides* (Maxim.) M.Bywater & Wickens, *Tillaea aquatica* L. in part, *Tillaeastrum aquaticum* (L.) Britton in part]

Crassula connata (Ruiz & Pav.) A.Berger – PIGMYWEED. Thin, bare soils of uplands Mid Mar–Apr. [*Tillaea erecta* Hook. & Arn.]

Dudleya cymosa (Lem.) Britton & Rose ssp. *cymosa* – CANYON DUDLEYA. Outcrops along creeks and drainages, rocky bluffs above the Sacramento River and Paynes Creek. Early Apr–May.

Parvisedum pumilum (Benth.) R.T.Clausen – DWARF-STONECROP. Thin soils on patches of eroded mudflow. Early Apr–May. [*Sedella pumila* (Benth.) Britton & Rose]

Sedum spathulifolium Hook. – BROAD-LEAVED STONECROP. Rocky cliffs on the north side of Paynes Creek near its mouth. Early Apr.

CUCURBITACEAE – GOURD FAMILY

Marah fabaceus (Naudin) Greene var. *agrestis* (Greene) Stocking – CALIFORNIA MANROOT. Rocky ridges. Late Feb–Mar.

CUSCUTACEAE – DODDER FAMILY

Cuscuta howelliana P.Rubtzov – BOGGS LAKE DODDER. Parasitic on *Navarretia* and *Eryngium* on drying beds of vernal pools. Late May–Jul. *Oswald & Ahart 7978*: NW¼ NW¼ Sect. 17. NE strand of Hog Lake. 08 Jul 96.

Cuscuta pentagona Engelm. – FIELD DODDER. Parasitizing *Xanthium* and *Polygonum* along Paynes Creek. Late Jun–Jul. [*C. arvensis* Beyr. Misapplied, *C. campestris* Yunck., *C. pentagona* var. *calycina* Engelm.] *Oswald & Ahart 7981*: SE¼ SE¼ Sect. 15. Gravel bar at the bridge site. 08 Jul 96.

ERICACEAE – HEATH FAMILY

Arctostaphylos manzanita Parry ssp. *manzanita* – BIG MANZANITA. Brushy slopes in blue oak woodland along Paynes Creek. In fruit late Mar.

EUPHORBIACEAE – SPURGE FAMILY

Chamaesyce maculata (L.) Small – SPOTTED SPURGE. Roadsides, gravel bars, other disturbed places. Native to eastern US. Mid May–Sep... [*Euphorbia maculata* L.; *E. supina* Raf.] *Oswald & Ahart 7720*: NW¼ SE¼ Sect. 22. Gravel bar on the E side of Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Chamaesyce nutans (Lag.) Small – LARGE SPURGE. Rocky banks and flood plains of Paynes Creek. Native to southeast U.S., S. Amer. Early Jun–Sep... [*Euphorbia maculata* L. misapplied] *Oswald & Ahart 7965*: NW¼ NE¼ Sect. 8. Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96. *Oswald & Ahart 8258*: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Chamaesyce ocellata (Durand & Hilg.) Millsp. ssp. *ocellata* – VALLEY SPURGE. Common and widespread on summer-dry slopes and flats. Early Jun–Sep... [*Euphorbia ocellata* Durand & Hilg.] *Oswald & Ahart 7951*: SE¼ NE¼ Sect. 8. Open blue oak savanna at the NE end of the parcel. 08 Jul 96.

Chamaesyce serpyllifolia (Pers.) Small ssp. *serpyllifolia* – THYME-LEAVED SPURGE. Gravel and sand bars along Paynes Creek. Early Jul. [*Euphorbia serpyllifolia* Pers.]

Eremocarpus setigerus (Hook.) Benth. – TURKEY-MULLEIN. Dry grassy slopes and flats, dry gravelly stream beds. Mid May–Sep... *Oswald & Ahart 7955*: SW¼ NE¼ Sect. 8. Rocky bed of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Euphorbia spathulata Lam. – WARTY SPURGE. Grassy slopes in blue oak savanna. Mid May. [*E. dic-*

tyosperma Fisch. & C.A.Mey.] *Oswald & Ahart 7591*: SE¼ NW¼ Sect. 8. N-facing slope in blue oak woodland above Paynes Creek in the NE corner of the parcel. 20 May 96.

FABACEAE – LEGUME FAMILY

[*Leguminosae*]

Astragalus gambelianus E.Sheld. – GAMBEL'S MILK-VETCH. Rocky and eroded patches of mudflow. Early Apr. *Oswald & Ahart 7324*: NE¼ SE¼ Sect. 22. High bank of Paynes Creek ca. 2/3 of the way between the bridge site and the Sacramento River. 08 Apr 96.

Astragalus pauperculus Greene – DEPAUPERATE MILK-VETCH. Thin, bare, rocky soils in grassland. Early Apr. CNPS List 4. *Oswald & Ahart 7342*: SE¼ SE¼ Sect. 13. Common in thin soils over mudflow on the S side of the gravel road 1.3 mi W of the parking lot. 08 Apr 96.

Cercis occidentalis Torr. ex A.Gray – WESTERN REDBUD. Rocky ridges, riparian zones. Mid Mar–Apr. *Oswald, Ahart, & Molter 7271*: SE¼ SE¼ Sect. 15. S side of Paynes Creek at the bridge site. 25 Mar.

Lathyrus sulphureus W.H.Brewer ex A.Gray – SNUB PEA. Brushy slopes in Paynes Creek Canyon. Mid Apr.

Lotus corniculatus L. – BIRD'S-FOOT-TREFOIL. Moist flats and gravel bars along Paynes Creek. Native to Eurasia. Early Apr–Sep. *Oswald & Ahart 7693*: SE¼ SE¼ Sect. 15. Gravel bar along Paynes Creek at the bridge site. 03 Jun 96.

Lotus humistratus Greene – FOOTHILL LOTUS. Rocky slopes. Early Apr–Jun. [*Hosackia brachycarpa* Benth.] *Oswald & Ahart 7616*: SW¼ SE¼ Sect. 18. Old quarry on the W side of Hwy. 36 ca. 0.6 mi S of the parking lot. 20 May 96.

Lotus micranthus Benth. – SMALL-FLOWERED LOTUS. Grassy and rocky slopes and flats. Early Apr–May. [*Hosackia parviflora* Benth.] *Oswald & Ahart 7603*: NW¼ NE¼ Sect. 8. Flood channel along Paynes Creek in the NE end of the parcel. 20 May 96.

Lotus purshianus (Benth.) Clem. & E.G.Clem. var. *purshianus* – SPANISH LOTUS. Roadsides, flood plain of Paynes Creek. Early Jul–Sep... [*L. americana* (Nutt.) Bisch., *Hosackia americana* (Nutt.) Piper] *Oswald & Ahart 7987*: NW¼ SW¼ Sect. 17. Parking lot at Hog Lake. 08 Jul 96.

Lotus wrangelianus Fisch. & C.A.Mey. – WRANGEL LOTUS. Grassy slopes and flats. Early Apr. [*L. subpinnatus* Lag. misapplied, *Hosackia subpinnata* (Lag.) Torr. & A.Gray misapplied]

Lupinus bicolor Lindl. var. *tridentatus* Eastw. Ex C.P.Sm. – BICOLORED LUPINE. Grassy slopes and flats, oak savanna, flood channels along Paynes Creek. Mid Mar–May. [Varieties not recognized in The Jepson Manual.]

Lupinus nanus Douglas ex Benth. var. *apricus* (Greene) C.P.Sm. – SKY LUPINE. Grassy slopes and flats, roadsides in oak savanna. Late Mar–Jun. [*L. vallicola* A.Heller ssp. *apricus* (Greene) D.B.Dunn. Varieties not recognized in The Jepson Manual.]

Lupinus nanus var. *latifolius* Benth ex Torr. – BROAD-LEAVED LUPINE. Grassy and rocky slopes in open blue oak woodland. Mid Mar. [Varieties not recognized in The Jepson Manual.] *Oswald & Ahart 7341*: SE¼ SE¼ Sect. 13. Slopes both above and below the gravel road 1.3 mi W of the parking lot. 08 Apr 96.

Lupinus nanus var. *vallicola* (A.Heller) C.P.Sm. – VALLEY LUPINE. Locally abundant along the gravel road. Late Apr–Jun. [*L. vallicola* A.Heller] *Oswald & Ahart 7536*: SE¼ SE¼ Sect. 13. S side of the gravel road 1.4 mi W of the parking lot. 06 May 96.

Lupinus pachylobus Greene – BIG-PODDED LUPINE. Open grassy and rocky slopes and flats. Mid Mar–Apr. *Oswald & Ahart 7327*: NW¼ SE¼ Sect. 22. Locally abundant on the grassy plateau on the E side of Paynes Creek approaching its mouth. 08 Apr 96.

Lupinus polycarpus Greene – SMALL-FLOWERED LUPINE. Roadsides, grassy flats. Late Mar–Apr. [*L. micranthus* Douglas. Included in *L. bicolor* in The Jepson Manual.]

Lupinus succulentus Douglas ex W.D.J.Koch – SUCCULENT LUPINE. Growing in gravel at the parking lot. Early May.

Medicago arabica (L.) Huds. – SPOTTED MEDICK. Shaded cut banks and rocky flood channels in riparian zones along Paynes Creek. Probably native to Medit. Late Apr–Jun. *Oswald & Ahart 7524*: NW¼ SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Medicago polymorpha L. – COMMON BUR-CLOVER. Flood plain of Paynes Creek. Native to Medit. Late Mar–Jun. [*M. apiculata* Willd., *M. hispida* Gaertn., *M. hispida* var. *confinis* (W.D.J.Koch) Burnat]

Medicago praecox DC. – MEDITERRANEAN BUR-CLOVER. Oak savanna, creek margins. Native to Medit. Mid Mar–Apr.

Melilotus alba Medik. – WHITE SWEET-CLOVER. Common on the rocky and sandy flood plain of Paynes Creek. Early Jun–Sep...

Melilotus indica (L.) All. – INDIAN SWEET-CLOVER. Roadsides, grassy slopes and flats, flood channels along Paynes Creek. Early May.

Trifolium albopurpureum Torr. & A.Gray var. *albopurpureum* – INDIAN CLOVER. Grassy and rocky slopes and flats. Early Apr. *Oswald & Ahart 7328*: NW¼ SE¼ Sect. 22. Locally abundant on the grassy plateau on the E side of Paynes Creek approaching its mouth. 08 Apr 96. *Oswald & Ahart 7431*: SE¼ SW¼

Sect 7. Near the power line at the N end of the Jeep Trail. 23 Apr 96.

Trifolium bifidum var. *decipiens* Greene – DECEPTIVE CLOVER. Thicker soils in blue oak savanna. Mid Apr–May. *Oswald & Ahart 7424*: NW¼ NW¼ Sect 17. W shore of Hog Lake. 23 Apr 96.

Trifolium campestre Schreb. – HOP CLOVER. Grassy flats, roadsides. Native to Eur. Early May. [*T. procumbens* L. misapplied] *Oswald & Ahart 7540*: SW¼ NW¼ Sect. 17. Gravel road just W of the parking lot. 06 May 96.

Trifolium ciliolatum Benth. – FOOTHILL CLOVER. Grassy slopes and flats. Late Apr–May.

Trifolium depauperatum Desv. var. *depauperatum* – DWARF COWBAG CLOVER. Common in grassland. Mid Mar–Apr.

Trifolium depauperatum var. *amplectens* (Torr. & A.Gray) McDermott – INVOLUCRATE COWBAG CLOVER. Grassy openings along Paynes Creek. Late Mar–Apr. [*T. amplectens* Torr. & A.Gray] *Oswald & Ahart 7325*: NE¼ SE¼ Sect. 22. High bank of Paynes Creek ca. 3/4 of the way between the bridge site and the Sacramento River. 08 Apr 96.

Trifolium dubium Sibth. – LITTLE HOP CLOVER. Grassy flats and slopes. Native to Eur. Late Apr–Jun. *Oswald & Ahart 7418*: SW¼ NW¼ Sect 17. Upland along the W shore of Hog Lake. 23 Apr 96.

Trifolium hirtum All. – ROSE CLOVER. Common on grassy slopes and flats, roadsides. Native to Eurasia, N. Afr. Late Apr–Jun. *Oswald & Ahart 7586*: NW¼ NE¼ Sect. 8. Near the intermittent stream in the NE end of the parcel. 20 May 96.

Trifolium microcephalum Pursh – SMALL-HEADED CLOVER. Grassy and rocky flats. Early Apr–May.

Trifolium microdon Hook. & Arn. – SQUARE-HEADED CLOVER. Localized populations in grassy and brushy slopes in blue oak woodland. Late Apr. *Oswald & Ahart 7451*: NE¼ SW¼ Sect 7. S slope of Paynes Creek Canyon ca. 0.4 mi N of the Jeep Trail and 0.2 mi W of the power line at this location. 23 Apr 96.

Trifolium subterraneum L. – SUBTERRANEAN CLOVER. Thin soils in open blue oak savanna, gravelly soil in flood channels of Paynes Creek. Native to southern Eur., N. Afr. Mid Mar–Apr. *Oswald & Ahart 7229*: NW¼ SW¼ Sect. 25. Jeep trail following the power line N of Sevenmile Creek. 18 Mar 96.

Trifolium variegatum Nutt. – WHITE-TIPPED CLOVER. Moist soil of vernal wetlands, margins of drainages and streams, seeps on mudflow. Early Apr–May.

Trifolium willdenovii Spreng. – TOMCAT CLOVER. Rocky slopes in blue oak savanna, rocky edges of Paynes Creek. Late Mar–Apr. [*T. tridentatum* Lindl. including var. *aciculare* (Nutt.) McDermott] *Oswald & Ahart 7316.1*: NW¼ NW¼ Sect. 23. Grassy slope in blue oak woodland S of the bridge site. 08 Apr 96.

Oswald & Ahart 7444: NE¼ SW¼ Sect 7. Flood channels along Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Vicia sativa L. ssp. *sativa* – GARDEN VETCH. Common along Paynes Creek. Native to Eur. Late Apr.

Vicia sativa ssp. *nigra* (L.) Erhart – GARDEN VETCH. Common along Paynes Creek. Late Apr–Jun. [*V. sativa* var. *angustifolia* (L.) Wahlenb., *V. angustifolia* L. including var. *segetalis* (Thuill.) W.D.J.Koch]

Vicia villosa ssp. *varia* (Host) Corb. – WINTER VETCH. Common in open grassland and blue oak savanna. Mid Apr–Jun. [*V. villosa* var. *glabrescens* W.D.J.Koch, *V. dasycarpa* Ten.]

FAGACEAE – BEECH FAMILY

Quercus douglasii Hook. & Arn. – BLUE OAK. Widespread on slopes and ridges; indicator of blue oak woodland. Flowering interval not determined.

Quercus lobata Née – VALLEY OAK. Common along Paynes Creek. Flowering interval not determined.

Quercus wislizeni A.DC. var. *wislizeni* – INTERIOR LIVE OAK. Rocky ridges. Early Apr.

GENTIANACEAE – GENTIAN FAMILY

Centaurium muehlenbergii (Griseb.) W. Wight ex Piper – JUNE CENTAURY. Grassy flats, margins of streams. Early May–Sep. [*C. floribundum* (Benth.) B.L.Rob.]

Centaurium venustum (A.Gray) B.L.Rob. – CANCHALAGUA. Moist places along intermittent streams and Paynes Creek. Late May–Sep. [Includes var. *abramsii* Munz] *Oswald & Ahart 7714*: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Cicendia quadrangularis (Lam.) Griseb. – TIMWORT. Gravelly banks. Early Apr. [*Microcala quadrangularis* (Lam.) Griseb.]

GERANIACEAE – GERANIUM FAMILY

Erodium botrys (Cav.) Bertol. – LONG-BEAKED STORK'S-BILL. Grassy slopes and flats. Native to southern Eur. Mid Mar–Jun.

Erodium brachycarpum (Godr.) Thellung – SHORT-FRUITED STORK'S-BILL. Grassy slopes and flats. Native to southern Eur. Mid Mar. [*E. obtusiplicatum* (Maire, Weiller & Wilczek) J.T.Howell]

Erodium cicutarium (L.) L'Hér. – RED-STEMMED FILAREE. Grassland, open savanna. Native to Eurasia. Late Feb–Jun.

Geranium carolinianum L. – CAROLINA GERANIUM. Grassy banks and blue oak woodland bordering Paynes Creek. Mid Apr–May. *Oswald & Ahart 7437*: NE¼ SW¼ Sect 7. Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Geranium dissectum L. – CUT-LEAVED GERANIUM. Moist, sandy flats along Paynes Creek. Early Apr–May. *Oswald & Ahart 7438*: NE¼ SW¼ Sect 7. Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Geranium molle L. – DOVE'S-FOOT GERANIUM. Widespread in the shade of blue oaks. Late Mar–May. *Oswald & Ahart 7421*: NW¼ NW¼ Sect 17. W shore of Hog Lake. 23 Apr 96.

HIPPOCASTANACEAE – BUCKEYE FAMILY

Aesculus californica (Spach) Nutt. – CALIFORNIA BUCKEYE. Brushy slopes, riparian woodland. Early May–Jun. *Oswald & Ahart 7584*: NW¼ NE¼ Sect. 8. Along the intermittent stream in the NE corner of the parcel. 20 May 96.

HYDROPHYLLACEAE – WATERLEAF FAMILY

Eriodictyon californicum (Hook. & Arn.) Torr. – CALIFORNIA YERBA-SANTA. Brushy slopes and flats. Early May. *Oswald & Ahart 7531*: SE¼ NW¼ Sect. 13. Grassy slope above Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Nemophila heterophylla Fisch. & C.A.Mey. – VARIABLE-LEAVED NEMOPHILA. Rocky ridges, shaded slopes in blue oak woodland, banks along Paynes Creek. Late Feb–May. *Oswald & Ahart 7518*: NW¼ SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Nemophila pedunculata Douglas ex Benth. – MEADOW NEMOPHILA. Wet places in grassland, open savanna. Late Feb–Apr.

Phacelia egea (Greene ex Brand) J.T.Howell – ROCK PHACELIA. Rocky ridges and bluffs. Early Apr. [*P. californica* Cham. in part] *Oswald & Ahart 7340*: SE¼ SE¼ Sect. 13. Rocky ridge on the N side of the gravel road 1.3 mi W of the parking lot. 08 Apr 96.

HYPERICACEAE – ST. JOHN'S-WORT FAMILY

Hypericum anagalloides Cham. & Schldl. – TINKER'S-PENNY. Seeps on mudflow along intermittent streams. Collected in flower and fruit early Sep... *Oswald & Ahart 8249*: SW¼ Sect. 13. Rocky edge of an intermittent stream at this location. 04 Sep 96.

Hypericum perforatum L. – KLAMATHWEED. Roadsides, creek margins, oak savanna. Native to Eur. Mid May–Jul. *Oswald & Ahart 7699*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

JUGLANDACEAE – WALNUT FAMILY

Juglans californica S. Watson var. *hindsii* Jeps. – NORTHERN CALIFORNIA BLACK WALNUT. Seedling tree noted on the flood plain of Paynes Creek.

LAMIACEAE – MINT FAMILY

[Labiatae]

Lamium amplexicaule L. – GIRAFFEHEAD. Flood plain of Paynes Creek. Native to Eurasia. Early Apr.

Oswald & Ahart 7330.1: SW¼ SE¼ Sect. 22. E edge of Paynes near its mouth. 08 Apr 96.

Lamium purpureum L. – RED HENBIT. Locally common on sandy gravel bars along Paynes Creek. Native to Eur. Early Apr. *Oswald & Ahart 7330*: SW¼ SE¼ Sect. 22. E edge of Paynes near its mouth. 08 Apr 96. *Oswald & Ahart 7448*: NE¼ SW¼ Sect 7. Flood channels of Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Lycopus americanus Muhl. ex W.P.C.Bart. – CUT-LEAVED BUGLEWEED. Moist places along Paynes Creek. Early Jul–Sep... *Oswald & Ahart 7985*: SE¼ SE¼ Sect. 15. Growing in moist sand on the edge of Paynes Creek at the bridge site. 08 Jul 96.

Marrubium vulgare L. – HOREHOUND. Flood plain of Paynes Creek. Native to Eur. Mid May–Jun.

Mentha arvensis L. – AMERICAN WILD MINT. Moist places along Paynes Creek. Early Jul–Sep... [Includes var. *villosa* (Benth.) S.R.Stewart, var. *lanata* Piper, var. *glabrata* (Benth.) Fernald, & various formae of S.R.Stewart] *Oswald & Ahart 7980*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 08 Jul 96.

Mentha pulegium L. – PENNYROYAL. Gravel bars, stream banks. Native to Eur. Early Jul–Sep... *Oswald & Ahart 7963*: NW¼ NE¼ Sect. 8. Paynes Creek E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Monardella sheldonii Torr. – SHELTON'S COYOTE-MINT. Rocky places along creeks. Late May–Jul. [*M. villosa* Benth. var. *sheldonii* (Torr.) Jeps.; *M. villosa* ssp. *sheldonii* (Torr.) Epling] *Oswald & Ahart 7703*: NE¼ NE¼ Sect. 22. Paynes Creek ca. 0.3 mi S of the bridge site. 03 Jun 96.

Pogogyne zizyphoroides Benth. – SACRAMENTO VALLEY POGOYNE. Vernally moist flats, margins of pools and drainages. Early Apr–May.

Scutellaria californica A. Gray – CALIFORNIA SKULLCAP. Rocky and brushy slopes in blue oak woodland. Mid May–Jul. *Oswald & Ahart 7583*: SW¼ NE¼ Sect. 8. Bank of intermittent stream in the NE corner of the parcel. 20 May 96. *Oswald & Ahart 7709*: SE¼ NE¼ Sect. 22. Growing on a grassy flat along Paynes Creek ca. 0.4 mi S of the bridge site. Flowers vary from typical white to pink or purplish in this population. 03 Jun 96.

Scutellaria siphocampyloides Vatke – GRAY-LEAVED SKULLCAP. Rocky intermittent stream beds. Mid May. [*S. angustifolia* Pursh var. *canescens* Gray, *S. austiniiae* Eastw.] *Oswald & Ahart 7570*: SW¼ NE¼ Sect. 8. Common on the rocky bed and edges of an intermittent stream at this location. 20 May 96.

Scutellaria tuberosa Benth. – DANNY'S SKULLCAP. Rocky and brushy canyon slopes. Late Apr. [Includes var. *similis* Jeps. & ssp. *australis* Epling] *Oswald & Ahart 7450*: NE¼ SW¼ Sect 7. Locally abundant on a

brushy north-facing slope of Paynes Creek Canyon ca. 0.2 mi W of the power line at this location. 23 Apr 96.

Stachys stricta Greene – SONOMA HEDGE-NETTLE. Growing in moist to wet places along the margin of Paynes Creek. Late May–Sep... [*S. ajugoides* Benth. var. *stricta* (Greene) Jeps.]

Trichostema lanceolatum Benth. – VINEGAR-WEED. Widespread on grassy slopes and flats, rocky flood channels. Early Jul–Sep... *Oswald & Ahart* 7962: NW¼ NE¼ Sect. 8. Paynes near the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Trichostema simulatum Jeps. – SISKIYOU BLUE-CURLS. Uncommon on gravel bars along Paynes Creek. Early Jul. *Oswald & Ahart* 7982: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 08 Jul 96.

LIMNANTHACEAE – MEADOWFOAM FAMILY

Limnanthes alba ssp. *versicolor* (Greene) C.T.Mason – SHASTA MEADOWFOAM. Occasional plants along Paynes Creek. Both glabrous and densely hairy plants grow together, bringing into question the validity of subspecies in this taxon. Late Apr–May. [*L. versicolor* (Greene) Rydb., *L. alba* var. *versicolor* (Greene) C.T.Mason] *Oswald & Ahart* 7441: NE¼ SW¼ Sect 7. Flood channels of Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Limnanthes douglasii ssp. *rosea* (Hartw. ex Benth.) C.T.Mason – ROSY MEADOWFOAM. Drying ditches and margins of vernal pools in open grassland. Late Mar. [*L. douglasii* var. *rosea* (Hartw. ex Benth.) C.T.Mason, *L. rosea* Hartw. ex Benth.] *Oswald* 4548: Edge of Hog Lake. 30 Apr. 91. *Oswald & Ahart* 7338: SE¼ SE¼ Sect. 13. Common on the drying bed of a roadside ditch along the gravel road 1.3 mi W of the parking lot. 08 Apr 96.

Limnanthes floccosa Howell ssp. *floccosa* – WOOLLY MEADOWFOAM. Vernal wet soils, rocky slopes, often in disturbed places. Mid Mar. CNPS List 2; proposed downgrade in the 6th Edition of CNPS Inventory to List 4. *Oswald* 4534: E side of Hwy. 36 near the parking lot. 30 Apr 91. *Oswald & Ahart* 7235: NE¼ NE¼ Sect. 8. Locally abundant in thin, drying soil of a vernal wet track on the W side of Hwy. 36 near the N end of the parcel. 18 Mar 96.

LYTHRACEAE – LOOSESTRIFE FAMILY

Lythrum hyssopifolium L. – HYSSOP LOOSE-STRIFE. Moist places along streams. Native to Eur. Mid May–Jul.

MALVACEAE – MALLOW FAMILY

Sidalcea hartwegii A.Gray ex Benth. – HARTWEG'S CHECKERBLOOM. Grassy blue oak woodland. Late Apr–Jun. *Oswald & Ahart* 7430: SE¼ SW¼ Sect

7. N end of the Jeep Trail near the power line. 23 Apr 96.

Sidalcea hirsuta A.Gray – HAIRY CHECKERBLOOM. Moist grassy flats along east shore of Hog Lake. Late May–Jun.

MOLLUGINACEAE – CARPET-WEED FAMILY

Mollugo verticillata L. – INDIAN-CHICKWEED. Sandy and gravelly flood channels along Paynes Creek. Native to tropical Amer. Mid May–Sep...

MORACEAE – MULBERRY FAMILY

Ficus carica L. – EDIBLE FIG. Scattered trees on the flood plain along Paynes Creek. Native to Medit. With fruit mid May.

OLEACEAE – OLIVE FAMILY

Fraxinus dipetala Hook. & Arn. – CALIFORNIA ASH. North-facing canyon slopes. *Oswald, Ahart, & Molter* 7269: SE¼ NE¼ Sect. 8. Paynes Creek Canyon in the NE corner of the parcel. 25 Mar 96.

Fraxinus latifolia Benth. – OREGON ASH. Common along Paynes Creek and the Sacramento River. Early Apr.

ONAGRACEAE – EVENING-PRIMROSE FAMILY

Camissonia contorta (Douglas ex Hook.) Raven – TWISTED EVENING-PRIMROSE. Gravelly places. Early Apr. *Oswald* 4892: NW¼ Sect. 17. Intersection of dirt road to Tuscan Buttes and Hwy. 36 at Hog Lake. 05 Apr. 92

Clarkia gracilis (Piper) A.Nelson & J.F.Macbr. ssp. *gracilis* – SLENDER CLARKIA. Locally common on brushy slopes. Early May. *Oswald & Ahart* 7516: NW¼ SW¼ Sect. 13. North-facing slope of Paynes Creek Canyon ca. 1 mi upstream from the bridge site. 06 May 96.

Clarkia purpurea (Curtis) A.Nelson & J.F.Macbr. ssp. *quadrivulnera* (Douglas) F.H.Lewis & M.R. Lewis – PURPLE CLARKIA. Common and widespread on grassy slopes and flats. Early May–Jun.

Epilobium brachycarpum C.Presl – TALL ANNUAL WILLOWHERB. Roadsides, stream margins. Late Aug–Sep... [*E. paniculatum* Nutt. ex Torr. & A.Gray including var. *jucundum* (A.Gray) Trel. & var. *laevicaule* (Rydb.) Munz]

Epilobium ciliatum Raf. ssp. *ciliatum* – FRINGED WILLOWHERB. Sandy and rocky flood channels along Paynes Creek. In fruit early Sep. [*E. californicum* Hausskn. including var. *holosericeum* (Trel.) Jeps., var. *occidentale* (Trel.) Jeps. & var. *parishii* (Trel.) Jeps.; *E. adenocaulon* Hausskn. including var. *holosericeum* (Trel.) Munz & var. *parishii* (Trel.) Munz; *E. watsonii* Barbey var. *parishii* (Trel.) C.L.Hitchc. & var. *occidentale* (Trel.) C.L.Hitchc.] *Oswald & Ahart* 8265: SE NE¼ Sect. 14. Wet soil on the edge of Pay-

nes Creek ca. 1 mi upstream from the bridge site. 04 Sep. 96.

Epilobium densiflorum (Lindl.) P.Hoch & Raven – DENSE-FLOWERED SPIKE-PRIMROSE. Flood channels along Paynes Creek. Mid May–Jul. [*Boisduvalia densiflora* (Lindl.) S.Watson including var. *pallescens* Suksd., var. *salicina* (Torr. & A.Gray) Munz & forma *imbricata* (Greene) Munz] Oswald & Ahart 7599: NW¼ NE¼ Sect. 8. Along Paynes Creek in the north tip of the parcel. 20 May 96.

Epilobium torreyi (S.Watson) P.Hoch & Raven – TORREY'S SPIKE-PRIMROSE. Vernal wet places in upland, moist places along Paynes Creek. Early May–Jul. [*Boisduvalia stricta* (A. Gray) Greene] Oswald & Ahart 7509.1: SE¼ SW¼ Sect. 13. Grassy flat N of the gravel road and W of the Jeep Trail. 06 May 96.

Ludwigia palustris (L.) Elliott – MARSH PURSLANE. Moist flood plain of Paynes Creek. Early Jul–Sep. [Includes var. *americana* (DC.) Fernald & Griscom & var. *pacifica* Fernald & Griscom] Oswald & Ahart 7967: NW¼ NE¼ Sect. 8. Paynes Creek E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Ludwigia peploides (Humb., Bonpl. & Kunth) Raven ssp. *peploides* – YELLOW WATERWEED. Flood channels and quite water along Paynes Creek. Late Aug–Sep... [*Jussiaea californica* Jeps.; *J. repens* L. var. *peploides* (Humb., Bonpl. & Kunth) Griseb.]

OROBANCHACEAE – BROOM-RAPE FAMILY

Orobanche uniflora L. var. *uniflora* – NAKED BROOM-RAPE. Parasitic on both *Lithophragma* and *Saxifraga* on brushy north-facing slopes of Paynes Creek Canyon. Late Apr. [Includes var. *minuta* (Suksd.) Achey, var. *sedii* (Suksd.) Achey, var. *occidentalis* (Greene) Taylor & MacBryde, ssp. *occidentalis* (Greene) Abrams ex Ferris] Oswald & Ahart 7433: NE¼ SW¼ Sect. 7. Near the power line and N end of the Jeep Trail. 23 Apr 96.

PAPAVERACEAE – POPPY FAMILY

Eschscholzia californica Cham. – CALIFORNIA-POPPY. Edge of a flood channels along Paynes Creek. Mid May–Jun.

Eschscholzia lobbii Greene – FRYINGPANS. Widespread on grassy flats. Mid Mar–May.

Meconella californica Torr. – CALIFORNIA MECONELLA. Locally abundant in thin soils on grassy and rocky north-facing slopes. Mid Mar. [*M. oregana* Nutt. var. *californica* (Torr.) Jeps.] Oswald 7227: SE¼ NW¼ Sect. 8. N-facing rim of Paynes Creek Canyon. 15 Mar 96.

Platystemon californicus Benth. – CALIFORNIA CREAMCUPS. Grassy openings on brushy slopes of Paynes Creek Canyon. Mid Apr–May. [Includes vars. *crinitus* Greene, *horridulus* (Greene) Jeps., *nutans* Brandegee, & *ornithopus* (Greene) Munz] Oswald &

Ahart 7435: NE¼ SW¼ Sect. 7. N of the end of Jeep Trail near the power line. 23 Apr 96.

PLANTAGINACEAE – PLANTAIN FAMILY

Plantago coronopus L. – CUT-LEAVED PLANTAIN. Disturbed roadsides. Native to Eur. Early Apr.

Plantago elongata Pursh – ELONGATE PLANTAIN. Drying beds of shallow vernal wetlands. Mid Mar–Apr. [Includes ssp. *pentasperma* Bassett & var. *californica* (Greene) B.Boivin; *P. bigelovii* A.Gray ssp. *californica* (Greene) Bassett, *P. heterophylla* Nutt. misapplied]

Plantago erecta E.Morris – ERECT PLANTAIN. Common and widespread in grassland, open savanna. Early Mar–Apr. [*P. hookeriana* Fisch. & C.A.Mey. var. *californica* (Greene) Poe]

Plantago lanceolata L. – ENGLISH PLANTAIN. Moist flats and flood channels along Paynes Creek. Native to Eur. Early May–Jul.

Plantago major L. – COMMON PLANTAIN. Moist flats on the flood plain of Paynes Creek. Native to Eur. Late Aug–Sep. [Includes vars. *pilgeri* Domin & *scopulorum* Fr. & S.P.Broberg] Oswald & Ahart 8262: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

PLATANACEAE – SYCAMORE FAMILY

Platanus racemosa Nutt. – WESTERN SYCAMORE. Riparian zones along Paynes Creek and the Sacramento River. Late Mar. Oswald, Ahart, & Molter 7261: NW¼ NE¼ Sect. 8. Paynes Creek in the NE end of the parcel. 25 Mar 96.

POLEMONIACEAE – PHLOX FAMILY

Gilia tricolor Benth. ssp. *tricolor* – BIRD'S-EYE GILIA. Locally abundant on grassy slopes and flats. Mid Mar–May.

Linanthus androsaceus (Benth.) Greene – COMMON LINANTHUS. Collected in moist, stony soil along Hog Lake on 25 April 1979 (Ahart 1845, CHSC). Based on calyx lobes that are hairy both on the margins and backs, this population would key to *L. parviflorus* in The Jepson Manual. However, the corolla is comparable in size, color, and especially in the thickness of the tube to that of *L. androsaceus*. The corolla tube of *L. parviflorus*, on the other hand, is thread-like. This plant was not relocated during our 1996 survey.

Linanthus bicolor (Nutt.) Greene – BICOLORED LINANTHUS. Grassy slopes and flats, openings with scattered shrubs and blue oak. Late Mar–May.

Linanthus bolanderi (A.Gray) Greene – BOLANDER'S LINANTHUS. Locally abundant on grassy and rocky slopes. Mid Mar–May. Oswald & Ahart 7232: SW¼ NE¼ Sect. 26. W-facing slope of the bluffs overlooking the Sacramento River between the mouths of Paynes and Sevenmile creeks. 18 Mar 96.

Linanthus ciliatus (Benth.) Greene – WHISKER-BRUSH. Locally abundant on grassy slopes and flats, in blue oak savanna. Early Apr–May. *Oswald & Ahart* 7529: SE¼ NW¼ Sect. 13. Slope above Paynes Creek N of the junction of the gravel road and the Jeep Trail. 06 May 96.

Linanthus filipes (Benth.) Greene – WILD BABY'S-BREATH. Localized populations on rocky and grassy slopes. Early Apr. *Oswald & Ahart* 7335: SW¼ SE¼ Sect. 22. E side of a grassy plateau above the Sacramento River at Paynes Creek. 08 Apr 96.

Navarretia heterandra H.Mason – TEHAMA NAVARRETIA. Locally abundant on drying grassy flats. Early May–Jun. CNPS List 4. *Oswald & Ahart* 7539: SW¼ NW¼ Sect. 17. Between the SW end of Hog Lake and the parking lot. 06 May 96.

Navarretia intertexta (Benth.) Hook. ssp. *intertexta* – NEEDLE-LEAVED NAVARRETIA. Locally common on flood channels along Paynes Creek. Mid May. *Oswald & Ahart* 7587: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Navarretia leucocephala Benth. ssp. *leucocephala* – WHITE-FLOWERED NAVARRETIA. Margins of vernal pools, vernal flooded ditches and depressions. Mid Apr–Jul.

Navarretia pubescens (Benth.) Hook. & Arn. – DOWNY NAVARRETIA. Locally common on grassy and rocky slopes and flats. Mid May–Jun. *Oswald & Ahart* 7595: NW¼ NE¼ Sect. 8. Grassy slopes above Paynes Creek in the NE corner of the parcel. 20 May 96.

Navarretia tagetina Greene – MARIGOLD NAVARRETIA. Common and widespread in dry grassland and blue oak savanna; also in flood channels along Paynes Creek. Early May–Jun. *Oswald & Ahart* 7602: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Navarretia viscidula Benth. ssp. *purpurea* (Greene ex Brand) H.Mason – STICKY NAVARRETIA. Locally abundant in grassy and gravelly upland. Mid May–Jun. *Oswald & Ahart* 7614: SW¼ SE¼ Sect. 18. Old quarry located on the W side of Hwy. 36 ca. 0.6 mi S of the parking lot. 20 May 96.

Phlox gracilis (Hook.) Greene – SLENDER PHLOX. Grassland, open blue oak savanna. Mid Mar–Apr. [*Microsteris gracilis* (Hook.) Greene, including ssp. *humilis* (Greene) V.E. Grant & var. *humilior* (Hook.) Cronquist]

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe membranacea Benth. – PINK SPINEFLOWER. Rocky bluffs, creek banks. Late May–Jun. *Oswald & Ahart* 7719: NW¼ SE¼ Sect. 22. Rocky bluffs on the E side of Paynes Creek near the Sacramento River. 03 Jun 96.

Chorizanthe polygonoides Torr. & A.Gray var. *polygonoides* – KNOTWEED SPINEFLOWER. Locally

common in thin soils on patches of eroded mudflow. Early Apr–May.

Eriogonum luteolum Greene – WICKER BUCKWHEAT. Dry creek banks. Early Jul. *Oswald & Ahart* 7958: NW¼ NE¼ Sect. 8. Intermittent stream near Paynes Creek in the NE end of the parcel. 08 Jul 96.

Eriogonum nudum var. *pubiflorum* Benth. – HAIRY-FLOWERED BUCKWHEAT. Open grassland and blue oak savanna. Early Jul–Sep...

Polygonum arenastrum Jord. ex Boreau – COMMON KNOTWEED. Parking lots, roadsides, sandy and rocky places along Paynes Creek. Native to Eur. Late Apr–Sep... *Oswald & Ahart* 7698: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Polygonum bidwelliae S.Watson – BIDWELL'S KNOTWEED. Locally abundant in thin soils on mudflow in open grassland. Early May. CNPS List 4. *Oswald & Ahart* 7510: SE¼ SW¼ Sect. 13. Gravelly flat in open blue oak savanna N of the gravel road and W of the Jeep Trail. 06 May 96.

Polygonum bolanderi W.H.Brewer ex A.Gray – BOLANDER'S KNOTWEED. Common on dry, rocky and grassy bluffs overlooking the Sacramento River, rocky banks along Paynes Creek. Early Jul. *Oswald & Ahart* 7984: SE¼ SE¼ Sect. 15. Near Paynes Creek at the bridge site. 08 Jul 96.

Polygonum californicum Meisn. – CALIFORNIA KNOTWEED. Thin soils on patches of eroded mudflow. Mid May–Jun. *Oswald & Ahart* 7991.1.: SE¼ NE¼ Sect. 19. Road leading to the quarry on the E side of Hwy. 36 ca. 0.9 mi S of the parking lot. 08 Jul 96.

Polygonum hydropiper L. – WATER-PEPPER. Gravel bars, moist places along Paynes Creek. Native to Eur. Mid May–Jun. *Oswald & Ahart* 7724: NW¼ SE¼ Sect. 22. E edge of Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Polygonum lapathifolium L. – WILLOW-WEED. Moist places along Paynes Creek. Late May–Sep... *Oswald & Ahart* 7722: NW¼ SE¼ Sect. 22. E edge of Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Polygonum persicaria L. – LADY'S-THUMB. Gravel bars along Paynes Creek. Native to Eur. Late Apr–Sep... *Oswald & Ahart* 7723: NW¼ SE¼ Sect. 22. E edge of Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Polygonum punctatum Elliott – DOTTED SMARTWEED. Moist places along Paynes Creek. Late Aug–Sep... *Oswald & Ahart* 8257: SE NE¼ Sect. 14. In moist soil along Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Pterostegia drymarioides Fisch. & C.A.Mey. – PTEROSTEGIA. At the base of large rocks, in shaded places on outcrops. Early May. *Oswald & Ahart* 7575: SW¼ NE¼ Sect. 8. Rocky bank of intermittent stream in the NE corner of the parcel. 20 May 96.

Rumex conglomeratus Murray – GREEN DOCK. Locally common on grassy and brushy flats along Paynes Creek Late May–Jun. Oswald & Ahart 7712: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Rumex crispus L. – CURLY DOCK. Vernally wet places in grassland, open blue oak savanna. Native to Eurasia. Early May–Jun.

Rumex salicifolius var. *triangulivalvis* (Danser) C.L.Hitchc. – CALLOSE-VALVED WILLOW DOCK. Rocky stream channels. Early May. [*R. triangulivalvis* (Danser) Rech.f. var. *oreolapathum* Rech.f.]

PORTULACACEAE – PURSLANE FAMILY

Calandrinia ciliata (Ruiz & Pav.) DC. – RED-MAIDS. Roadsides, creek margins, grasslands. Early Apr. [Includes var. *menziesii* (Hook.) J.F.Macbr., *C. caulescens* Humb., Bonpl. & Kunth var. *menziesii* A.Gray]

Claytonia parviflora Douglas ex Hook. ssp. *parviflora* – SMALL-FLOWERED MINER'S-LETTUCE. Shaded places on rocky slopes and ridges, creek banks, under blue oak. Mid Mar–May. Oswald & Ahart 7318: SW¼ NW¼ Sect. 23. Paynes Creek downstream from the bridge site. 08 Apr 96. [*Montia perfoliata* (Donn ex Willd.) Howell in part, *M. perfoliata* var. *parviflora* (Douglas ex Hook.) Jeps., *M. perfoliata* forma *parviflora* (Douglas ex Hook.) J.T.Howell]

Claytonia perfoliata Donn ex Willd. ssp. *perfoliata* – COMMON MINER'S-LETTUCE. Under blue oak, in rocky and shaded places. Mid Mar–Apr. [*Montia perfoliata* (Donn ex Willd.) Howell] Oswald & Ahart 7317: SW¼ NW¼ Sect. 23. Paynes Creek downstream from the bridge site. 08 Apr 96.

Montia fontana L. ssp. *ampositana* Sennen – WATER MONTIA. Moist, thin soils and outcrops in upland. Late Feb–Apr. Oswald & Ahart 7225: SE¼ Sect. 13. Near the W end of the Jeep Trail. 05 Mar 96.

Montia fontana ssp. *chondrosperma* (Fenzl) Walters – WATER MONTIA. Shallow water of ditches, other wet places. Late Feb–Mar. Oswald & Ahart 7234: SE¼ SW¼ Sect. 25. Wet drainage paralleling the N side of Sevenmile Creek ca. 0.1 mi W of Hwy. 36. 18 Mar 96.

Portulaca oleracea L. – COMMON PURSLANE. Gravelly and grassy margins of Paynes Creek. Native to Eur. Early Jul.

PRIMULACEAE – PRIMROSE FAMILY

Anagallis arvensis L. – SCARLET PIMPERNEL. Sandy flats along Paynes Creek, grassy slopes in blue oak savanna. Native to Eur. Early Apr–Jun.

Dodecatheon clevelandii Greene ssp. *patulum* (Greene) H.J.Thomps. – LOWLAND SHOOTINGSTAR. Widespread in grassland, open blue oak savanna. Late Feb–Apr. [*D. patulum* Greene] Oswald & Ahart 7233: SW¼ NE¼ Sect. 26. Open flat between the Sacramento River and the power transmission lines at this

location. A few plants in this population have magenta rather than white petals. 18 Mar 96.

Dodecatheon hendersonii A.Gray – HENDERSON'S SHOOTINGSTAR. Brushy slopes, blue oak savanna. Mid Mar–Apr. [Includes var. *cruciatum* Greene, ssp. *cruciatum* (Greene) H.J.Thomps., var. *hansenii* Greene, & ssp. *parvifolium* (Kunth) H.J.Thomps., *D. hansenii* (Greene) H.J.Thomps.] Oswald 7228: NW¼ NE¼ Sect. 8. Slopes in the NE corner of the parcel. 15 Mar 96.

RANUNCULACEAE – BUTTERCUP FAMILY

Clematis lasiantha Nutt. – CHAPARRAL CLEMATIS. Common vine on brushy slopes. Mid Apr. Oswald & Ahart 7449: NE¼ SW¼ Sect 7. N side of Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Delphinium hansenii (Greene) Greene ssp. *hansenii* – HANSEN'S LARKSPUR. Brushy slopes in Paynes Creek Canyon. Early May.

Delphinium patens Benth. ssp. *patens* – SPREADING LARKSPUR. Grassy and brushy openings on north-facing slopes of Paynes Creek Canyon. Mid Apr–May. Oswald & Ahart 7528: SW¼ NW¼ Sect. 13. Near Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Delphinium variegatum Torr. & A.Gray ssp. *variegatum* – ROYAL LARKSPUR. Grassy flats and openings in blue oak woodland. Early Apr.

Myosurus minimus L. – COMMON MOUSETAIL. Thin soils of vernal wet depressions, receding margin of Hog Lake. Mid Mar. [Includes var. *filiformis* Greene, ssp. *montanus* G.R.Campb. & ssp. *major* (Greene) G.R. Campb.; *M. lepturus* (A.Gray) Howell var. *filiformis* Greene]

Ranunculus aquatilis var. *hispidulus* Drew – WATER BUTTERCUP. Locally abundant in shallow water and on wet mud along the edge of Hog Lake. Late Apr. Oswald & Ahart 7421.1: NW¼ NW¼ Sect 17. 23 Sep 96.

Ranunculus arvensis L. – FIELD BUTTERCUP. Moist soil along streams. Native to Eur. Mid May. Oswald & Ahart 7582: SW¼ NE¼ Sect. 8. Bank of an intermittent stream in the NE corner of the parcel. 20 May 96.

Ranunculus canus Benth. – SACRAMENTO VALLEY BUTTERCUP. Oak savanna along ridges, riparian zones along Paynes Creek. Early Mar–May. [Includes var. *laetus* (Greene) L.D.Benson & var. *ludovicianus* (Greene) L.D.Benson] Oswald, Ahart, & Molter 7259: NW¼ NE¼ Sect. 8. Paynes Creek in the NE end of the parcel. 25 Mar 96.

Ranunculus hebecarpus Hook. & Arn. – PUBESCENT-FRUITED BUTTERCUP. Shaded banks. Late Mar–Apr. Oswald, Ahart, & Molter 7274: SE¼ SE¼ Sect. 15. S bank of Paynes Creek at the bridge site. 25 Mar 96.

Ranunculus muricatus L. – PRICKLE-SEEDED BUTTERCUP. Moist places along streams. Native to Eur. Mid May. *Oswald & Ahart 7608*: NW¼ NE¼ Sect. 8. Flood channel along Paynes Creek in the NE end of the parcel. 20 May 96.

Thalictrum fendleri var. *polycarpum* Torr. – MANY-FRUITED MEADOW-RUE. Scattered plants on the flood plain of Paynes Creek. Mid May. [*T. polycarpum* (Torr.) S. Watson] *Oswald & Ahart 7588*: NE¼ NW¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus cuneatus (Hook.) Nutt. var. *cuneatus* – BUCKBRUSH. Rocky and brushy slopes. Mid Mar. [Includes var. *dubius* J.T. Howell, var. *ramulosus* Greene, & var. *submontanus* (Rose) McMinn; *C. ramulosus* (Greene) McMinn var. *ramulosus*]

Rhamnus ilicifolia Kellogg – HOLLY-LEAVED REDBERRY. Rocky ridges, blue oak savanna. Late Apr–May. [*R. crocea* Nutt. var. *ilicifolia* (Kellogg) Greene & ssp. *ilicifolia* (Kellogg) C.B. Wolf] *Oswald & Ahart 7420*: NW¼ NW¼ Sect. 17. W shore of Hog Lake. 23 Apr 96.

Rhamnus tomentella Benth. ssp. *tomentella* – HOARY COFFEEBERRY. Rocky ridges. Late Apr–May. *Oswald & Ahart 7419*: NW¼ NW¼ Sect. 17. W shore of Hog Lake. 23 Apr 96.

ROSACEAE – ROSE FAMILY

Aphanes occidentalis (Nutt.) Rydb. – WESTERN LADY'S-MANTLE. Grassland, open savanna. Early Mar. [*Alchemilla arvensis* (L.) Scop., *Alchemilla occidentalis* Nutt.]

Cercocarpus betuloides Nutt. ex Torr. & A. Gray var. *betuloides* – BIRCH-LEAVED MOUNTAIN-MAHOGANY. Brushy slopes. Flowering interval not determined. [*C. montanus* Raf. var. *glaber* (S. Watson) F.L. Martin]

Heteromeles arbutifolia (Lindl.) M. Roem. – TOYON. Brushy slopes along Paynes Creek. Flowering interval not determined.

Potentilla glandulosa Lindl. ssp. *glandulosa* – STICKY CINQUEFOIL. Seepy places on mudflow; shaded banks in riparian woodland along Paynes Creek. Early May. *Oswald & Ahart 7514*: SW¼ SW¼ Sect. 13. Seep on the rocky edge of an intermittent stream at this location. 06 May 96.

Rosa californica Cham. & Schltld. – CALIFORNIA ROSE. Locally abundant bramble on the flood plain of Paynes Creek. Mid May. *Oswald & Ahart 7590*: NE¼ NW¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Rubus discolor Weihe & Nees – HIMALAYAN BLACKBERRY. Forming a dense patch of brambles on the flood plain of Paynes Creek. Native to Asia. Mid May–Jun. *Oswald & Ahart 7710.2*: SE¼ NE¼ Sect.

22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Rubus ursinus Cham. & Schltld. – CALIFORNIA BLACKBERRY. Common on the flood plain of Paynes Creek. Late Mar. [*R. vitifolius* Cham. & Schltld., *R. vitifolius* ssp. *ursinus* (Cham. & Schltld.) Abrams, *R. macropetalus* Douglas ex Hook.]

RUBIACEAE – MADDER FAMILY

Cephalanthus occidentalis L. var. *californicus* Benth. – CALIFORNIA BUTTON-WILLOW. Wet margins of Paynes Creek. Early Jul. *Oswald & Ahart 7960*: NW¼ NE¼ Sect. 8. Paynes near the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Crucianella angustifolia L. – CROSSWORT. Disturbed places along Paynes Creek. Native to Eur. Mid May. *Oswald & Ahart 7612*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Galium aparine L. – CLEAVERS. Blue oak savanna, rocky places. Mid Mar–Apr. *Oswald & Ahart 7334*: SW¼ SE¼ Sect. 22. Among basalt boulders on a bluff overlooking the Sacramento River just downstream from the mouth of Paynes Creek. 08 Apr 96.

Galium parisiense L. – WALL BEDSTRAW. Roadsides, parking lots, rocky slopes and flats. Early May–Jun. *Oswald & Ahart 7565*: SE¼ NE¼ Sect. 8. Grassy and rocky flat in the NE corner of the parcel. 20 May 96.

Galium porrigens Dempster var. *tenue* (Dempster) Dempster – NARROW-LEAVED CLIMBING BEDSTRAW. Locally common in rocky and brushy places. Mid Mar–Apr.

Sherardia arvensis L. – FIELD-MADDER. Moist places along streams. Mid May–Jun. *Oswald & Ahart 7576*: SW¼ NE¼ Sect. 8. Intermittent stream in the NE corner of the parcel. 20 May 96.

RUTACEAE – RUE FAMILY

Ptelea crenulata Greene – HOPTREE. Common on North-facing ridges and slopes in Paynes Creek Canyon. Early Apr–May. [*P. baldwinii* Torr. & A. Gray var. *crenulata* Jeps.] *Oswald & Ahart 7530*: SE¼ NW¼ Sect. 13. Grassy slope above Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

SALICACEAE – WILLOW FAMILY

Populus fremontii S. Watson ssp. *fremontii* – FREMONT'S COTTONWOOD. Riparian zones along Paynes Creek and the Sacramento River. Flowering interval not determined.

Salix exigua Nutt. – SANDBAR WILLOW. Common on the flood plain of Paynes Creek. Flowering interval not determined. [*S. exigua* var. *stenophylla* (Rydb.) C.K. Schneid., *S. hindsiana* Benth. including var. *leucodendroides* (Rowlee) C.R. Ball & var. *parishiana* (Rowlee) C.R. Ball, *S. sessilifolia* Nutt. var. *hindsiana*

(Benth.) Andersson & var. *leucodendroides* C.K. Schneid.] *Oswald & Ahart* 7687: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Salix gooddingii C.R. Ball – GOODDING'S BLACK WILLOW. Flood plain and banks of Paynes Creek. With expanding leaves and catkins late Mar. [Includes var. *variabilis* C.R. Ball; *S. nigra* Marshall var. *vallicola* Dudley]

Salix laevigata Bebb – RED WILLOW. Flood plain of Paynes Creek. Flowering interval not determined.

Salix lasiolepis Benth. – ARROYO WILLOW. Flood plain of Paynes Creek. Developing leaves and green fruits late Mar. [Includes var. *bracelinae* C.R. Ball & var. *sandbergii* (Rydb.) C.R. Ball, *S. tracyi* C.R. Ball]

SAXIFRAGACEAE – SAXIFRAGE FAMILY

Lithophragma bolanderi A. Gray – BOLANDER'S WOODLANDSTAR. Shaded, rocky slopes and outcrops. Both the entire- and lacerate-petaled variants of the plant are found. Early Apr–May. [*L. scabrella* (Greene) Greene, *L. heterophylla* (Hook. & Arn.) Torr. & A. Gray var. *scabrella* (Greene) Jeps.] *Oswald & Ahart* 7452: NE¼ SW¼ Sect. 7. Grassy and brushy slope of Paynes Creek Canyon ca. 0.4 mi N of the Jeep Trail and 0.2 mi W of the power line at this location. 23 Apr 96.

Lithophragma parviflorum var. *trifoliatum* (Eastw.) Jeps. – THREE-PARTED WOODLANDSTAR. Common on brushy slopes, along Paynes Creek, and in rocky places. Mid Mar–Apr. [*L. trifoliata* Eastw.] *Oswald & Ahart* 7434: NE¼ SW¼ Sect. 7. Common on the brushy N-facing slope of Paynes Creek Canyon near the N of the end of the Jeep Trail. 23 Apr 96.

Saxifraga californica Greene – CALIFORNIA SAXIFRAGE. Rocky slopes and ridges, rocky creek banks. Some plants (*Oswald, Ahart, & Molter* 7262) are intermediate between *S. californica* and *S. integrifolia*. Mid Mar–Apr. *Oswald & Ahart* 7230: NW¼ SW¼ Sect. 25. Along the jeep trail following the power line N of Sevenmile Creek. 18 Mar 96.

Saxifraga integrifolia Hook. – HOOKER'S SAXIFRAGE. Common in grassland, open blue oak savanna. Late Feb–Mar.

SCROPHULARIACEAE – FIGWORT FAMILY

Antirrhinum cornutum Benth. – SPURRED SNAP-DRAGON. Gravel bars along Paynes Creek. Late May–Jul. *Oswald & Ahart* 7700: NE¼ NE¼ Sect. 22. Paynes Creek ca. 0.3 mi S of the bridge site. 03 Jun 96.

Castilleja attenuata (A. Gray) T.I. Chuang & Heckard – VALLEY-TASSELS. Common on grassy flats, rocky slopes in blue oak savanna. Late Mar–May. [*Orthocarpus attenuatus* A. Gray]

Collinsia sparsiflora var. *collina* (Jeps.) Newsom – FEW-FLOWERED COLLINSIA. Grassland, open oak savanna, rocky places. Mid Mar–Apr. *Oswald, Ahart, &*

Molter 7268.1: SE¼ NE¼ Sect. 8. Paynes Creek Canyon in the NE corner of the parcel. 25 Mar 96.

Collinsia tinctoria Hartw. ex Benth. – STICKY CHINESE-HOUSES. Rocky banks along Paynes Creek. Late May–Jun. *Oswald & Ahart* 7705: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.4 mi S of the bridge site. 03 Jun 96.

Cordylanthus pilosus A. Gray ssp. *hansenii* (Ferris) T.I. Chuang & Heckard – HANSEN'S BIRD'S-BEAK. Stream banks and gravel bars. Early Jul. [*C. hansenii* (Ferris) J.F. Macbr.] *Oswald & Ahart* 7959: NW¼ NE¼ Sect. 8. Flood plain along Paynes at the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Gratiola ebracteata Benth. – BRACKETLESS HEDGE-HYSSOP. Common on the margins of vernal pools and on the drying beds of shallow wetlands and ditches. Early Apr–May.

Gratiola heterosepala Mason & Bacig. – BOGGS LAKE HEDGE-HYSSOP. Drying margins of Hog Lake. Early May. CNPS List 1B, CE; proposed change to List 4 in the 6th Edition of the Inventory. *Oswald & Ahart* 7537: SW¼ NW¼ Sect. 17. S end of Hog Lake. 06 May 96.

Keckiella breviflora (Lindl.) Straw var. *glabrisepala* (D.D. Keck) N.H. Holmgren – GAPIING KECKIELLA. Rocky and brushy slopes. Mid May–Jun. [*Penstemon breviflorus* ssp. *glabrisepalus* D.D. Keck; *Keckiella breviflora* ssp. *glabrisepala* (D.D. Keck) Straw] *Oswald & Ahart* 7577: SW¼ NE¼ Sect. 8. Slopes bordering the intermittent stream in the NE corner of the parcel. 20 May 96.

Lindernia dubia (L.) Pennell – FALSE PIMPERNEL. Sand bars along Paynes Creek, drying strand of Hog Lake. Late May–Sep. [*L. anagallidea* (Michx.) Pennell] *Oswald & Ahart* 7716: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Mimulus cardinalis Douglas ex Benth. – SCARLET MONKEY-FLOWER. Moist and rocky edges of streams. Mid Jul–Sep. *Oswald & Ahart* 8269: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Mimulus douglasii (Benth.) A. Gray – PURPLE MOUSE-EARS. Thin soils on eroded patches of mudflow. Mid Mar. [*M. cleistogamus* J.T. Howell]

Mimulus floribundus Douglas ex Lindl. – FLORIFEROUS MONKEY-FLOWER. Around large boulders. Mid Mar–Apr. [*M. arenarius* A.L. Grant, *M. dudleyi* A.L. Grant, *M. subulatus* (A.L. Grant) Pennell, *M. floribundus* var. *subulatus* A.L. Grant]

Mimulus glaucescens Greene – SHIELD-BRACTED MONKEY-FLOWER. Common on rocky flats and flood channels along Paynes Creek. Early Apr–Jun. CNPS List 4. *Oswald & Ahart* 7442: NE¼ SW¼ Sect. 7. Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Mimulus guttatus Fisch. ex DC. – SEEP MONKEY-FLOWER. Margins of Hog Lake, flood channels along Paynes Creek. Mid Apr–Sep. [*M. guttatus* var. *depauperatus* (A.Gray) A.L. Grant, *M. micranthus* A.Heller; *M. guttatus* ssp. *micranthus* (A.Heller) Munz] Oswald & Ahart 7427 (var. *micranthus*): NE¼ NE¼ Sect 18. Unnamed vernal pool W of Hog Lake. 23 Apr 96.

Mimulus guttatus var. *nasutus* (Greene) Jeps. – SNOUTED MONKEY-FLOWER. Outcrops, thin soils on eroded mudflow. Mid Mar–Apr. [Included in *M. guttatus* in The Jepson Manual.]

Mimulus pilosus (Benth.) S. Watson – DOWNY MIMETANTHE. Sandy and gravelly flood channels along Paynes Creek. Mid May–Sep. [*Mimetanthe pilosa* (Benth.) Greene] Oswald & Ahart 7704: NE¼ NE¼ Sect. 22. Flood channel along Paynes Creek ca. 0.3 mi S of the bridge site. 03 Jun 96.

Mimulus tricolor Hartw. ex Lindl. – TRICOLORED MONKEY-FLOWER. Drying margins of vernal pools. Mid Apr–Jun. Oswald & Ahart 7425: NE¼ NE¼ Sect 18. Unnamed vernal pool W of Hog Lake. 23 Apr 96.

Penstemon azureus Benth. var. *azureus* – AZURE BEARDTONGUE. Rocky margins of intermittent streams in blue oak woodland. Mid May. [*P. heterophyllus* Lindl. var. *azureus* (Benth.) Jeps.] Oswald & Ahart 7567: SW¼ NE¼ Sect. 8. Intermittent stream in the NE corner of the parcel. 20 May 96.

Scrophularia californica Cham. & Schtdl. ssp. *floribunda* (Greene) R.J. Shaw – CALIFORNIA FIGWORT. Rocky bluffs and outcrops. Mid Mar–Apr. Oswald & Ahart 7415: SW¼ NW¼ Sect 17. Rocky slope on the W side of Hog Lake. 23 Apr 96.

Tonella tenella (Benth.) A.Heller – SMALL-FLOWERED TONELLA. Moss-covered rocks in shaded places along Paynes Creek. Late Mar. Oswald, Ahart, & Molter 7265: SE¼ NW¼ Sect. 8. Riparian woodland along Paynes Creek in the NE corner of the parcel. 25 Mar 96.

Triphysaria eriantha (Benth.) T.I. Chuang & Heckard ssp. *eriantha* – JOHNNYTUCK. Widespread in grassland and open oak savanna. Late Feb–May. [*Orthocarpus erianthus* Benth. var. *erianthus*, *O. bidwelliae* A.Gray]

Verbascum blattaria L. – MOTH MULLEIN. Roadsides, rocky flood plain of Paynes Creek. Native to Eurasia. Mid May–Sep...

Verbascum thapsus L. – WOOLLY MULLEIN. Roadsides, rocky flood plain of Paynes Creek. Native to Eurasia. Early Jul–Sep...

Veronica anagallis-aquatica L. – WATER SPEEDWELL. Locally common in sandy and rocky soil along flood channels of Paynes Creek. Mid Apr–Sep... [*V. anagallis* L.] Oswald & Ahart 7439: NE¼ SW¼ Sect 7. Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Veronica peregrina L. ssp. *xalapensis* (Humb., Bonpl. & Kunth) Pennell – PURSLANE SPEEDWELL. Margins of vernal pools and other vernal wet places. Early Apr–May. Oswald & Ahart 7445: NE¼ SW¼ Sect 7. Flood channels of Paynes Creek just downstream from the power line at this location. 23 Apr 96.

Veronica persica Poir. – PERSIAN SPEEDWELL. Moist places. Native to Asia Minor. Early Apr. Oswald & Ahart 7331: SW¼ SE¼ Sect. 22. E margin of Paynes near its mouth. 08 Apr 96.

SOLANACEAE – NIGHTSHADE FAMILY

Datura stramonium var. *tatula* (L.) Torr. – PURPLE-STEMMED JIMSONWEED. Old plant from last year on the sandy bank of Paynes Creek. Also young vegetative plant at the bridge site.

Nicotiana quadrivalvis Pursh – INDIAN TOBACCO. Growing on a flood channel along Paynes Creek. Flowering interval not determined.

Solanum americanum Mill. – AMERICAN BLACK NIGHTSHADE. Stream margins. Early Sep... [*S. nodiflorum* Jacq.] Oswald & Ahart 8268: SE NE¼ Sect. 14. Flood plain of Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

STYRACACEAE – STORAX FAMILY

Styrax officinalis L. var. *rediviva* (Torr.) H.W. Howard – CALIFORNIA SNOWBELL. Common shrub on the slopes along Paynes Creek near the Sacramento River. Flowering period not determined. [Includes var. *californica* (Torr.) Rehder & var. *fulvescens* (Eastw.) Munz & I.M. Johnst., *S. californica* Torr.]

URTICACEAE – NETTLE FAMILY

Urtica dioica ssp. *holosericea* (Nutt.) Thorne – HOARY CREEK NETTLE. Flood channels along Paynes Creek. Early Jul–Sep. [*U. dioica* ssp. *gracilis* (Aiton) Selander var. *holosericea* (Nutt.) C.L. Hitchc., *U. gracilis* Aiton var. *holosericea* (Nutt.) Jeps., *U. holosericea* Nutt., *U. breweri* S. Watson, *U. serra* Blume misapplied] Oswald & Ahart 8266: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

VALERIANACEAE – VALERIAN FAMILY

Plectritis ciliosa ssp. *insignis* (Suksd.) D.H. Morey – SHORT-SPURRED PINK PLECTRITIS. Thin soils and rocky places on mudflow. Mid Mar–Apr. [Includes var. *davyana* (Jeps.) Dyal; *P. californica* (Suksd.) Dyal var. *rubens* (Suksd.) Dyal, *P. macroptera* (Suksd.) Rydb. var. *patelliformis* (Suksd.) Dyal] Oswald, Ahart, & Molter 7268: SE¼ NE¼ Sect. 8. North-facing slope of Paynes Creek canyon in the NE end of the parcel. 25 Mar 96.

Plectritis macrocera Torr. & A. Gray – WHITE PLECTRITIS. Grassland, rocky places. Mid Mar. [Includes var. *collina* (A.Heller) Dyal, var. *grayi*

(Suksd.) Dyal & var. *mamillata* (Suksd.) Dyal; *P. eichleriana* (Suksd.) A.Heller, *P. jepsonii* (Suksd.) Burt Davy] *Oswald, Ahart, & Molter 7267*: SE¼ NE¼ Sect. 8. North-facing slope with of Paynes Creek canyon in the NE corner of the parcel. 25 Mar 96.

VERBENACEAE – VERVAIN FAMILY

Verbena hastata L. – HALBERD-LEAVED VERVAIN. Moist edges of Paynes Creek. Early Jul–Sep... [Includes var. *scabra* Moldenke] *Oswald & Ahart 7983*: SE¼ SE¼ Sect. 15. Gravel bar along Paynes Creek at the bridge site. 08 Jul 96.

Verbena lasiostachys Link var. *scabrida* Moldenke – WESTERN VERVAIN. Rocky flood channels along Paynes Creek. Early Jun. [*V. robusta* Greene]

VIOLACEAE – VIOLET FAMILY

Viola douglasii Steud. – DOUGLAS' VIOLET. Scattered plants in rocky grassland with scattered blue oaks. Mid Mar. *Oswald & Ahart 7231*: NW¼ SW¼ Sect. 25. Near the jeep trail following the powerline N of Sevenmile Creek. 18 Mar 96.

VISCACEAE – MISTLETOE FAMILY [Loranthaceae]

Phoradendron macrophyllum (Engelm.) Cockerell – BIG-LEAVED MISTLETOE. On Oregon ash (*Fraxinus latifolia*) along Paynes Creek. Flowering interval not determined. [*P. flavescens* (Pursh) Nutt. var. *macrophyllum* Engelm., *P. tomentosum* (DC.) Engelm. ex A.Gray ssp. *macrophyllum* (Engelm.) Wiens, *P. longispicum* Trel.]

Phoradendron villosum (Nutt.) Nutt. – HAIRY MISTLETOE. On blue oak (*Quercus douglasii*). Flowering interval not determined. [*P. flavescens* (Pursh) Nutt. var. *villosum* (Nutt.) Engelm.]

VITACEAE – GRAPE FAMILY

Vitis californica Benth. – CALIFORNIA WILD GRAPE. Climbing on rocks and trees in riparian zones. Mid May–Jun.

ZYGOPHYLLACEAE – CALTROP FAMILY

Tribulus terrestris L. – PUNCTURE-VINE. Common roadside weed. Native to Medit. Late Jun–Jul. *Oswald & Ahart 7973*: NE¼ NE¼ Sect. 8. Along Hwy. 36 at the NE end of the parcel. 08 Jul 96.

MONOCOT FLOWERING PLANTS

ALISMATACEAE – WATER-PLANTAIN FAMILY

Alisma plantago-aquatica L. – WATER-PLANTAIN. Pools and later their dry beds along Paynes Creek. Early Jul. [Includes var. *americanum* Schult. & Schult.f., *Alisma plantago* L., *A. subcordatum* Raf., *A. triviale* Pursh] *Oswald & Ahart 7968*: NW¼ NE¼ Sect. 8. Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Damasonium californicum Torr. ex Benth. – FRINGED WATER-PLANTAIN. Common in shallow water and later on mud at Hog Lake and the unnamed vernal pool to the west. Late Apr–May–Jul. [*Machaerocarpus californicus* (Torr. ex. Benth) Small] *Oswald & Ahart 7413*: SW¼ NW¼ Sect 17. W end of Hog Lake. 23 Apr 96.

Sagittaria sanfordii Greene – SANFORD'S ARROW-HEAD. Extensive colonies in Hog Lake. Late Jun–Jul. CNPS List 1B, proposed move to List 4 in the 6th edition of the CNPS Inventory. *Oswald & Ahart 7977*: NW¼ NW¼ Sect. 17. Collected in ca. 3 dm of water on the NE side of the lake. 08 Jul 96.

CYPERACEAE – SEDGE FAMILY

Carex barbarae Dewey – SANTA BARBARA SEDGE. Extensive colonies on sandy flats along Paynes Creek. Late Mar. *Oswald & Ahart 7710.1*: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Carex densa (L.H.Bailey) L.H.Bailey – DENSE SEDGE. Rocky banks of intermittent streams. Late Mar. [*C. breviligulata* Mack. & *C. vicaria* L.H. Bailey in part]

Carex nudata W.Boott – TORRENT SEDGE. Common on the rocky edge of Paynes Creek. Late Mar. *Oswald, Ahart, & Molter 7260*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 25 Mar 96.

Cyperus bipartitus Torr. – TWO-PARTED CYPERUS. In moist soil along Paynes Creek. Late Aug. [*C. rivularis* Kunth, *C. niger* Ruiz & Pav. var. *rivularis* (Kunth) V.E.Grant, *C. niger* var. *castaneus* (Pursh) Kük.] *Oswald & Ahart 8270*: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Cyperus eragrostis Lam. – TALL CYPERUS. Rocky flood channels along Paynes Creek. Early May. *Oswald & Ahart 7697*: SE¼ SE¼ Sect. 15. Along Paynes Creek at the bridge site. 03 Jun 96.

Cyperus esculentus L. – YELLOW NUT-SEDE. Flood channels and gravel bars along Paynes Creek. Late May. *Oswald & Ahart 7725*: NW¼ SE¼ Sect. 22. E side of Paynes Creek just upstream from the Sacramento River. 03 Jun 96. *Oswald & Ahart 7966*: NW¼ NE¼ Sect. 8. Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Cyperus squarrosus L. – AWNED CYPERUS. Moist places along Paynes Creek. Mid May. [*Cyperus aristatus* Rottb.] *Oswald & Ahart 7604*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Cyperus strigosus L. – FALSE NUTSEDE. Moist places on the gravelly flood plain of Paynes Creek. Early Jul. *Oswald & Ahart 7952*: NW¼ NE¼ Sect. 8.

Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Eleocharis acicularis (L.) Roem. & Schult. var. *acicularis* – NEEDLE SPIKE-RUSH. Vernaly flooded places, stream margins. Late May. *Oswald & Ahart 7970*: NW¼ NE¼ Sect. 8. Along Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96. *Oswald & Ahart 8253*: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Eleocharis macrostachya Britton ex Small – PALE SPIKE-RUSH. Common in vernal pools, wet drainages, sloughs and flood channels along creeks. Late May. [*E. palustris* (L.) Roem. & Schult.] *Oswald & Ahart 7969*: NW¼ NE¼ Sect. 8. Along Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Eleocharis parishii Britton – PARISH'S SPIKE-RUSH. In moist soil along Paynes Creek. Late Aug. [*E. montevidensis* Kunth var. *disciformis* (Parish) V.E. Grant & var. *parishii* (Britton) V.E. Grant] *Oswald & Ahart 8271*: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Lipocarpa micrantha (Vahl) G.C. Tucker – SMALL-FLOWERED LIPOCARPHA. Moist gravel bars along Paynes Creek. Late May. [*Hemicarpha micrantha* (Vahl) Pax var. *minor* (Schrad.) Friedl.] *Oswald & Ahart 7721*: NW¼ SE¼ Sect. 22. E side of Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Scirpus acutus Muhl. ex Bigelow var. *occidentalis* (S. Watson) Beetle – HARD-STEMMED TULE. Shallow water on the margins of Paynes Creek. Early May. *Oswald & Ahart 7979*: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 08 Jul 96.

Scirpus microcarpus C. Presl – SMALL-FRUITED BULRUSH. Wet soil on the edge of Paynes Creek. Late Aug. *Oswald & Ahart 8264*: SE NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

HYDROCHARITACEAE – WATERWEED FAMILY

Elodea canadensis Rich. – CANADIAN WATERWEED. Localized population in still water along Paynes Creek. Late May–Jun. *Oswald & Ahart 7711*: SE¼ NE¼ Sect. 22. Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

JUNCACEAE – RUSH FAMILY

Juncus acuminatus Michx. – SHARP-FRUITED RUSH. Flood channels along Paynes Creek. Late May.

Juncus bufonius L. var. *bufonius* – COMMON TOAD RUSH. Widespread in vernaly moist places, gravelly flats. Early Apr. *Oswald & Ahart 7713*: SE¼ NE¼ Sect. 22. Along Paynes Creek ca. 0.5 mi S of the bridge site. 03 Jun 96.

Juncus bufonius var. *congestus* Wahlenb. – CONGESTED TOAD RUSH. Found in the parking lot at Hwy. 36. Dry plants early Jul. [*J. bufonius* var. *congdonii* (S. Watson) J.T. Howell]

Juncus capitatus Weigel – LEAFY-BRACTED DWARF RUSH. Locally abundant on vernaly moist, grassy flats and in disturbed places. Native to Eurasia, N. Afr. Early Apr. *Oswald & Ahart 7337*: NW¼ SE¼ Sect. 23. Jeep trail crossing blue oak savanna at this location. 08 Apr 96.

Juncus effusus var. *pacificus* Fernald & Wieg. – PACIFIC RUSH. Tufted rush on the bank of Paynes Creek. Mid May.

Juncus oxymyris Engelm. – POINTED RUSH. In flood channels along Paynes Creek. Early May. *Oswald & Ahart 7706*: SE¼ NE¼ Sect. 22. Along Paynes Creek ca. 0.4 mi S of the bridge site. 03 Jun 96.

Juncus patens E. Mey. – SPREADING RUSH. Flood plain along Paynes Creek. Late Apr.

Juncus tenuis Willd. – SLENDER RUSH. On the edge of an intermittent drainage near Paynes Creek. Early May.

Juncus uncialis Greene – INCH-HIGH RUSH. Drying beds of pools and ditches. *Oswald & Ahart 7339*: SE¼ SE¼ Sect. 13. Roadside ditch 1.3 mi W of the parking lot. 08 Apr 96.

JUNCAGINACEAE – ARROW-GRASS FAMILY [Lilaeaceae]

Lilaea scilloides (Poir.) Hauman – FLOWERING-QUILLWORT. In wet soil in the drainage at the W end of Hog Lake. Late Apr.

LILIACEAE – LILY FAMILY [Includes Amaryllidaceae & Smilacaceae]

Allium amplexans Torr. – CLASPING ONION. Rocky slopes in blue oak savanna, flood plains along Paynes Creek. Early Apr–May.

Allium peninsulare Lemmon ex Greene var. *peninsulare* – MEXICAN ONION. Locally common in rocky and brushy slopes in blue oak woodland and on brushy banks along Paynes Creek. Mid May. *Oswald & Ahart 7573*: SW¼ NE¼ Sect. 8. Near the intermittent stream in the NE corner of the parcel. 20 May 96.

Brodiaea californica Lindl. var. *californica* – CALIFORNIA BRODIAEA. Locally abundant in open grassland and grassy openings in blue oak woodland. Late Apr–May.

Brodiaea coronaria (Salisb.) Engl. ssp. *coronaria* – HARVEST BRODIAEA. Common on the drying margins of Hog Lake. Late May–Jun.

Brodiaea elegans Hoover ssp. *elegans* – ELEGANT BRODIAEA. Common on dry slopes and flats. Early May–Jun. [Includes vars. *mundula* (Jeps.) Hoover & *australis* Hoover]

Brodiaea minor (Benth.) S. Watson – BLUESTARS. Widespread on grassy flats. Early Apr–May. [Includes var. *nana* (Hoover) Hoover]

Calochortus luteus Douglas ex Lindl. – YELLOW MARIPOSA-LILY. Dry slopes in oak savanna near Paynes Creek in the western half of the parcel. Late May–Jun.

Calochortus superbus Purdy ex J.T. Howell – SUPERB MARIPOSA-LILY. Grassy and rocky slopes and flats. Early May. [*C. luteus* Douglas ex Lindl. var. *citrinus* S. Watson]

Chlorogalum angustifolium Kellogg – NARROW-LEAVED SOAP-PLANT. Common on grassy flats. Early May–Jun.

Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum* – WAVY-LEAVED SOAP-PLANT. Rocky ridges, banks and flood plains along Paynes Creek. Mid May.

Dichelostemma capitatum A.W. Wood ssp. *capitatum* – BLUEDICKS. Common on rocky ridges, grassy slopes and flats, blue oak savanna. Late Feb–May. [*D. pulchellum* (Salisb.) A. Heller, *D. lacuna-vernalis* L.W. Lenz, *Brodiaea capitata* Benth., *Brodiaea pulchella* (Salisb.) Greene]

Dichelostemma congestum (Sin.) Kunth – FORK-TOOTHED OOKOW. Brushy and grassy places along Paynes Creek. Early May. [*Brodiaea congesta* Sm., *Brodiaea pulchella* (Salisb.) Greene misapplied, *D. pulchellum* (Salisb.) A. Heller misapplied]

Dichelostemma multiflorum (Benth.) A. Heller – ROUND-TOOTHED OOKOW. Common in open blue oak savanna. Early Apr–May. [*Brodiaea congesta* Sm., *Brodiaea pulchella* (Salisb.) Greene misapplied, *D. pulchellum* (Salisb.) A. Heller misapplied]

Dichelostemma volubile (Kellogg) A. Heller – TWINING OOKOW. Climbing on vegetation on brushy north-facing slopes. Early May. [*Brodiaea volubilis* (Kellogg) Baker, *D. californicum* (Torr.) A.W. Wood]

Erythronium multiscapoideum (Kellogg) A. Nelson & P.B. Kenn. – SIERRA FAWN-LILY. Shaded banks along Paynes Creek. Late Mar. [*E. hartwegii* S. Watson] Oswald, Ahart, & Molter 7263: SE¼ NW¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 25 Mar 96.

Fritillaria affinis (Schult.) Sealy var. *affinis* – CHECKERED FRITILLARY. Shaded and brushy slopes and banks along Paynes Creek, north-facing edges of rimrock along plateaus. In fruit late Mar. [*F. lanceolata* Pursh]

Odontostomum hartwegii Torr. – HARTWEG'S ODONTOSTOMUM. Grassy slopes and flats, edges of drainages and streams. Early Apr–May. Oswald & Ahart 7527: SW¼ NW¼ Sect. 13. Rocky flood channel of Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Smilax californica (A. DC.) A. Gray – CALIFORNIA GREENBRIER. Prickly vine on the flood plain along Paynes Creek. Flowering interval not determined.

Triteleia bridgesii (S. Watson) Greene – BRIDGES' TRITELEIA. Margins of intermittent streams, banks and north-facing slopes along Paynes Creek. Early May. [*Brodiaea bridgesii* S. Watson]

Triteleia hyacinthina (Lindl.) Greene (typical form) – WILD HYACINTH. Along streams, on the margins of vernal pools, and on wet grassy flats. Early May. [*Brodiaea hyacinthina* (Lindl.) Baker; *Hesperoscordum hyacinthinum* Lindl.]

Triteleia hyacinthina (Lindl.) Greene (upland form) – WILD HYACINTH. Rocky slopes and flats in oak savanna. Although differing from the typical form in flower size, shape of filaments, habitat, and flowering period, it has not been recognized taxonomically in floras. Late Mar–Apr.

Triteleia laxa Benth. – ITHURIEL'S-SPEAR. Widespread in blue oak savanna and in the riparian zone along Paynes Creek. Early Apr–May.

Triteleia lilacina Greene – GLASSY WILD HYACINTH. Thin soils of grassy flats, thin soils on rocky slopes and flats of mudflow. Early Apr. [*Hesperoscordum lilacinum* (Greene) A. Heller ex Abrams, *Brodiaea hyacinthina* (Lindl.) Baker var. *greenii* (Hoover) Munz] Oswald & Ahart 7316.2: NW¼ NW¼ Sect. 23. Patch of mudflow in blue oak savanna near Paynes Creek S of the bridge site. 08 Apr 96.

Zigadenus venenosus S. Watson var. *venenosus* – DEATH-CAMAS. Locally abundant on brushy slopes along Paynes Creek. Early Apr–May.

POACEAE – GRASS FAMILY [Gramineae]

Achnatherum lemmonii (Vasey) Barkworth – LEMMON'S NEEDLEGRASS. Locally abundant on grassy slopes along Paynes Creek. Early Apr. [*Stipa lemmonii* (Vasey) Scribn.] Oswald & Ahart 7432: NE¼ SW¼ Sect. 7. Paynes Creek Canyon near the N of the end of the Jeep Trail. 23 Apr 96.

Aegilops triuncialis L. – BARBED GOATGRASS. Flood channels along Paynes Creek. Mid May. Oswald & Ahart 7596: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Agrostis exarata Trin. – SPIKED BENTGRASS. Gravel bars along Paynes Creek. Late May. [*A. ampla* Hitchc., *A. longiligula* Vasey, including var. *australis* J.T. Howell] Oswald & Ahart 7696: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Agrostis hendersonii Hitchc. – HENDERSON'S BENTGRASS. Vernal wet flats. Dry plants noted in early Jun. CNPS List 3. [*A. microphylla* Steud. vars. *intermedia* Beetle & *hendersonii* (Hitchc.) Beetle] Oswald & Ahart 7718: NW¼ SE¼ Sect. 22. Grassy pla-

teau on the E side of Paynes Creek at the Sacramento River. 03 Jun 96.

Agrostis stolonifera L. – CREEPING BENT. Gravel bars along Paynes Creek. [*A. alba* L. var. *alba* misapplied in part, *A. alba* vars. *major* (Gaudin) Farw. & *palustris* (Huds.) Pers., *A. palustris* Huds.]

Aira caryophyllea L. – SILVER EUROPEAN HAIR-GRASS. Grassland, rocky slopes. Native to Eur. Mid Mar.

Alopecurus saccatus Vasey – VERNAL POOL FOXTAIL. Common on drying beds of vernal pools. Mid Apr. [*A. howellii* Vasey]

Andropogon virginicus L. var. *virginicus* – BROOMEDGE BLUESTEM. Moist places along intermittent streams, sandy flood plain of Paynes Creek. Native to eastern US. Flowering in autumn—plants still vegetative 04 Sep 96.

Aristida oligantha Michx. – OLDFIELD THREE-AWN. Open grassland, oak savanna, gravel bars. Early Jul. *Oswald & Ahart 7964*: NW¼ NE¼ Sect. 8. Along Paynes E of the mouth of the intermittent stream in the NE end of the parcel. 08 Jul 96.

Avena barbata Pott ex Link – SLENDER WILD OAT. Common in grassy places. Native to southern Eur. Late Apr. *Oswald & Ahart 7615*: SW¼ SE¼ Sect. 18. Old quarry on the W side of Hwy. 36 ca. 0.6 mi S of the parking lot. 20 May 96.

Avena fatua L. – WILD OAT. Flood plain of Paynes Creek. Less common than the previous species. Native to Eur. Early May. *Oswald & Ahart 7526* – NW SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Briza minor L. – LESSER QUAKING-GRASS. Vernally moist slopes and flats. Native to southern & western Eur. Early Apr.

Bromus carinatus Hook. & Arn. var. *carinatus* – CALIFORNIA BROME. Growing along a sandy and rocky flood channel of Paynes Creek. Early May. *Oswald & Ahart 7524.1*: NW SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96. [*B. breviaristatus* Buckl., *B. marginatus* Steud. & *B. polyanthus* Scribn.]

Bromus diandrus Roth – RIPGUT BROME. Common in thicker soils and in disturbed places. Mid Apr. [*B. rigidus* Roth including var. *gussonei* (Parl.) Coss. & Durieu, misapplied] *Oswald & Ahart 7601*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Bromus hordeaceus L. – SOFT CHESS. Common and widespread in grassland and disturbed places. Native to Eur. Mid Apr. [*B. mollis* L., *B. scoparius* L.] *Oswald & Ahart 7600*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Bromus laevipes Shear – WOODLAND BROME. Brushy slopes along Paynes Creek. Early May. [*B. vulgaris* (Hook.) Shear var. *eximius* Shear] *Oswald &*

Ahart 7519.1: NW¼ SW¼ Sect. 13. Slope above Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Bromus madritensis L. ssp. *madritensis* – FOXTAIL CHESS. Grassy flats. Native to Eur. Late Apr. *Oswald & Ahart 7508*: SE¼ SW¼ Sect. 13. Flat N of the gravel road and W of the Jeep Trail. 06 May 96.

Bromus madritensis ssp. *rubens* (L.) Husn. – RED BROME. Oak woodland. Native to Eur. Mid Mar. [*B. rubens* L.] *Oswald & Ahart 7509*: SE¼ SW¼ Sect. 13. Flat N of the gravel road and W of the Jeep Trail. 06 May 96.

Bromus racemosus L. – SMOOTH-FLOWERED SOFT CHESS. Moist channels along Paynes Creek. Native to Eur. Mid May. [Included in *B. hordeaceus* L. in The Jepson Manual] *Oswald & Ahart 7606*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Bromus sterilis L. – POVERTY BROME. Flood channels along Paynes Creek. Native to Eurasia. Early May. *Oswald & Ahart 7523*: NW¼ SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Chloris virgata Sw. – SILKY CHLORIS. Roadside weed. Native to warm temperate regions worldwide. Early Jul. *Oswald & Ahart 7990*: NE¼ NE¼ Sect. 19. E edge of Hwy. 36 ca. 0.7 mi S of the parking lot. 08 Jul 96.

Crypsis schoenoides (L.) Lam. – SWAMP PRICKLEGRASS. Moist channels along Paynes Creek. Native to Eur. Early Jun. *Oswald & Ahart 8263*: SE¼ NE¼ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Cynodon dactylon (L.) Pers. – BERMUDA-GRASS. Flood channels along Paynes Creek. Native to Afr. Mid May. *Oswald & Ahart 7605*: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Cynosurus echinatus L. – HEDGEHOG DOGTAIL. Common in blue oak woodland, riparian zones along Paynes Creek. Native to Eur. Early Apr. *Oswald & Ahart 7512.1*: SW¼ SW¼ Sect. 13. Rocky edge of an intermittent stream at this location. 06 May 96.

Deschampsia danthonioides (Trin.) Munro – ANNUAL HAIRGRASS. Widespread on drying beds of vernal pools and wetlands. Early Apr. [*Aira danthonioides* Trin.]

Digitaria sanguinalis (L.) Scop. – HAIRY CRAB-GRASS. Gravel bars along Paynes Creek. Native to Eur. Early Jun. *Oswald & Ahart 7726*: NW¼ SE¼ Sect. 22. Paynes Creek just upstream from the Sacramento River. 03 Jun 96.

Echinochloa colona (L.) Link – JUNGLE-RICE. Sand and gravel bars along Paynes Creek. Late May.

Echinochloa crus-galli (L.) P.Beauv. – BARN-YARD GRASS. Moist places along streams. Collected

early Sep. [Includes var. *zelayensis* (Humb., Bonpl. & Kunth) Hitchc.] *Oswald & Ahart 8250*: SW SW $\frac{1}{4}$ Sect. 13. Seep on the rocky edge of an intermittent stream at this location. 04 Sep 96.

Elymus glaucus Buckley ssp. *glaucus* – BLUE WILD-RYE. Stream edges. Mid May. *Oswald & Ahart 7569*: SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 8. Rocky edges of an intermittent stream at this location. 20 May 96.

Elymus multisetus (J.G.Sm.) Burt Davy – BIG SQUIRRELTAIL. Brushy and rocky banks. Mid May. [*Sitanion jubatum* J.G.Sm.] *Oswald & Ahart 7594*: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 8. Along an intermittent stream in the NE corner of the parcel. 20 May 96.

Eragrostis cilianensis (All.) Vign. ex Janchen – STINKGRASS. Gravel bars along Paynes Creek. Late May. [*E. megastachya* (Koeler) Link] *Oswald & Ahart 7702*: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 22. Paynes Creek ca. 0.3 mi S of the bridge site. 03 Jun 96.

Eragrostis pectinacea (Michx.) Nees var. *pectinacea* – PURPLE LOVEGRASS. Gravel bars, vernal wet depressions. Late May. [*E. diffusa* Buckl.] *Oswald & Ahart 7690*: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96. *Oswald & Ahart 7991*: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 19. Vernal wet depression on the E side of Hwy. 36 ca. 0.7 mi SW of the parking lot. 08 Jul 96.

Gastridium ventricosum (Gouan) Schinz & Thell. – NITGRASS. Grassy slopes and flats. Native to Eur. Late Apr. *Oswald & Ahart 7572*: SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 8. Edge of an intermittent stream in the NE corner of the parcel. 20 May 96.

Hordeum marinum Huds. ssp. *gussoneanum* (Parl.) Thell. – MEDITERRANEAN BARLEY. Grassy slopes and flats. Native to Eur. Mid Apr. [*H. geniculatum* All., *H. gussoneanum* Parl., *H. hystrix* Roth]

Hordeum murinum ssp. *leporinum* (Link) Ar-cang. – HARE WALL BARLEY. Common in blue oak woodland. Native to Eur. Early Apr. [*H. leporinum* Link, *H. murinum* L.]

Leersia oryzoides (L.) Sw. – RICE CUTGRASS. Wet edge of Paynes Creek. Late Aug.

Lolium multiflorum Lam. – ANNUAL RYEGRASS. Grassy slopes and flats, margins of streams and pools. Native to Eur. Late Apr. *Oswald & Ahart 7511*: SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sect. 13. Rocky edge of an intermittent stream at this location. 06 May 96.

Lolium temulentum L. – DARNEL. Grassy edges of intermittent streams. Native to Medit. Late Apr. *Oswald & Ahart 7512*: SW SW $\frac{1}{4}$ Sect. 13. Rocky edge of an intermittent stream at this location. 06 May 96.

Melica californica Scribn. – CALIFORNIA MELIC. Locally common on rocky banks and outcrops. Early Apr. *Oswald & Ahart 7568*: SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 8. Edge of an intermittent stream in the NE corner of the parcel. 20 May 96.

Melica torreyana Scribn. – TORREY'S MELIC. Brushy slopes along Paynes Creek. Early May. *Oswald*

& *Ahart 7519*: NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sect. 13. Slope bordering Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Muhlenbergia rigens (Benth.) Hitchc. – DEER-GRASS. Rocky margins and flood plains of Sevenmile Creek downstream from Hwy. 36, riparian zone along Paynes Creek. Early Jul.

Nassella pulchra (Hitchc.) Barkworth – PURPLE NEEDLEGRASS. Grassy slopes along Paynes Creek. Early Apr. [*Stipa pulchra* Hitchc.]

Orcuttia tenuis Hitchc. – SLENDER ORCUTTIA. Common on the drying bed of Hog Lake. Early May. CNPS List 1B, CE, PT. *Oswald & Ahart 7976*: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sect. 17. Northeast side of the lake. 08 Jul 96.

Panicum acuminatum Sw. var. *acuminatum* – WESTERN PANICGRASS. Gravel and sand bars along Paynes Creek. Late May. [*P. occidentale* Scribn., *P. hauchucaae* Ashe, *P. pacificum* Hitchc. & Chase, *P. shastense* Scribn. & Merr., & *P. thermale* Bol., *Dichanthelium lanuginosum* (Elliott) Gould var. *fasciculatum* (Torr.) Spellens.] *Oswald & Ahart 7694*: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sect. 15. Along Paynes Creek at the bridge site. 03 Jun 96.

Panicum capillare L. – WITCHGRASS. Gravel bars. Late May. *Oswald & Ahart 7695*: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Panicum dichotomiflorum Michx. – SMOOTH WITCHGRASS. Stream margins. Native to eastern U.S. Late Aug. *Oswald & Ahart 8267*: SE NE $\frac{1}{4}$ Sect. 14. Paynes Creek ca. 1 mi upstream from the bridge site. 04 Sep 96.

Paspalum dilatatum Poir. – DALLISGRASS. Moist places along Paynes Creek. Native to S. Amer. Late May. *Oswald & Ahart 7692*: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Paspalum distichum L. – KNOTGRASS. In shallow water and later on the dry margins of ponds and streams. Early Jul. *Oswald & Ahart 7971*: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sect. 17. Receding margin of Hog Lake. 08 Jul 96.

Poa annua L. – ANNUAL BLUEGRASS. Grassland, open savanna, riparian zones, disturbed places. Native to Eur. Late Feb.

Poa bulbosa L. – BULBOUS BLUEGRASS. Rocky bank of intermittent stream in NE corner of parcel. Native to Eur. Late Mar.

Poa pratensis L. ssp. *pratensis* – KENTUCKY BLUEGRASS. Moist, shaded banks. Native to Eur. Mid May. *Oswald & Ahart 7607*: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sect. 8. Along Paynes Creek in the NE corner of the parcel. 20 May 96.

Poa secunda J.Presl ssp. *secunda* – ONE-SIDED BLUEGRASS. Tufted grass on outcrops and in thin soils of open rocky plains. Mid Mar. [*P. canbyi* (Scribn.) Howell, *P. gracillima* Vasey, *P. incurva* Scribn. & T.A. Williams, *P. sandbergii* Vasey, *P. scabrella* (Thurb.) Benth. ex Vasey] *Oswald & Ahart 7344*:

NE¼ SW¼ Sect. 13. S side of the gravel road 0.9 mi W of the parking lot. 08 Apr 96.

Poa tenerrima Scribn. – DELICATE BLUEGRASS. Tufted grass in thin soils of shallow wetlands. Early Apr.

Polypogon interruptus Humb., Bonpl. & Kunth – DITCH BEARDGRASS. Sandy and rocky flood channels along Paynes Creek. Native to S. Amer. Early May. [*P. lutosus* (Poir.) Hitchc. misapplied] Oswald & Ahart 7520: NW¼ SW¼ Sect. 13. Paynes Creek ca. 1 mi upstream from the bridge site. 06 May 96.

Polypogon maritimus Willd. – MEDITERRANEAN BEARDGRASS. Moist places along streams and drainages. Native to Medit. Eur., Afr. Early May. Oswald & Ahart 7610: NW¼ NE¼ Sect. 8. Paynes Creek in the NE corner of the parcel. 20 May 96.

Scribneria bolanderi (Thurb.) Hack. – SCRIBNER'S-GRASS. Grassy opening at the end of the gravel road at Paynes Creek. Late Mar.

Setaria sphacelata (Schum.) Moss – AFRICAN BRISTLEGRASS. Tufted perennial in vernal wet places along roads. Native to Afr. Early Jul. Oswald & Ahart 7989: NE¼ NE¼ Sect. 19. E side of Hwy. 36 ca. 0.7 mi SW of the parking lot. 08 Jul 96.

Setaria viridis (L.) P.Beauv. – GREEN BRISTLEGRASS. Gravel bars along Paynes Creek. Late May. [*Chaetochloa viridis* (L.) Scribn.] Oswald & Ahart 7689: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Sorghum halepense (L.) Pers. – JOHNSONGRASS. Moist flats along Paynes Creek. Native to Medit. Late May. Oswald & Ahart 7688: SE¼ SE¼ Sect. 15. Paynes Creek at the bridge site. 03 Jun 96.

Sporobolus cryptandrus (Torr.) A. Gray – SAND DROPSEED. Common tufted roadside grass. Native to Southern California. Early Jul. Oswald & Ahart 7972: NE¼ NE¼ Sect. 8. Along Hwy. 36 at the NE end of the parcel. 08 Jul 96.

Taeniatherum caput-medusae (L.) Nevski – MEDUSA-HEAD. Deeper soils of grassy flats. Native to Eur. Early May. [*Elymus caput-medusae* L.]

Vulpia bromoides (L.) Gray – SIX-WEEKS FESCUE. Banks along Paynes Creek. Native to Eur. Early Apr. [*Festuca bromoides* L., *F. dertonensis* (All.) Asch. & Graebn.]

Vulpia microstachys (Nutt.) Munro var. *microstachys* – SMALL FESCUE. Outcrops, thin soil on grassy slopes and flats. Early Apr. [*Festuca microstachys* Nutt.] Oswald & Ahart 7329: SW¼ SE¼ Sect. 22. Tuscan outcrop on the E side of Paynes Creek near its mouth. 08 Apr 96.

Vulpia microstachys var. *ciliata* (Beal) Lonard & Gould – FRINGED FESCUE. Thin soils on mudflow. Early Apr. [*Festuca eastwoodiae* Piper, *F. grayi* (Abrams) Piper] Oswald & Ahart 7343: NE¼ SW¼ Sect. 13. S side of the road 0.9 mi W of the parking lot. 08 Apr 96.

Vulpia microstachys var. *confusa* (Piper) Lonard & Gould – HAIRY-LEAVED FESCUE. Thin soils on eroded mudflow. Early Apr. [*Festuca confusa* Piper, *F. tracyi* Hitchc.]

Vulpia microstachys var. *pauciflora* (Scribn. ex Beal) Lonard & Gould – FEW-FLOWERED FESCUE. Localized populations in blue oak savanna. Late Apr. [*Festuca pacifica* Piper, *F. reflexa* Buckl.] Oswald & Ahart 7424.1: NW¼ NW¼ Sect 17. Between Hog Lake and the unnamed vernal pool. 23 Apr 96.

Vulpia myuros var. *hirsuta* (Hack.) Asch. & Graebn. – FOXTAIL FESCUE. Grassy slopes and flats. Mid Apr. [*Festuca megalura* Nutt.]

POTAMOGETONACEAE – PONDWEED FAMILY

Potamogeton diversifolius Raf. – DIVERSE-LEAVED PONDWEED. In shallow water in Hog Lake. In fruit early Jul.

TYPHACEAE – CATTAIL FAMILY

Typha domingensis Pers. – SOUTHERN CATTAIL. Shallow margins of Paynes Creek. Summer.

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