

**Rare Plant Status Review: *Fritillaria eastwoodiae***  
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*Fritillaria eastwoodiae* is an endemic, perennial herb in the Liliaceae. It is known from chaparral, cismontane woodland, and lower montane coniferous forest habitats from 50 to 1500 meters in elevation. *F. eastwoodiae* is also sometimes found growing on serpentinite. It is included in *The Jepson Manual* (1993) and will be included in *The Jepson Manual* (2<sup>nd</sup> Edition). *F. eastwoodiae* flowers between March and June.

*F. eastwoodiae* is known from 153 occurrences in Butte, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, and Yuba Counties (please see page 4 for a map showing known locations). 31 of these occurrences are considered historical and have not been documented for at least 20 years. Out of the 122 recent occurrences (those that have been documented in the past 20 years) a total of 45 are currently ranked as either “good” or “excellent” by CNDDDB. 33 of 122 recent occurrences are ranked as either “fair” or “poor” by CNDDDB. The occurrence rank is unknown for 73 occurrences. Two occurrences of *F. eastwoodiae* are considered “possibly extirpated” by CNDDDB. Field work should attempt to re-locate historical occurrences of *F. eastwoodiae*, and suitable habitat within and beyond its known range should be searched for new occurrences. Please see the table below for a summary of occurrence data.

It is important to note that there are serious questions regarding the taxonomy of *F. eastwoodiae*. The map on page 4 clearly shows the bimodal distribution between occurrences of this taxon in Shasta and Tehama counties, and occurrences further to the south. In the past botanists have suggested that populations of *F. eastwoodiae* growing on serpentinite in Butte and Yuba counties may represent a separate, distinct taxonomic entity. The proper identification of plants called *F. eastwoodiae* from numerous occurrences has also been called into question. Lingering taxonomic questions regarding *F. eastwoodiae* resulted in its re-ranking from List 1B to List 3 in the Sixth Edition (2001) of the CNPS Inventory.

Occurrence Statistics for <i>Fritillaria eastwoodiae</i> Data from CNDDDB, January 2009											
Total # of Known Element Occurrences	Element Occurrence Ranks						Population Status		Presence		
	A	B	C	D	X	U	Historic >20 years	Recent <=20 years	Present, Extant	Possibly Extirpated	Extirpated
153	8	37	29	4	2	73	31	122	151	2	0

The population size of *F. eastwoodiae* is fairly well known. Some data are available for approximately 118 occurrences. Counts/estimates conducted at various times between 1979 and 2007 indicate that the population size at occurrences of *F. eastwoodiae* varies greatly (from 1 plant at EO#s 94, 112, 123, and 124 to 1,000's of plants at EO# 75).

Population count/estimate data is provided in the table starting on page 5. The majority of occurrences of *F. eastwoodiae* are represented by very few plants, and approximately 72 out of 122 recent occurrences contain fewer than 100 individuals.

Occurrences of *F. eastwoodiae* are threatened by logging, development, vehicles, road maintenance, recreational activities, erosion, non-native plants, and overshadowing.

Some CNDDDB users have asked us to submit this review, requesting your input on possibly downgrading *Fritillaria eastwoodiae*'s status to List 4. If the taxonomy were clearer and the bimodal distribution situation better understood, the number of good to excellent sites would potentially justify downgrading. The small size of the populations is still of concern. If there are many more populations or plants out there, that could also change the picture. Based on the best available information, CNPS and CNDDDB still recommend that *F. eastwoodiae* be kept on List 3.2. Future research that resolves the taxonomic questions about *F. eastwoodiae* may result in the need for a re-evaluation of its conservation status. We ask that you submit your best scientific opinion regarding list placement of *Fritillaria eastwoodiae*.

### Recommended Actions

**CNPS:** Keep on CNPS List 3.2

**CNDDDB:** Keep on G3Q, S3

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### Current CNPS *Inventory* record:

*Fritillaria eastwoodiae* MacFarlane

Butte County fritillary

Liliaceae

List 3.2

Butte (BUT), El Dorado (ELD), Nevada (NEV), Placer (PLA), Plumas (PLU), Shasta (SHA), Tehama (TEH), Yuba (YUB)

Greenwood (526B) 3812088, Auburn (527A) 3812181, Foresthill (541D) 3912017, North Bloomfield (557C) 3912038, Washington (557D) 3912037, Challenge (558B) 3912142, French Corral (558C) 3912132, Nevada City (558D) 3912131, Rackerby (559A) 3912143, Cascade (574B) 3912162, Clipper Mills (574C) 3912152, Brush Creek (575A) 3912163, Berry Creek (575B) 3912164, Oroville Dam (575C) 3912154, Forbestown (575D) 3912153, Cherokee (576A) 3912165, Hamlin Canyon (576B) 3912166, Oroville (576D) 3912155, Chico (577A) 3912167, Kimshew Point (591B) 3912184, Pulga (591C) 3912174, Soapstone Hill (591D) 3912173, Stirling City (592A) 3912185, Cohasset (592B) 3912186, Paradise West (592C) 3912176, Paradise East (592D) 3912175, Grays Peak (626B) 4012146, Manton (627A) 4012147, Shingletown (627B) 4012148, Inskip Hill (627C) 4012138, Finley Butte (627D) 4012137, Viola (644C) 4012156, Miller Mountain (645A) 4012167, Whitmore (645B) 4012168, Inwood (645C) 4012158,

Hagaman Gulch (645D) 4012157, Montgomery Creek (663C) 4012178, Goose Gap (664A) 4012281

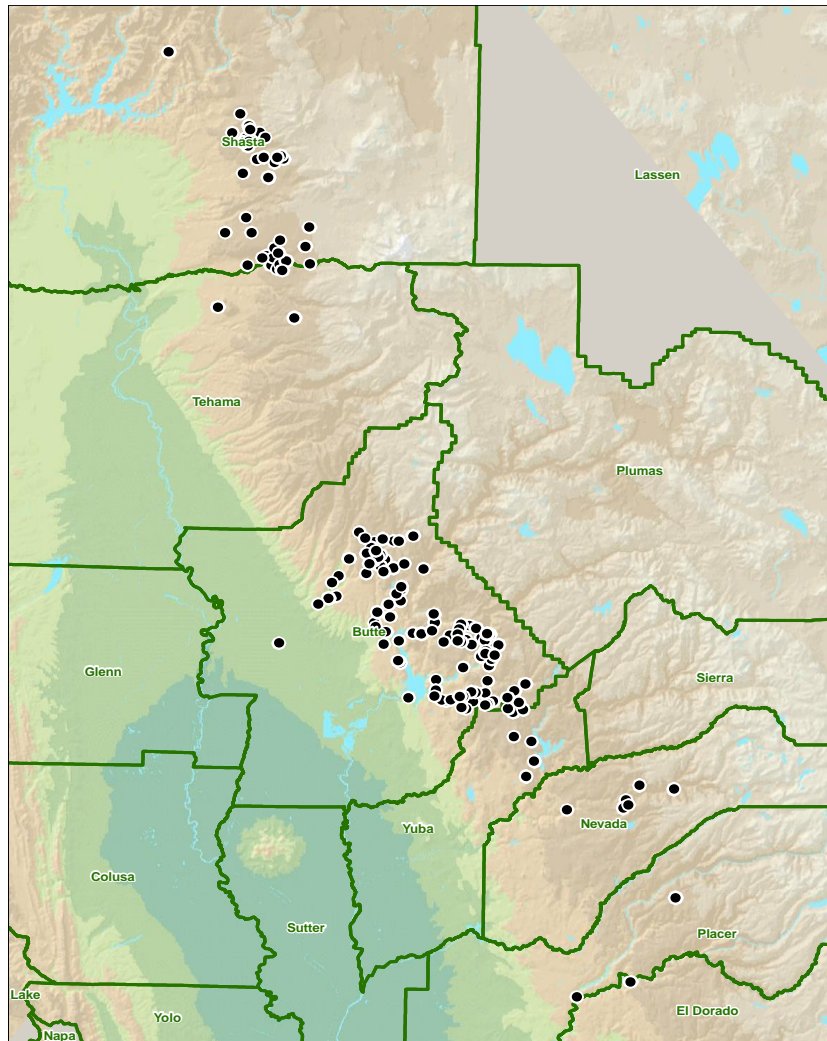
Chaparral, cismontane woodland, lower montane coniferous forest / sometimes serpentinite; elevation 50-1500 meters.

Perennial, bulbiferous herb, blooms March through June.

Move to List 1B? Plants from SHA and TEH Co. may be different taxon; needs study.

Occurrence on 608C needs confirmation. Threatened on private lands by logging and development. Other threats include vehicles, road maintenance, recreational activities, erosion, non-native plants and overshadowing. See *Leaflets of Western Botany* 1:55 (1933) for original description as *F. phaeantha*, and *Madroño* 25(2):93-100 (1978) for revised nomenclature.

Map showing the known occurrences of *Fritillaria eastwoodiae*



**Population Counts/Estimates at *Fritillaria eastwoodiae* Occurrences**

<b>Element Occurrence # (s)</b>	<b>Population Count/Estimate</b>	<b>Date of Observation</b>
1, 2, 3, 4 combined	1,000's of plants	1992
5	5,000 to 10,000	1992
6	"Large numbers observed"	1992
7	"13 colonies observed"	1979
8	100's of plants	1990
9	5-6 plants	2005
10	50	1990
11	15	1990
14	15	1997
16	16	1990
17	120	1990
18	20	1990
19	>100	2005
20	84	1984
21	60	1990
22	60	1990
23	10	1990
24	295	2007
25	"Dozens"	2005
26	100-250	2005
27	30	1990
28	10	1990
29	50+	1993
31	30	1990
32	Possibly Extirpated	2005
33	32	2005
36	1000	2007
50	"Locally Abundant"	1967
55	"A few clusters"	1942
57	21	1992
58	12	2002
59	11	2007
60	"No plants seen"	2007
61	"none found in cursory survey"	2002
62	12	2002
64	60	2007
65	200	2002
66	320	1993

Element Code: PMLIL0V060  
 Retained on CNPS List 3.2 on 2009-04-30

67	12+	1994
69	31	1984
70	unknown number observed	1991
72	111	2007
74	~300	2004
75	1,000's of plants	2004
79	~1,030	2005
80	5	2005
82	"small population"	1979
83	10	1993
84	400	1992
85	20+	1993
86	100+	1993
87	"several hundred plants"	1992
88	4	1992
89	>1138	2004
91	7+	2007
92	>1000	2007
93	753+	2004
94	1	1994
95	224	1995
97	40	2005
98	10	1997
99	5	1997
100	3	1999
103	7	2004
104	25	2004
105	20	2004
106	~150	2001
107	17	2003
108	47	2003
109	104	2003
110	10	2003
111	5	2003
112	1	2003
113	5	2003
114	20	2004
115	5	2003
116	7	2005
117	6	2003
118	5	2003
119, 120 combined	20	2003
121	1	2003
122	13	2003
123	1	2003
124	1	2004
125	182	2003
126	100	2002
128	46	2003

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Retained on CNPS List 3.2 on 2009-04-30

129	4	2003
130	9	2003
131	104	2003
132	4	2003
133	80	2003
134	152	2003
135	40	2003
136	2	2003
137	50	2003
138	33	2003
140	"several dozen"	2002
141	5	2005
142	~400	2004
146	40-100	2000
147	~100	2002
148	10	2002
149	10	2002
150	~30	2002
151	~50	2007
152	"unknown number"	2004
153	>50	2005
154	~24	2004
155	~75	2004
156	~500	2003
157	"unknown number"	2004
158	"unknown number"	2004
159	"unknown number"	2003
160	~40	2003
161	200 to 300	2003
162	"unknown number"	2003
164	16	2007