

Plant Species Evaluation Form

Pleuropogon refractus (Gray) Benth.

NODDING SEMAPHORE GRASS

Family: Poaceae
(CNPS 2018)

PLANTS Symbol: PLRE2
(USDA 2018)

Calif. Endemic: No
(CNPS 2018)

Synonyms/Other Names: *Lophoclaena refracta* A. Gray (Tropicos 2018).

Identification Issues: Unknown.

Taxonomy:

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Species In Genus: 5 species: temperate North America, 1 sp. in eastern Asia. Etymology: (Greek: side beard, from awn at palea base in some species).

Genus Description – Habit: Annual, perennial herb. Stem: generally erect. Leaf: generally cauline; sheath margins fused > 1/2; ligule membranous; blade flat or folded, drooping. Inflorescence: raceme-like. Spikelet: bisexual; 1-8 cm; laterally compressed; glumes << lowest floret, translucent, lower 1-veined, upper 1-3-veined; breaking apart above glumes and beneath florets; florets 5-20; lemma 7-9-veined, veins prominent, not converging, extending to tip, awn (0)0.2-22 mm; palea +/- = lemma, veins with appendages; anthers 3.

Species Description – Habit: Perennial herb from rhizomes. Stem: erect, 7-15 dm, often rooting at lower nodes. Leaf: ligule 2-9 mm; blade (3)5-14 mm wide. Inflorescence: (10)20-35 cm. Spikelet: (1.5)2.5-5 cm, reflexed at maturity; lower glume 3-7 mm, upper 4-9 mm; lemma 8-10.5 mm, awn 5-22 mm; palea appendages 0.2-0.6(1) mm. Chromosomes: 2n=32,36. eFlora Treatment Author: Susan J. Bainbridge.

Status:

Note: Federally recognized Endangered, Threatened, Proposed, or Candidate species under the Endangered Species Act are omitted as they do not meet the definition of a Species of Conservation Concern (FSH 1909.12 § 12.52).

State Listing	G-rank	S-rank	CRPR	R5 FSS	NFP SM	CA BLM
CA: Not listed NV: Not listed OR: Not listed	G4	CA: S4 NV: Not listed OR: Not listed	4.2	Not listed	Not listed	Not listed

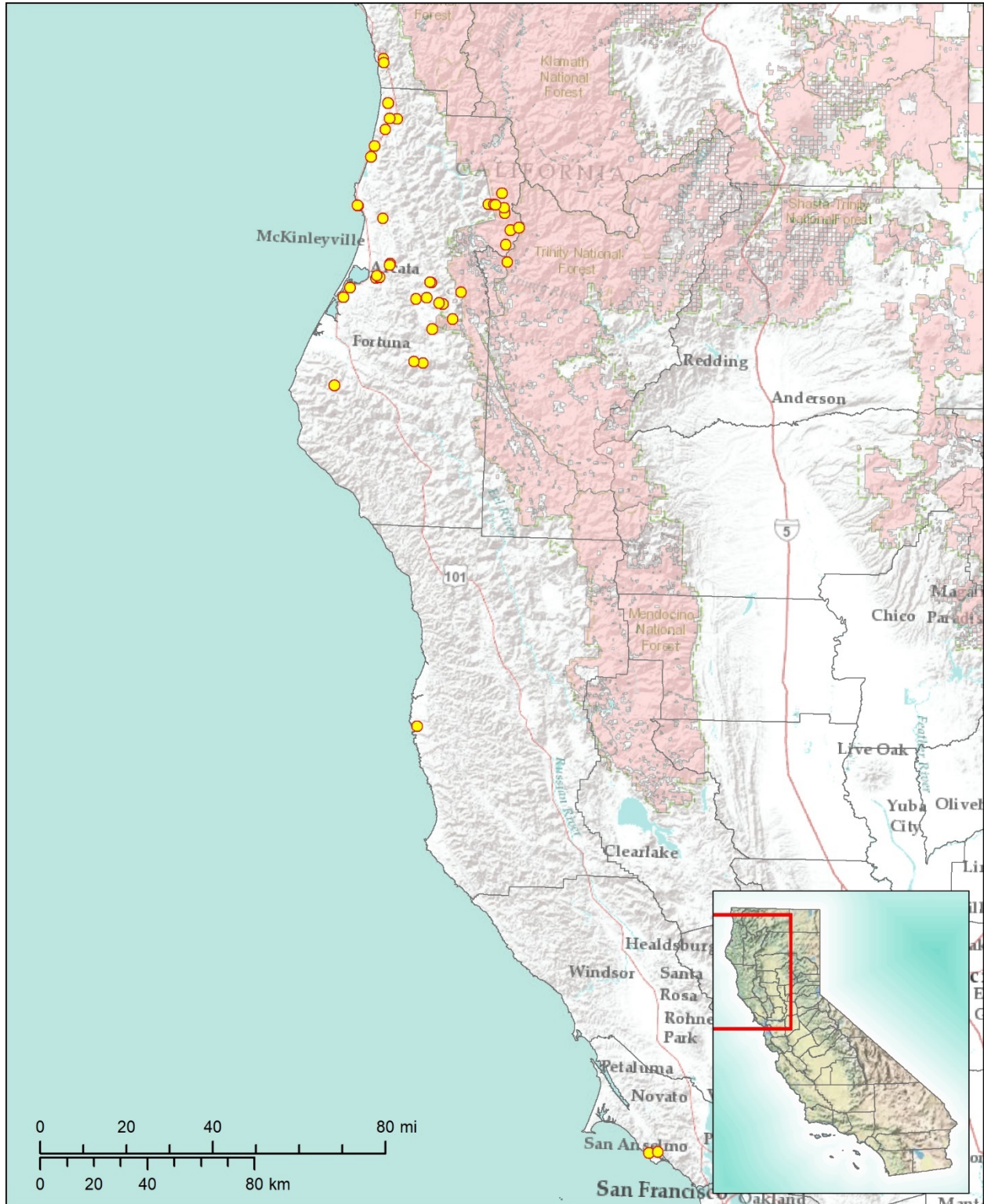
SWAP: Not listed	NNHP: Not listed	NNPS: Not listed	ORBIC: Not listed	OCS: Not listed	IUCN: Not listed
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Expanded abbreviations and citations: State Listing=California Endangered Species Act Listing (CDFW 2018b), Nevada Division of Forestry Fully Protected Plant Species (NAC 527) (NDF 2012), Oregon Department of Agriculture Listed Plants (ODA 2014); G-rank=Global Conservation Status (CDFW 2018a; NatureServe 2018); S-rank=Subnational (state or province-level) Conservation Status (CDFW 2018a; NatureServe 2018; NNHP 2017; ORBIC 2016); CRPR=California Rare Plant Rank (CNPS 2018); R5 FSS=USDA Forest Service Region 5 Regional Forester Sensitive Plant Species List (USDA 2013); NFP SM=Forest Service and Bureau of Land Management Northwest Forest Plan Survey and Manage Species (USDA 2001); CA BLM=California Bureau of Land Management Designated Sensitive Species (BLM 2010); SWAP=California State Wildlife Action Plan Status (CDFW 2015); NNHP=Nevada Natural Heritage Program Status (NNHP 2017); NNPS=Nevada Native Plant Society Status (NNHP 2017); ORBIC=Oregon Biological Information Center Status (ORBIC 2016); OCS=Oregon Conservation Strategy Species (ODFW 2016); IUCN=International Union for Conservation of Nature Red List Status (IUCN 2017).

Distribution: Western North American from California to British Columbia (USDA 2018). California occurrences are restricted to northern counties along the coast. Two disjunct

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occurrences are found in Marin County near Point Reyes. Remaining occurrences are located to the north in Mendocino, Humboldt and Del Norte Counties. Roughly one-quarter of all California occurrences are found on NFS lands within Six Rivers NF. A single historical record exists in Shasta-Trinity NF from Happy Camp Mountain, July 1950 (*Tracy 18961*, UC1145106; CCH 2017). Although represented by only one historical specimen, its occurrence on Shasta-Trinity NF appears valid based on its distribution to the immediate north represented by numerous records in Six Rivers NF, Humboldt County.



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Sources: *Distribution:* Calflora 2017, CCH 2017. *Layers:* USDA Forest Service, Pacific Southwest National Forests: CPAD 2016. California counties: CDF 2009. *Basemaps:* California inset map: © 2013 National Geographic Society, i-cubed (Esri 2017a). Main map: Esri, DeLorme, USGS, NPS (Esri 2012) and Esri, USGS, NOAA (Esri 2017b).

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Locations within California:

Record numbers indicate sites that contain an individual, population, or groups of populations located within ¼ mile of each other, per the California Natural Diversity Database (CNDDDB 2017) definition of Element Occurrences (EOs) in California. Official EO numbers for plants in California are determined solely by the CNDDDB and are included within the Reference (Source) column for CNDDDB data. Duplicate records from the same site are given the same record number and included in red. The Population Info column includes total number of individuals and total number and size of populations/sub-populations when provided. Elevations provided in meters from source have been converted to feet. If not provided in original source, Land Manager information was obtained using the California Protected Areas Database (CPAD 2016) and Quad information was obtained using 24K Quads, SDE Feature Class (CDFG 2013). All other information is directly from the Reference (Source) unless additional citation is given.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
1	Point Reyes Bird Observatory 3 mi. NW of Bolinas at Arroyo Honda	Marin	Bolinas (3712286)	CCH, Jan 2017 (CAS744690)	1-Sep-1973			Point Reyes Nat. Seashore	200
1	Bolinas, Point Reyes Bird Observatory	Marin	Bolinas (3712286)	CCH, Jan 2017 (GH360623)	23-May-1976			Point Reyes Nat. Seashore	
1	By a fire trail near Point Reyes Bird Observatory	Marin	Bolinas (3712286)	CCH, Jan 2017 (RSA336496)	23-Apr-1976			Point Reyes Nat. Seashore	
1	Marin County: Point Reyes Bird Observatory. 3 miles northwest of Bolinas at Arroyo Honda	Marin	Bolinas (3712286)	CCH, Jan 2017 (UCD90109)	10-Apr-1970			Point Reyes Nat. Seashore	200
1	Marin County: Point Reyes Bird Observatory. 3 miles northwest of Bolinas at Arroyo Honda	Marin	Bolinas (3712286)	CCH, Jan 2017 (UCD90110)	10-Apr-1970			Point Reyes Nat. Seashore	200
2	near Bolinas (near Point Reyes Bird Observatory)	Marin	Bolinas (3712286)	CCH, Jan 2017 (UC1258205)	31-Aug-1977			Golden Gate NRA	
2	near Point Reyes Bird Observatory (along a fire trail, Bolinas); Bolinas	Marin	Bolinas (3712286)	CCH, Jan 2017 (UC1446207)	14-May-1977			Golden Gate NRA	
2	near Point Reyes Bird Observatory (by a fire trail)	Marin	Bolinas (3712286)	CCH, Jan 2017 (UC1446212)	23-Apr-1976			Golden Gate NRA	
2	near Point Reyes Bird Observatory (near Bolinas, probably a branch of Arroyo Honda)	Marin	Bolinas (3712286)	CCH, Jan 2017 (UC1446213)	8-Jun-1975			Golden Gate NRA	
2	near Point Reyes Bird Observatory (near Bolinas)	Marin	Bolinas (3712286)	CCH, Jan 2017 (UC1446214)	30-May-1975			Golden Gate NRA	
3	Along Fern Canyon Trail, Russian Gulch State Park	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (CAS928176)	29-Jul-1981			Russian Gulch SP	10

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
3	Russian Gulch State Park, canyon, campground	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (CHSC6077)	18-May-1968			Russian Gulch SP	
3	Russian Gulch	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (UC33682)	1-May-1900			Russian Gulch SP	
3	Along roadside beyond the camping ground in Russian Gulch	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (CHSC6122)	18-May-1968			Russian Gulch SP	
3	Russian Gulch near Fort Bragg	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (POM205013)	31-May-1900			Russian Gulch SP	
3	Russian Gulch c. 3 mi N of Mendocino City	Mendocino	Mendocino (3912337)	CCH, Jan 2017 (SJSU4916)	11-Jun-1970			Russian Gulch SP	
4	on road between Scotia and Capetown	Humboldt	Taylor Peak (4012442)	CCH, Jan 2017 (UC1317649)	22-Jul-1949				
4	Humboldt County: on road between Scotia and Capetown	Humboldt	Taylor Peak (4012442)	CCH, Jan 2017 (UCD90106)	22-Jul-1949				
4	Humboldt County: on road between Scotia and Capetown	Humboldt	Taylor Peak (4012442)	CCH, Jan 2017 (UCD90104)	22-Jul-1949				
4	Humboldt County: on road between Scotia and Capetown	Humboldt	Taylor Peak (4012442)	CCH, Jan 2017 (UCD90105)	22-Jul-1949				
5	Humboldt County: branch of South Fork of Yager Creek. North of Yager	Humboldt	Yager Junction (4012357)	CCH, Jan 2017 (UCD90101)	2-Jun-1942				
6	Head of Middle Yager Creek.	Humboldt	Yager Junction (4012357)	CCH, Jan 2017 (SEINET200956)	18-Jun-1922				
6	head of Middle Yager Creek; Northern Coast Ranges, Middle Yager Creek	Humboldt	Yager Junction (4012357)	CCH, Jan 2017 (UC249503)	18-Jun-1922				2500
7	Corral Prairie	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (SEINET200957)	14-Jul-1932				

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
8	Board Camp Mountain. Forest Service Road 4N38. 1/2 mile S of intersection with National Forest 1.	Humboldt	Board Camp Mtn. (4012366)	CCH, Jan 2017 (HSC99142)	16-Jul-2008			Six Rivers NF	4623
9	Halfway between Snow Camp and Twin Lakes (at Charley Preston's old gate near the road)	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (RSA167306)	26-Jun-1951				
9	halfway between Snow Camp and Twin Lakes (at Charley Preston's old gate near the road)	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (UC1152046)	26-Jun-1951				
9	Humboldt County: halfway between Snow Camp and Twin Lakes (at Charley Preston's old gate near the road.)	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (UCD90108)	26-Jun-1951				
10	1 mi e of Snow Camp (8 mi ene of Kneeland)	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (UC1151675)	25-Jun-1951				
10	1 mile east of Snow Camp, ca. 8 miles e.n.e. of Kneeland	Humboldt	Grouse Mtn. (4012376)	CCH, Jan 2017 (CAS447117)	25-Jun-1951				
10	Humboldt County: 1 mile east of Snow Camp, ca. 8 miles e.n.e. of Kneeland	Humboldt	Mad River Buttes (4012367)	CCH, Jan 2017 (UCD90103)	25-Jun-1951				
11	Snow Camp	Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (UC1145107)	9-Jul-1939				4600
11	Humboldt County: Snow Camp	Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (UCD90107)	9-Jul-1939				
12	Humboldt Bay; North Coast Ranges, Humboldt Bay	Humboldt	Eureka (4012472)	CCH, Jan 2017 (UC127319)	31-May-1901				50
12	Humboldt County: Humboldt Bay	Humboldt	Eureka (4012472)	CCH, Jan 2017 (UCD90102)	1-May-1901				50
13	Maple Creek, L.W. Shatz Tree Farm	Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (HSC90190)	27-Apr-1991				

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
14		Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (HSC94001)	24-Mar-2000				2231
15	Eureka; Northern Coast Ranges, Eureka	Humboldt	Eureka (4012472)	CCH, Jan 2017 (UC1103802)	28-Apr-1918				100
15	Eureka; Northern Coast Ranges, Eureka	Humboldt	Eureka (4012472)	CCH, Jan 2017 (UC184171)	10-Jun-1901				100
16	head of Madden Creek, Ammon Ridge, seepage area along logging spur road arterial to Forest Road 5N81	Humboldt	Grouse Mtn. (4012376)	CCH, Jan 2017 (JEPS109805)	24-Jun-2004				4700
16	head of Madden Creek, Ammon Ridge, seepage area along Forest Road 5N15 0.4 miles west of the junction with Forest Road 5N01	Humboldt	Grouse Mtn. (4012376)	Calflora, May 2017 (xr168788)	24-Jun-2004	1+ individuals			4800
17	Bald Mountain, "High Prairie" Bald Mountain; Northern Coast Ranges, Bald Mountain	Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (UC180505)	4-Jul-1914				3500
18	Near Murphy Meadow	Humboldt	Maple Creek (4012377)	CCH, Jan 2017 (HSC75692)	26-Jun-1980				2999
19	Old logging road on s side of Jacoby Creek	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (UC1152688)	24-Mar-1963				
20	1.5 mi E of Bayside on road leading up Jacoby Creek	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (HSC10611)	14-Jun-1965				
20	Jacoby Creek	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (UC1258206)	31-Aug-1977				
21	Along Jacoby Creek Road, Jacoby Creek, about 3 miles N of Eureka	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (RSA336495)	1-Apr-1975				
21	about 3 mi n of Eureka (along Jacoby Creek Road); Jacoby Creek	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (UC1258214)	1-Jun-1975				

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
21	3 mi n of Eureka (along Jacoby Creek Road); Jacoby Creek	Humboldt	Arcata South (4012471)	CCH, Jan 2017 (UC1258192)	15-May-1976				
22	Blue Lake	Humboldt	Blue Lake (4012388)	CCH, Jan 2017 (HSC93191)	20-May-1998				
22	1 mi below Blue Lake (on Mad River); Northern Coast Ranges, Mad River	Humboldt	Korbel (4012378)	CCH, Jan 2017 (UC1103800)	2-Apr-1905				200
23	6 mi. n.e. Hawkins Bar (at "Fern Spring", Happy Camp Mt.); Trinity Summit Range, Happy Camp Mt., "Fern Spring"	Humboldt	Denny (4012384)	CCH, Jan 2017 (UC1145106)	2-Jul-1950			Shasta-Trinity NF	4200
24	Near Groves Prairie, close to the town of Willow Creek.	Humboldt	Denny (4012384)	CCH, Jan 2017 (HSC54031)	12-Jul-1979			Six Rivers NF	4121
25	Near Bell Swamps.	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (HSC70450)	20-Jul-1980			Six Rivers NF	4678
26	head of Little Hors-Linto Creek (Trinity Summit); , Little Hors-Linto Creek	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (UC1103799)	7-Aug-1936			Six Rivers NF	4500
27	along Little River, 5 mi from the coast Little River; Northern Coast Region, Little River	Humboldt	Crannell (4112411)	CCH, Jan 2017 (UC1103801)	4-Jun-1911				400
28	Patterson Meadows	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (HSC102147)	3-Aug-2011			Six Rivers NF	5102
28	Corral Prairie	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (RSA10057)	14-Jul-1932			Six Rivers NF	5000
28	Trinity Summit, Corral Prairie Trinity Summit; Klamath Mountains, , Corral Prairie	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (UC526779)	14-Jul-1932			Six Rivers NF	5000
29	2 mi. N of Trinidad on Trinity St.	Humboldt	Trinidad (4112412)	CCH, Jan 2017 (HSC10612)	15-May-1965				

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
29	2.2 mi N of Trinidad on Trinity St.	Humboldt	Trinidad (4112412)	CCH, Jan 2017 (HSC10613)	13-May-1965			Trinidad SB	899
30	Near Tish Tang A Tang Creek, close to the town of Hoopa.	Humboldt	Trinity Mtn. (4112314)	CCH, Jan 2017 (HSC57304)	31-Jul-1979			Six Rivers NF	4449
31	Big Hill Rd, 10.7 miles from Hwy 96	Humboldt	Tish Tang Point (4112315)	CCH, Jan 2017 (HSC103124)	7-Jul-2009				4600
32	Near North Trinity Mtn, 11.9 mi east of Hoopa on Big Hill Rd (8N01), at Box Camp, Six Rivers National Forest.	Humboldt	Tish Tang Point (4112315)	CCH, Jan 2017 (HSC99458)	7-Jul-2010			Six Rivers NF	4501
32	near Box Camp (Trinity Summit); Trinity Summit	Humboldt	Tish Tang Point (4112315)	CCH, Jan 2017 (UC1145105)	5-Jul-1947			Six Rivers NF	5000
33	Near Mill Creek, Middle Fork, close to the town of Hoopa	Humboldt	Hopkins Butte (4112325)	CCH, Jan 2017 (HSC57302)	1-Aug-1979			Six Rivers NF	4400
34	Humboldt Lagoons SP	Humboldt	Rodgers Peak (4112421)	Calflora, May 2017 (casp57)	1-Jan-1982	1+ individuals		Humboldt Lagoons SP	
35	Young Red Alder forest, with little underbrush. Perennially wet slope.	Humboldt	Orick (4112431)	Calflora, May 2017 (po13780)	28-Mar-2016	11 - 50 individuals			489
36	Prairie Creek; Northern Coast Ranges, Prairie Creek	Humboldt	Orick (4112431)	CCH, Jan 2017 (UC1103803)	22-May-1926				500
37	13 miles S of Klamath along Hwy 101 in Big Tree State Park	Humboldt	Holter Ridge (4112338)	CCH, Jan 2017 (RSA256328)	26-May-1973			Redwood NP	200
38	4 miles NE of Orick at Boye's Prairie	Humboldt	Orick (4112431)	CCH, Jan 2017 (RSA183537)	10-May-1964			Prairie Creek Redwoods SP	
39	about 10 mi n of Orick; Prairie Creek Redwood State Park	Humboldt	Fern Canyon (4112441)	CCH, Jan 2017 (UC1258213)	1-Jun-1975			Prairie Creek Redwoods SP	

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
40	Hunter Creek, about 3 miles N of Klamath.	Del Norte	Requa (4112451)	CCH, Jan 2017 (RSA336494)	14-May-1976				
40	about 3 mi n of Klamath (Hunter Creek); Hunter Creek	Del Norte	Requa (4112451)	CCH, Jan 2017 (UC1446206)	14-May-1976				
40	Hunter Creek	Del Norte	Requa (4112451)	CCH, Jan 2017 (UC1258215)	31-May-1975				

Distribution on National Forest System (NFS) Lands:

(Please see Reference column of Locations table above for references pertaining to Record Numbers indicated on NFS lands.)

National Forest System (NFS) lands	Record #s (from Locations table above)	CNDDDB EOs	Non-CNDDDB Records	Recent (seen in past 20 yrs.)	Historic (not seen in past 20 yrs.)	Most Recent Obs.	EOs/ Recs. (5 mile buffer)	Total Records on NFS lands
Angeles:	-	-	-	-	-	-	-	0
Cleveland:	-	-	-	-	-	-	-	0
Eldorado:	-	-	-	-	-	-	-	0
Inyo:	-	-	-	-	-	-	-	0
Klamath:	-	-	-	-	-	-	-	0
Lake Tahoe Basin MU:	-	-	-	-	-	-	-	0
Lassen:	-	-	-	-	-	-	-	0
Los Padres:	-	-	-	-	-	-	-	0
Mendocino:	-	-	-	-	-	-	-	0
Modoc:	-	-	-	-	-	-	-	0
Plumas:	-	-	-	-	-	-	-	0
San Bernardino:	-	-	-	-	-	-	-	0
Sequoia:	-	-	-	-	-	-	-	0
Shasta-Trinity:	23	0	1	0	1	2-Jul-1950	0	1
Sierra:	-	-	-	-	-	-	-	0
Six Rivers:	8, 24, 25, 26, 28, 30, 32, 33	0	8	3	5	7-Jul-2010	0	8
Stanislaus:	-	-	-	-	-	-	-	0
Tahoe:	-	-	-	-	-	-	-	0
Totals:	N/A	0	9	3	6	N/A	0	9

Demographic and Population Trends: Total number of occurrences for this taxon were estimated using GIS tools and methods described by Green and Sims (2018). Population count and size estimate information is lacking for most occurrences. A single record from a historic occurrence associated with Humboldt Lagoons SP was observed to have one or more individuals. Another occurrence, documented in recent years on a perennially wet slope had 11-50 plants observed when seen in 2016 (Calflora 2017; CCH 2017). More fieldwork, collections, and reporting are needed to better depict patterns among California occurrences of *P. refractus*.

Life History: Perennial rhizomatous herb that blooms as early as March, but typically from April through August (CNPS 2018).

Diversity: *Pleuropogon refractus* is a member of the tribe Meliceae alongside all species of *Glyceria* and *Melica*. The three genera within this tribe are all well characterized members of subfamily Pooideae, which also contains the worlds most important temperate cereal crops (*Triticum* L., *Hordeum* L., and *Avena* L.), and is the largest of the 12 subfamilies within Poaceae, with a total of 177 genera and 3,850 species (Saarela et al. 2010; Stevens 2001).

Habitat: *Pleuropogon refractus* has a preference for wet meadows and shady banks (Bainbridge 2012). Records outside California document *P. refractus* growing along streams,

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moist depressions, wet ditches, forested wetlands, moist woods, riparian forests, wet and rocky alluvial fans, and seepage areas. These records outside California document *P. refractus* growing alongside *Alnus rubra*, *Athyrium felix-femina*, *Cornus sericea*, *Equisetum* sp., *Glyceria elata*, *Lysichiton americanum*, *Maianthemum dilatatum*, *Pedicularis* sp., *Picea sitchensis*, *Poa palustris*, *Rubus spectabilis*, *Scirpus microcarpus*, *Thuja plicata*, *Tolmiea menziesii*, and *Tsuga mertensiana* (CPNWH 2018).

Habitat Status or Trend: The 1994 Northwest Forest Plan put into place protections for Riparian Reserves, which would apply to these habitats..

Capacity for the Species to Disperse: Unknown.

Threats: Roadside mowing, logging, and associated road usage have been reported as threats (CNPS 2018). To what degree these threats impact *P. refractus* remains unknown. Although these habitats are more resistant to wildfire than others, drought and warming are making wildfire more of a threat than in the past. Logging has greatly diminished in the last 25 years on NF lands in NW California. Invasives such as Himalayan blackberry may be a threat, given the habitats. Diversion of water for pot growing on both private and public lands is a substantial concern in the KR and Coast Ranges.

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Formatting: Form is set up as 508 compliant. Please use the “styles” if further formatting is necessary.

Purpose: This is to maintain the best available science on a species that could be used by the Forest Service in a variety of functions. Specifically, there would be additional steps and evaluations to determine whether or not this species would be considered a Species of Conservation Concern under the 2012 Planning Rule or a Sensitive Species under the 1982 Planning Rule.

Additional Considerations at the Forest Level: Habitat amount and juxtaposition of both the species and habitat locations.