Species: *Botrychium minganense* Vict., Mingan moonwort

Photo Source: iNaturalist (2023)

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Status

Table 1 summarizes the current status of this species or subspecies/variety by various ranking entities and defines the meaning of the status.

Table 1. Current status of Mingan moonwort.

Entity	Status	Status Definition
NatureServe CA[a]	G5 S4	G5: Secure — Common; widespread and abundant. S4: Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors.
California Rare Plant Rank[b]	4.2	4: Watch List: Plants of limited distribution. 0.2: Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat).

		Botrychium minganense was added to the *CNPS Inventory* in 1994 and was downranked from 2B.2 to 4.2 on 15 February 2023.
California State Listing[c]	Not listed	
USDA Forest Service[d]	S Survey and Manage A	S: Sensitive Survey and Manage, Category A: Manage all known sites, conduct pre-disturbance and strategic surveys (Oregon and California).
USDI FWS[e]	Not listed	
USDI BLM[f]	Not listed	
NatureServe OR[g]	S3 HP List 4	S3: Rare, uncommon or threatened in Oregon, but not immediately imperiled, typically with 21–100 occurrences. HP List 4: Of conservation concern but currently not meeting the criteria for being considered threatened or endangered. This includes taxa that are very rare but are currently secure, as well as taxa that are declining in numbers or habitat but are still too abundant to be proposed as threatened or endangered.
Oregon State Listing[h]	Not listed	
NatureServe NV[i]	SNR	Not ranked in Nevada
Nevada State Listing[j]	Not listed	

[a] California Natural Diversity Database, California Dept. of Fish & Wildlife [CNDDB 2022, 2023]
[b] California Native Plant Society [CNPS 2023]
[c] California Department of Fish and Wildlife [CDFW 2023]
[d] US Forest Service Region 5 Forester's List [USDA 2013] and Pacific NW Survey and Manage [USDA & BLM 2014]
[e] US Department of Interior Fish and Wildlife Service [USFWS 2023]
[f] US Department of Interior Bureau of Land Management [BLM 2022]
[g] Oregon Biodiversity Information Center [ORBIC 2023]
[h] Oregon Department of Agriculture [ODA 2018]
[i] Nevada Division of Natural Heritage [NDNH 2022]
[j] Nevada Division of Forestry [NDF 2012]
Note: Individual State Heritage Programs (CNDDB, ORBIC, NNHP) represent NatureServe and contain more up-to-date ranks for their state than NatureServe Explorer.

Distribution, abundance, and population trend on the planning unit[1]

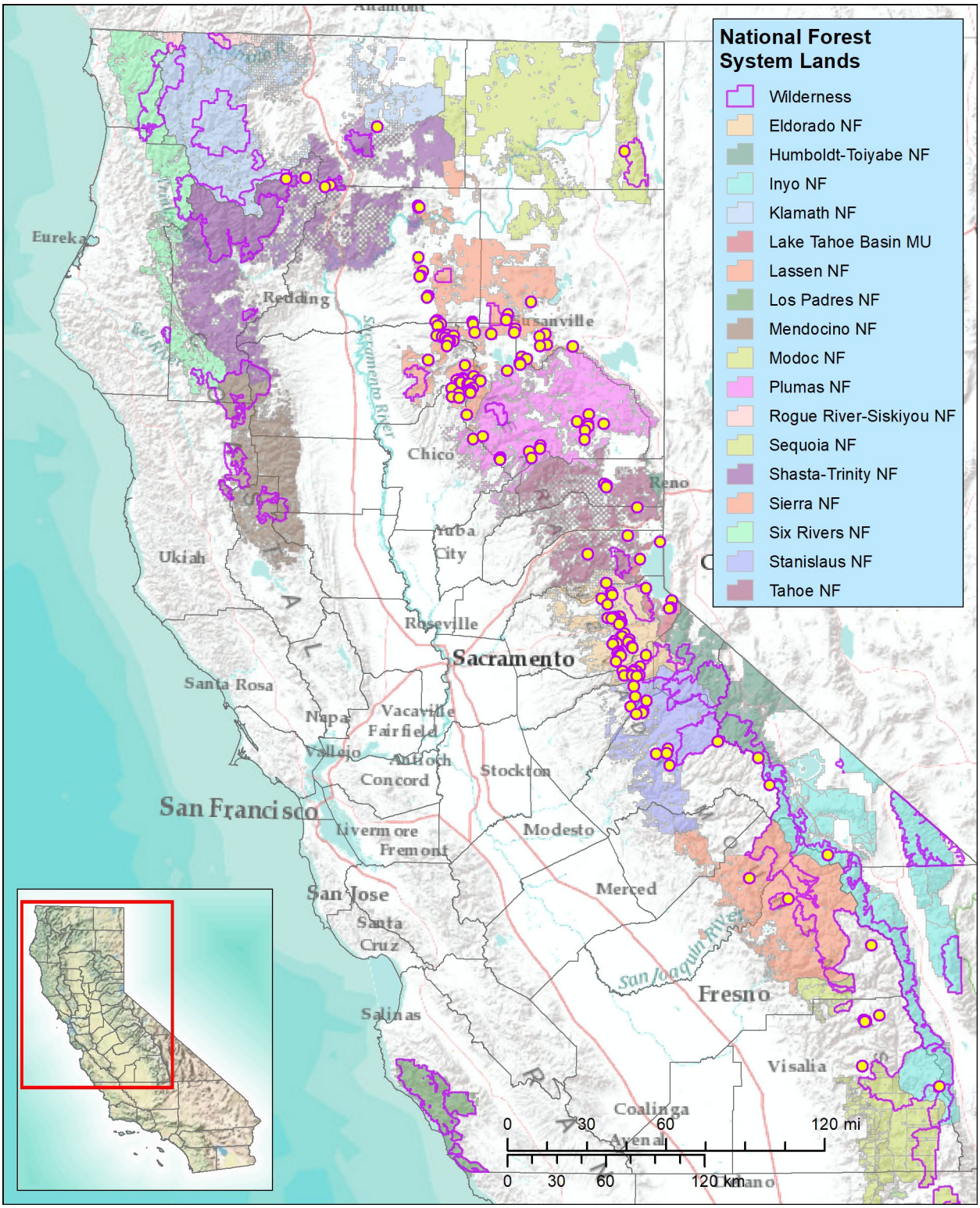
Table 2 summarizes the distribution and frequency of this species or subspecies/variety within National Forest System Lands in California. Table 4 in Appendix 1 lists all known occurrences of this species or subspecies/variety within California. Individual occurrences are defined as sites

[1] 1909.12 Chapter 10, Section 12.53, components 2, 3, and 4.

that contain an individual, population, or groups of populations of the plant that are located more than 1/4 (0.25) of a mile apart from each other as defined by the CNDDB.

Table 2. Known occurrence frequency of Mingan moonwort within the planning area (NRIS, CNDDB, Calflora/CCH databases).

National Forest System (NFS) lands in California	Record #s (from Table 4)	CNDDB EOs	Non-CNDDB Records	Recent (seen in past 20 years)	Historical (not seen in past 20 years)	Most Recent Obs. Date	Total Records on NFS lands
Eldorado:	100, 103, 106, 109, 113–137, 139, 140, 141, 142, 144, 145	34	1	34	1	27-Jul-2020	35
Inyo:	160, 169	2	-	1	1	2006	2
Klamath:	1	1	-	1	-	3-Aug-2018	1
Lake Tahoe Basin MU:	97, 99, 101, 105, 107, 108	5	1	5	1	18-Aug-2020	6
Lassen:	16-20, 24, 25–43, 45, 46, 52, 53, 55–66, 68–71, 73, 74	44	3	44	3	9-Jul-2021	47
Modoc:	2	1	-	1	-	14-Aug-2003	1
Plumas:	75, 77–88	13	-	13	-	8-Sep-2019	13
Shasta-Trinity:	4	1	-	1	-	20-Jul-2018	1
Sierra:	161, 162	2	-	2	-	19-Aug-2013	2
Stanislaus:	147, 148, 153–156, 158	5	2	5	2	23-Aug-2018	7
Tahoe:	95, 98	2	-	1	1	30-Aug-2011	2
Totals:	N/A	110	7	108	9	N/A	117



Sources: *Distribution*: Calflora (2022), CCH2 (2022), CNDDB (2022), NRIS (2022). *Baselayers*: 2013 National Geographic Society, i-cubed, Esri, Garmin, NOAA, NPS, USGS.

Mingan moonwort was last updated in the CNDDB on 12 March 2021 (CNDDB 2022). The GIS tools and methods described by Green and Sims (2018) were used to estimate occurrences for Mingan moonwort, because of the large number of records in the NRIS (2022) data set that needed to be merged with the CNDDB EOs.

Mingan moonwort is a near-endemic of North America and widely distributed in northern and western regions (Wagner and Wagner 1993, NatureServe 2023). It is also one of the most commonly encountered moonwort species (Hauk et al. 2012; D. Farrar 2022, pers. comm.). Outside of North America, it is known only from Iceland (Stensvold 2007). In California, there are currently 169 known occurrences, in scattered locations mostly along the higher Cascade-Sierran axis with one locality in the Warner Mountains and four occurrences in the Klamath Ranges (Scott and Trinity mtns.) (Calflora 2022, CCH2 2022, CNDDB 2022, NRIS 2022). Thirteen occurrences (8%) are historical (not revisited within the last 20 years), one (CNDDB EO #92) has the date of observation unknown, and 155 (92%) are recent. One occurrence in the Tahoe Basin (EO #17) is possibly extirpated. Of the Californian occurrences, 117 (69%) are on National Forest lands (Table 2), including the Klamath NF (1 occurrence), Modoc NF (1), Shasta-Trinity NF (1), Lassen NF (47), Plumas NF (13), Tahoe NF (2), Lake Tahoe Basin MU (6), Eldorado NF (35), Stanislaus NF (7), Inyo NF (2), and Sierra NF (2). Five occurrences are in federally designated Wilderness areas, including the Trinity Alps Wilderness (1 occurrence), Emigrant Wilderness (1), John Muir Wilderness (1), Kaiser Wilderness (1), and South Sierra Wilderness (1). Non-Forest sites are on commercial timberland owned by Sierra Pacific Industries (40 occurrences), the Coon Hollow Wildlife Area managed by CDFW (1), or National Park land (two in Lassen Volcanic NP, two in Yosemite NP, two in Kings Canyon NP, four in Sequoia NP).

Census data are available for 152 occurrences and indicate a range in population size from 1–473 plants, averaging 34 plants per occurrence and only 22 occurrences having 100 or more plants (CNDDB 2022, NRIS 2022). Thirty-one occurrences have been monitored over a period of years, but the data are insufficient for estimating population trends. Obtaining accurate population counts for this and other moonwort species is difficult, for several reasons. First, the plants are small, inconspicuous, and often overlooked (Stensvold 2007). Second, moonwort species have been shown to have a much higher density of below-ground structures (i.e., spores, gametophytes, and juvenile sporophytes) than what is represented by the above-ground population, and the plants commonly remain dormant below-ground, especially in dry years (Lesica and Ahlenslager 1996, Johnson-Groh et al. 2002). Third, survey records in many cases have noted that the species identification was uncertain or that the population count was for all *Botrychium* plants observed (without any attempt to obtain an accurate count of each co-occurring species) (CNDDB 2022). Identification of moonwort species can be challenging since two to several close relatives that are poorly differentiated morphologically often occur together in mixed colonies (Wagner and Wagner 1983).

One dubious record of Mingan moonwort (highlighted in pink at the bottom of Table 4), based on the collection *Peirson 3207* (RSA-85006), is from Coldwater Canyon in the eastern San Gabriel Mtns. (San Bernardino Co.). This is presumably a misidentification since a duplicate of

the same record in CCH2 (2022) indicates this as a mixed collection of *B. ascendens* and *B. crenulatum* (determined by D. Farrar in 2004). The southern range limit of *B. minganense* in California is evidently in the southern Sierra Nevada (Tulare Co.).

Of the 169 Californian records of Mingan moonwort, 161 are currently included in the CNDDB. The eight non-CNDDB records (#s 11, 52, 56, 62, 99, 129, 154, and 155 in Table 4) are located at least 0.47 miles from a known CNDDB occurrence. These eight records seem to represent new occurrences and should perhaps be evaluated for inclusion in the CNDDB.

Brief description of natural history and key ecological functions[2]

Mingan moonwort is a short-lived perennial herb up to c. 12 cm high (Farrar 2011). Like most other members of the fern family Ophioglossaceae, it produces one above-ground leaf per year in mid to late spring and persisting until late summer (Wagner and Wagner 1993, Johnson-Groh and Lee 2002). In dry years, the leaf may be of shorter duration or may not appear at all. The leaf is characteristically divided into a trophophore (sterile segment) that is pinnately divided and a sporophore (fertile segment) that is also 1–2-pinnate. The Ophioglossaceae are one of the most unusual and earliest branching lineages of ferns, having diverged from other monilophytes c. 250–370 million years ago (Rothfels et al. 2015, Testo and Sundue 2016).

In California, the habitat for Mingan moonwort is in fully or partially shaded understory of montane coniferous forest or in moist to wet areas (on or near streambanks; around springs, seeps, meadows, or fens; on lake margins; or along roadside ditches or canal banks). The elevational range is mostly from 4,000 to 7,325 feet (1,220–2,235 meters), less often to 10,800 feet (3,290 meters) in the central and southern Sierra Nevada. Frequently associated species include trees *Calocedrus decurrens*, *Abies concolor*, *A. magnifica*, *Pinus lambertiana*, *P. contorta* subsp. *murrayana*, *P. jeffreyi*, *P. ponderosa*, and *Pseudotsuga menziesii*; shrubs *Alnus incana* subsp. *tenuifolia*, *Cornus* spp., and *Salix* spp.; herbs *Circaea alpina* subsp. *pacifica*, *Senecio triangularis*, *Listera convallarioides*, *Carex* spp., *Viola glabella*, *Athyrium filix-femina* var. *cyclosorum*, *Adenocaulon bicolor*, *Perideridia parishii*, *Prunella vulgaris* var. *lanceolata*, *Pteridium aquilinum* var. *pubescens*, *Equisetum arvense*, *Galium triflorum*, *Epilobium ciliatum*, *Erythranthe primuloides*, *Pectiantia breweri*, *Sceptridium multifidum*, grasses (e.g., *Glyceria elata*), and mosses (e.g., *Plagiomnium* and *Philonotis*). Mingan moonwort also sometimes co-occurs with other rare or uncommon plant species including *Botrychium montanum* (CRPR 2B.1), *B. crenulatum* (2B.2), *B. ascendens* (2B.3), *B. pinnatum* (2B.3), *B. lineare* (1B.1), *Stellaria obtusa* (4.3), *S. longifolia* (2B.2), and *Darlingtonia californica* (4.2) (CCH2 2022, CNDDB 2022, CNPS 2023).

The moonwort genus *Botrychium* has a circumboreal distribution with some disjuncts in the Southern Hemisphere (Stensvold 2007, Dauphin et al. 2018). Its greatest species diversity is in North America (Dauphin et al. 2014) with 12 species known to occur in California (JEPS 2023). Recent molecular work (Dauphin et al. 2018) indicates that the Mingan moonwort is an allotetraploid (chromosome number $2n = 180$) that arose through hybridization between *B.*

[2] Basis for other 1909.12 Chapter 10, Section 12.53 components.

neolunaria (Stensvold and Farrar 2016) and the undescribed *B.* "farrarii" (both diploids with 2*n* = 90). Among other Californian moonworts it is most similar to *B. crenulatum*, which is more delicate, has fewer pinna pairs (3–5 in *B. crenulatum* vs. 3–10 in *B. minganense*), and a diploid chromosome number (2*n* = 90) (Wagner and Wagner 1981, 1990, 1993; Wagner and Devine 1989; Swartz and Brunsfeld 2002).

The gametophyte of Mingan moonwort is bisexual, non-photosynthetic, and lives entirely below-ground where it is dependent on arbuscular mycorrhizal fungi for its nutrition (reviewed by Stensvold 2007, Dauphin et al. 2014, Fryer 2014). Using genetic analysis, the fungal symbionts have been identified as members of the genus *Glomus* (Winther & Friedman 2007). These fungi occupy a narrow phylogenetic range (Merckx et al. 2012), suggesting specialization and co-evolution of the fern and fungal lineages. Further research may reveal that Mingan moonwort and other *Botrychium* species obtain much of their organically fixed carbon from neighboring photosynthetic plants by way of shared mycoheterotrophic networks (Winther & Friedman 2007). Because the soil likely inhibits movement of sperm between gametophytes, there is a high level of intragametophytic selfing, leading to low genetic variability at the population level (Hauk and Haufler 1999, Ahlenslager and Potash 2007, Stensvold 2007, Stensvold and Farrar 2016). The young, subterranean sporophyte is slow-growing and also reliant on symbiotic fungi (Winther & Friedman 2007). Several years may pass before the sporophyte is large enough to produce its first above-ground leaf. The size and health of the below-ground structure bank is critical in sustaining the long-term above-ground population and in buffering it from extinction (Johnson-Groh et al. 2002). Above-ground sporophytes may fail to produce spores when there is drought during the spring growing season (Muller 1992). Fern spores are often carried long distances by air currents (Smith 1972, Farrar and Stensvold 2017), and, in homosporous ferns like Mingan moonwort, intragametophytic selfing means that a single plant may be the founder of a new population.

The fire response and fire ecology of moonwort species are in need of study (Fryer 2014). Fire during the growing season would likely top-kill the emergent moonwort sporophytes. Because the gametophytes and young sporophytes are subterranean, they may be protected from damage by surface or crown fires especially when growing in mineral soil. However, below-ground structures residing in litter and duff are likely vulnerable to fire, especially ground fire. Since moonwort sporophytes are usually dormant during drought (Lesica and Ahlenslager 1996), they are likely dormant in extreme fire years. The presence of a soil spore bank likely helps to promote post-fire regeneration.

Overview of ecological conditions for recovery, conservation, and viability[3] including Threats and Risk Factors

Of the 169 currently known occurrences of Mingan moonwort in California, 117 (69%) are on National Forest land. Local populations tend to be very small and thus may be inherently

[3] 1909.12 Chapter 10, Section 12.53, components 7, 9, 10, 11 and 12, as appropriate.

vulnerable to extirpation. One occurrence in the Lake Tahoe basin near Kings Beach (Placer Co.) is possibly extirpated (CNDDB 2022). Habitat quality has been noted for 92 of the locality records for this species in the CNDDB (2022), and 59 of these were ranked Good or Excellent. Outside of California, it is considered possibly extirpated (SH) in Vermont and Nova Scotia; critically imperiled (S1) in Arizona, New York, North Dakota, Utah, Labrador, and Saskatchewan; imperiled (S2) in Wisconsin, Manitoba, and New Brunswick; imperiled to vulnerable (S2S3) in South Dakota; vulnerable (S3) in Colorado, Idaho, Minnesota, Oregon, Wyoming, and Newfoundland; vulnerable to apparently secure (S3S4) in Nunavut; apparently secure (S4) in Montana, Washington state, Alberta, Northwest Territories, Ontario, and Quebec; apparently secure to secure (S4S5) in Yukon Territory; and secure (S5) in British Columbia (NatureServe 2023).

Mingan moonwort generally occurs in montane coniferous forest and may be threatened by timber harvest and related activities (CNDDB 2022). However, because it often occurs in moist to wet habitats (streamsides, springs and seeps, meadows, fens), such impacts tend to be avoided under existing Forest Service management guidelines. Populations on private timberlands may receive similar protection under State Forest Practice Rules. Other frequently noted threats include livestock grazing and trampling, hydrologic changes, road and utility line maintenance, recreational activities and foot traffic, off-road vehicles, wildfire and fuel reduction projects, non-native plants, and disturbance associated with riparian or meadow enhancement projects (CNDDB 2022). Most populations of Mingan moonwort in Oregon and Washington state are found in summer-grazed grasslands; observers have noted that the plants are not harmed by livestock trampling, and grazing may also indirectly benefit them by preventing the encroachment of woody vegetation (D. Farrar 2023, pers. comm.). Extended periods of drought associated with long-term climate change could be detrimental or might exaggerate the effects of other hydrologic changes. Drier conditions would further increase the risk of wildfire in riparian areas, although the effects of fire on *Botrychium* species need further research (Fryer 2014).

Taxonomy[4]

Table 3 summarizes this species or subspecies/variety's name status in key literature.

Table 3. Name status of Mingan moonwort.

Entity	Name Status
CNDDB and CNPS	*Botrychium minganense* Victorin
Jepson eFlora	*Botrychium minganense* Vict.
Jepson Manual (1993)	*Botrychium minganense* Victorin
Flora of North America	*Botrychium minganense* Victorin
USDA NRCS[a] PLANTS	*Botrychium minganense* Victorin

[a] Natural Resources Conservation Service [NRCS 2023]

[4] 1909.12, Chapter 10, Section 12.53, component 1.

Synonymy: *Botrychium lunaria* var. *minganense* (Vict.) Dole, *Botrychium lunaria* forma *minganense* (Vict.) Clute, *Botrychium lunaria* subsp. *minganense* (Vict.) Calder & Roy L. Taylor (IPNI 2023, Tropicos 2023).

Jepson eFlora link (JEPS 2023): https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=15929

Type locality: CANADA: Québec: Archipel de Mingan, Île Niapisca (*Marie-Victorin & Rolland-Germain 18122*, isotype US) (Marie-Victorin 1927, Calvo et al. 2017, Smithsonian 2021).

Key literature

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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.

Appendix 1: Known Occurrences

Table 4. Known occurrences of Mingan moonwort within California (NRIS, CNDDB, Calflora/CCH databases).

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.

Rec. #	Locality	County	Quad	Ref. (Source)	Date Last Obs'd	Population Info	Threats	Land Mgr.	Elev. (ft.)
1	POMEROY CREEK, JUST SOUTH OF USFS ROAD 19, ABOUT 2.6 AIR MILES ESE OF THE WHALEBACK.	Siskiyou	West Haight Mtn. (4112251)	CNDDB, Nov. 2022 (EO 166)	3-Aug-2018	12 PLANTS OBSERVED IN 2018.		Klamath NF	5835
1		Siskiyou	West Haight Mtn. (4112251)	NRIS polys, Aug. 2022 (0505_57_BOMI-1)	3-Aug-2018	12		Klamath NF	
2	ALONG THE NORTH FORK OF PINE CREEK, 2.3 AIR MILES EAST OF ITS CONFLUENCE WITH THE MIDDLE FORK OF PINE CREEK.	Modoc	Shields Creek (4112043)	CNDDB, Nov. 2022 (EO 13)	14-Aug-2003	~24 PLANTS OBSERVED IN 2002, 4 IN 2003.	CATTLE GRAZING. IN 2003 SOME OF THE PLANTS SHOWED SIGNS OF BEING CHEWED ON BY CATTLE.	Modoc NF	6740
2		Modoc	Shields Creek (4112043)	NRIS polys, Aug. 2022 (050900E_BOMI001_53)	14-Aug-2003	4		Modoc NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3	Mumbo Basin 7.5' USGS quad. SE of Sherer Ridge and SE of Sunflower Creek.	Trinity	Mumbo Basin (4112225)	CCH2, Nov. 2022 (SPIF00038)	29-Jul-2015			private (Sierra Pacific Industries)	4711
3	HEADWATERS OF SUNFLOWER CREEK ON SW SLOPE OF SHERER RIDGE, ABOUT 2.5 AIR MILES ENE OF SUNFLOWER FLAT.	Trinity	Mumbo Basin (4112225)	CNDDB, Nov. 2022 (EO 91)	29-Jul-2015	19 BOTRYCHIUM PLANTS OBSERVED GROWING INTERMIXED IN 2015. THE RARE B. MONTANUM ALSO OBSERVED AT THIS SITE. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	SURROUNDING LAND USE IS TIMBERLAND, THOUGH PLANTS ARE PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	5000
4	ABOUT 0.5 AIR MILE NORTH OF TANGLE BLUE LAKE AND 1.25 AIR MILES SSE OF MOSQUITO LAKE, SCOTT MOUNTAINS.	Trinity	Tangle Blue Lake (4112226)	CNDDB, Nov. 2022 (EO 165)	20-Jul-2018	108 PLANTS OBSERVED IN 2018; NINE MAY BE B. CRENULATUM, BUT MOST ARE CLEARLY B. MINGANENSE.	THERE IS A RISK OF WANDERING HIKERS DAMAGING THE MEADOW, SOME SEEN DURING SITE VISIT.	Shasta-Trinity NF	5600
4		Trinity	Tangle Blue Lake (4112226)	NRIS polys, Aug. 2022 (0514_BOMI_56_001)	20-Jul-2018	108		Shasta-Trinity NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
5	Seven Lakes Basin 7.5' USGS quad. About 1.3 air mi. SE of Soapstone Pond and about 4.1 air mi. W of Castle Crags. Likely more than one species present.	Siskiyou	Seven Lakes Basin (4112224)	CCH2, Nov. 2022 (SPIF00033)	6-Sep-2011			private (Sierra Pacific Industries)	
5	SEEP AND MEADOW ABOVE AND BELOW ROAD AT SOAPSTONE TRAILHEAD, ~1.31 AIR MI SE OF SOAPSTONE POND, ~4 MI W OF CASTLE CRAGS.	Siskiyou	Seven Lakes Basin (4112224)	CNDDB, Nov. 2022 (EO 56)	6-Sep-2011	117 PLANTS OBSERVED IN 2011. THERE ARE POTENTIALLY DIFFERENT BOTRYCHIUM SPECIES IN THE POPULATION ACCORDING TO D. TAYLOR; B. CRENULATUM AND B. MINGANENSE ARE THE TWO MOST LIKELY SPECIES.	SURROUNDING LAND USE IS TIMBER HARVEST. PLANTS ARE PROTECTED WITHIN A WATER LAKE PROTECTION ZONE.	private (Sierra Pacific Industries)	6143

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
6	APPROXIMATELY 0.6 AND 0.8 AIR MILE SE OF ECHO LAKE AND 1 AIR MILE NNW OF WHALEN SUMMIT ON CASTLE CREEK ROAD.	Shasta	Seven Lakes Basin (4112224)	CNDDB, Nov. 2022 (EO 55)	6-Sep-2011	12 PLANTS OBSERVED IN THE NW POLYGON AND 1 PLANT OBSERVED IN THE SE POLYGON IN 2011. THERE ARE POTENTIALLY DIFFERENT SPECIES IN THE POPULATION ACCORDING TO D. TAYLOR; B. CRENULATUM AND B. MINGANENSE ARE THE TWO MOST LIKELY SPECIES.	SURROUNDING LAND USE IS TIMBER HARVEST. PLANTS ARE PROTECTED WITHIN A WATER LAKE PROTECTION ZONE.	private (Sierra Pacific Industries)	5609
7	NW SIDE OF ROCK CREEK, ABOUT 1.27 AIR MILES SE OF RED MOUNTAIN.	Shasta	Skunk Ridge (4112117)	CNDDB, Nov. 2022 (EO 90)	19-Aug-2013	111 BOTRYCHIUM PLANTS OBSERVED IN 2013. BOTRYCHIUM ASCENDENS ALSO OCCURS AT THIS SITE.	SURROUNDING LAND USE IS TIMBERLAND, THOUGH PLANTS ARE PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	4930
8	ABOUT 0.5 AIR MILE NORTH OF THE CONFLUENCE OF PEAVINE CREEK AND ROCK CREEK, AND ABOUT 1.9 AIR MILES SE OF RED MOUNTAIN.	Shasta	Skunk Ridge (4112117)	CNDDB, Nov. 2022 (EO 89)	20-Aug-2013	21 BOTRYCHIUM PLANTS OBSERVED IN 2013. BOTRYCHIUM ASCENDENS ALSO OCCURS AT THIS SITE.	SURROUNDING LAND USE IS TIMBERLAND, BUT PLANTS PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	4870

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
9	ABOUT 0.69 AIR MILE NE OF THE CONFLUENCE OF PEAVINE CREEK AND ROCK CREEK, ABOUT 2 AIR MILES SE OF RED MOUNTAIN.	Shasta	Skunk Ridge (4112117)	CNDDB, Nov. 2022 (EO 88)	20-Aug-2013	79 BOTRYCHIUM PLANTS OBSERVED IN 2013. BOTRYCHIUM ASCENDENS ALSO OCCURS AT THIS SITE.	SURROUNDING LAND USE IS TIMBERLAND, PLANTS PROTECTED BY WLPZ AND ADDITIONAL MEASURES.	private (Sierra Pacific Industries)	4842
10	APPROXIMATELY 1.7 AIR MILES SSW OF TERRY LAKE AND APPROXIMATELY 7.6 AIR MILES WEST OF BURNEY MOUNTAIN.	Shasta	Hatchet Mtn. Pass (4012177)	CNDDB, Nov. 2022 (EO 100)	9-Jun-2016	92+ PLANTS OBSERVED IN 2016. MAJORITY OF INDIVIDUALS WERE GROWING DOWN ON THE ROAD SIDE BERM AND DITCH RATHER THAN UPSLOPE IN THE SEEP.	ROAD WILL BE MOVED 10 FT TO THE WEST OF THIS OCCURRENCE TO AVOID FUTURE CHANGES IN HYDROLOGY AND INCREASE IN SHADING.	private (Sierra Pacific Industries)	4680
11	Pit-McCloud watershed divide: Howard Springs drainage, 0.7 air miles SE of Dan Covey Butte	Shasta	Jacks Backbone (4012166)	Calflora, Nov. 2022 (wb2209-3956)	13-Aug-2013			unknown (private?)	
11	Howard Springs drainage, 0.7 air miles SE of Dan Covey Butte	Shasta	Jacks Backbone (4012166)	CCH2, Nov. 2022 (DWT)	13-Aug-2013			unknown (private?)	5144

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
11	Pit-McCloud watershed divide: Howard Springs drainage, 0.7 air miles SE of Dan Covey Butte	Shasta	Jacks Backbone (4012166)	CCH2, Nov. 2022 (DWT)	13-Aug-2013			unknown (private?)	5144
12	0.25 AIR MILE SSW OF DAN HUNT MEADOWS AND 0.82 AIR MILE NORTH OF TAMARACK ROAD.	Shasta	Miller Mtn. (4012167)	CNDDB, Nov. 2022 (EO 134)	10-Aug-2017	16+ PLANTS OBSERVED IN 2017. POPULATION IS MIXED WITH BOTRYCHIUM CRENULATUM INDIVIDUALS IN THE FULL COUNT.	COWS GRAZING IN THE AREA.	private (Sierra Pacific Industries)	4820
13	0.71 AIR MILE SOUTHWEST OF DAN HUNT MEADOWS AND 0.59 AIR MILE NORTH OF COW CREEK.	Shasta	Miller Mtn. (4012167)	CNDDB, Nov. 2022 (EO 135)	10-Aug-2017	2 PLANTS OBSERVED IN 2017.		private (Sierra Pacific Industries)	4679
14	ALONG TRIBUTARY TO NORTH FORK BATTLE CREEK, ABOUT 1.2 AIR MILES SSE OF LATOUR BUTTE.	Shasta	Viola (4012156)	CNDDB, Nov. 2022 (EO 87)	19-Aug-2016	2 PLANTS OBSERVED IN 2015. 3 PLANTS OBSERVED IN 2016. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS. THERE IS PLENTY OF SUITABLE HABITAT IN AREA, AND MORE PLANTS MAY BE PRESENT IN A WETTER YEAR.	NONE. SITE IS NOT WITHIN OR ADJACENT TO ANY PROPOSED HARVEST UNITS.	private (Sierra Pacific Industries)	4915

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
15	ALONG TRIBUTARY TO NORTH FORK BATTLE CREEK, ABOUT 1.5 AIR MILES SOUTH OF LATOUR BUTTE.	Shasta	Viola (4012156)	CNDDB, Nov. 2022 (EO 86)	15-Sep-2015	2 PLANTS OBSERVED IN WEST POLYGON AND 1 PLANT IN EACH OF THE TWO EASTERN POLYGONS IN 2015. THE RARE BOTRYPUS VIRGINIANUS, BOTRYCHIUM CRENULATUM, B. ASCENDENS, AND B. MONTANUM ALSO FOUND IN AREA.	TIMBER HARVEST, THOUGH SITES ARE WITHIN WLPZ AND FORESTER WILL PROVIDE APPROVED PROTECTION MEASURES.	private (Sierra Pacific Industries)	4650
16	USFS ROAD 31N54, JUST SOUTH OF JUNCTION WITH ROAD 31N56, APPROXIMATELY 1 AIR MILE NW OF CAMPBELL MOUNTAIN.	Lassen	Antelope Mtn. (4012058)	CNDDB, Nov. 2022 (EO 29)	21-Sep-2011	~179 PLANTS SEEN IN 2006. 2007: 150 PLANTS IN NW-MOST POLY, 298 IN SW-MOST POLY, 25 IN MIDDLE POLY. 3 PLANTS IN E-MOST POLY IN 2008. SITE VISITED IN 2011, PLANTS NOT CENSUSED BUT WERE PRESUMABLY STILL PRESENT.	LIVESTOCK GRAZING AND TRAMPLING.	Lassen NF	5950
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-025A)	21-Sep-2011			Lassen NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-025B)	21-Sep-2011			Lassen NF	
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-025C)	21-Sep-2011			Lassen NF	
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-025D)	21-Sep-2011			Lassen NF	
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-025E)	21-Sep-2011			Lassen NF	
16		Lassen	Antelope Mtn. (4012058)	NRIS polys, Aug. 2022 (050658-BOMI-027)	21-Jul-2008	3		Lassen NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
17	BETWEEN USFS ROAD 30N63 AND SUSAN RIVER, APPROXIMATELY 1.85 AIR MILES EAST OF SILVER LAKE.	Lassen	Swain Mountain (4012141)	CNDDB, Nov. 2022 (EO 48)	17-Aug-2011	3 PLANTS OBSERVED IN 2011. LASSEN NF POPULATION #BOMI-031.	POPULAR DISPERSED CAMPING AND FUEL WOODCUTTING AREA. RUDIMENTARY CAR PATH IS CONSPICUOUS. CLOSE TO ROAD.	Lassen NF	6200
17		Lassen	Swain Mountain (4012141)	NRIS polys, Aug. 2022 (050651-BOMI-031)	17-Aug-2011	3		Lassen NF	
18	SOUTH SIDE OF USFS ROAD 32N10, APPROXIMATELY 1.13 AIR MILES NORTHEAST OF CUMMINGS SPRING.	Lassen	Red Cinder (4012142)	CNDDB, Nov. 2022 (EO 50)	16-Aug-2011	14 PLANTS OBSERVED IN 2011. LASSEN NF POPULATION #BOMI-033.	DEBRIS AND BRANCHES FROM WOODCUTTING FELL ON PART OF POPULATION.	Lassen NF	6250
18		Lassen	Red Cinder (4012142)	NRIS polys, Aug. 2022 (050651-BOMI-033)	16-Aug-2011	14		Lassen NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
19	EAST SIDE OF USFS ROAD 32N10, APPROXIMATELY 0.75 AIR MILE ENE OF CUMMINGS SPRING.	Lassen	Red Cinder (4012142)	CNDDB, Nov. 2022 (EO 51)	16-Aug-2011	3 PLANTS OBSERVED IN 2011. LASSEN NF POPULATION #BOMI-037.		Lassen NF	6230
19		Lassen	Red Cinder (4012142)	NRIS polys, Aug. 2022 (050651-BOMI-037)	16-Aug-2011	3		Lassen NF	
20	0.2 AIR MILE SOUTH TO 0.2 AIR MILE WEST OF CABIN SPRING.	Shasta	Grays Peak (4012146)	CNDDB, Nov. 2022 (EO 12)	3-Sep-2003	25 PLANTS OBSERVED IN 2002, 6 IN 2003, AND 13 IN 2004. THE PLANTS OBSERVED IN 2002 WERE ORIGINALLY BELIEVED TO BE BOTRYCHIUM ASCENDENS.	TRESPASS CATTLE. LOGGING.	Lassen NF	5600
20		Shasta	Grays Peak (4012146)	NRIS polys, Aug. 2022 (050653-BOMI-011A)	17-Aug-2004			Lassen NF	
20		Shasta	Grays Peak (4012146)	NRIS polys, Aug. 2022 (050653-BOMI-011B)	17-Aug-2004			Lassen NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
20		Shasta	Grays Peak (4012146)	NRIS polys, Aug. 2022 (050653-BOMI-011C)	17-Aug-2004			Lassen NF	
21	DRAINAGE ON SOUTH SIDE OF KINGS CREEK, ABOUT 0.75 AIR MILE SOUTH OF PILOT MOUNTAIN, LASSEN VOLCANIC NP.	Shasta	Mt. Harkness (4012143)	CNDDB, Nov. 2022 (EO 169)	11-Aug-2019	27 PLANTS OBSERVED IN 2019.		Lassen Volcanic NP	5633
22	ABOUT 0.1 AIR MILE WEST OF 31N17 FOREST ROAD AND 0.96 AIR MILE SOUTHWEST OF CABIN SPRINGS.	Shasta	Grays Peak (4012146)	CNDDB, Nov. 2022 (EO 133)	20-Jul-2020	21 PLANTS OBSERVED IN 2017. 20-25 PLANTS OBSERVED IN 2020. IT IS POSSIBLE THAT OTHER BOTRYCHIA SPECIES ARE PRESENT HERE, BUT PLANTS THAT WERE COLLECTED ALL HAVE KEYED OUT TO B. MINGANENSE.	NONE.	private (Sierra Pacific Industries)	5500

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
23	ABOUT 1/5 MILE TO THE EAST OF THE WARNER VALLEY RANGER STATION, UPSLOPE OF WARNER VALLEY ROAD, LASSEN VOLCANIC NP.	Plumas	Mt. Harkness (4012143)	CNDDB, Nov. 2022 (EO 168)	31-Jul-2019	15 PLANTS OBSERVED IN 2019.		Lassen Volcanic NP	5611
23	Warner Valley	Plumas		CCH2, Nov. 2022 (US 667141)	12-Jul-1897				
24	NORTH OF NORTH FORK DIGGER CREEK, ~1.5 MILES EAST OF RD 31N17, ~0.4 MILE WNW OF HEART LAKE, LASSEN NF.	Shasta	Lassen Peak (4012145)	CNDDB, Nov. 2022 (EO 137)	30-Jul-2017	ONLY ONE PLANT SEEN IN 2017, BUT HABITAT SEEMED AMPLE AND SEARCH TIME WAS VERY LIMITED.		Lassen NF	6430
25	JUST SOUTHEAST OF WHERE USFS ROAD 31N17 CROSSES SOUTH FORK DIGGER CREEK, APPROXIMATELY 1.6 AIR MILES WSW OF HEART LAKE.	Tehama	Grays Peak (4012146)	CNDDB, Nov. 2022 (EO 53)	27-Jul-2009	21 PLANTS OBSERVED IN 2009. LASSEN NF POPULATION #BOMI-28.	PLANNED TIMBER HARVEST. CATTLE GRAZING IS A THREAT TO HABITAT.	Lassen NF	5800

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
25		Tehama	Grays Peak (4012146)	NRIS polys, Aug. 2022 (050651-BOMI-028)	27-Jul-2009	21		Lassen NF	
26	SOUTHWESTERN END OF SWAIN MEADOW, NORTH OF JENNIE MOUNTAIN, ABOUT 1.8 AIR MILES SOUTH OF SWAIN SNOWMOBILE PARKING.	Plumas	Swain Mountain (4012141)	CNDDB, Nov. 2022 (EO 49)	2-Aug-2011	15 PLANTS OBSERVED IN 2011. THE RARE BOTRYCHIUM MONTANUM ALSO OCCURS AT THIS SITE. LASSEN NF POPULATION #BOMI-034.	FUELWOOD CUTTING. VEHICLE TRACKS OBSERVED CROSSING STREAM AND CUTTING THROUGH MOIST HABITAT.	Lassen NF	5740
26		Plumas	Swain Mountain (4012141)	NRIS polys, Aug. 2022 (050651-BOMI-034)	2-Aug-2011	15		Lassen NF	
27	JENNIE CREEK ABOUT 0.5 AIR MILE SOUTH OF JENNIE SPRING, NEAR END OF FOREST ROAD 29N72Y.	Plumas	Swain Mountain (4012141)	CNDDB, Nov. 2022 (EO 85)	17-Jul-2013	1 PLANT OBSERVED IN 2013.		Lassen NF	5790

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
27		Plumas	Swain Mountain (4012141)	NRIS polys, Aug. 2022 (050651-BOMI-038)	17-Jul-2013	1		Lassen NF	
28	JUST SE OF DOMINGO LAKE.	Plumas	Mt. Harkness (4012143)	CNDDB, Nov. 2022 (EO 9)	26-Jul-2004	87 PLANTS OBSERVED IN 2003, ORIGINALLY BELIEVED TO BE B. ASCENDENS, BUT LATER DETERMINED TO BE B. MINGANENSE BY D. FARRAR. 60 PLANTS WERE OBSERVED AT THIS SITE IN 2002 AND REPORTED AS B. ASCENDENS. 214 B. MINGANENSE OBSERVED IN 2004.	DISPERSED CAMPING NEAR LAKE. POTENTIAL ADMINISTRATION STUDY AREA.	Lassen NF	5840
28		Plumas	Mt. Harkness (4012143)	NRIS polys, Aug. 2022 (050651-BOMI-006)	26-Jul-2004			Lassen NF	
29	ABOVE LONG MEADOW THAT RUNS NW TO JOIN MAIN CREEK IN CRAZY HARRY GULCH, NW OF FREDONYER BUTTE.	Lassen	Roop Mountain (4012047)	CNDDB, Nov. 2022 (EO 27)	22-Jul-2015	246 PLANTS OBSERVED IN 2006. 63 PLANTS OBSERVED IN 2015; ONGOING DROUGHT HAS REDUCED POPULATION.	POSSIBLE ASPEN ENHANCEMENT AND TIMBER HARVEST AS PART OF THE SUSAN RIVER PROJECT.	Lassen NF	5530

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
29		Lassen	Roop Mountain (4012047)	NRIS polys, Aug. 2022 (050658-BOMI-016)	17-Jul-2006			Lassen NF	
30	NORTH AND SOUTH OF WHERE RD 29N36Y CROSSES LAST CHANCE CREEK, ON THE EASTERN BANKS OF THE CREEK.	Plumas	Red Cinder (4012142)	CNDDB, Nov. 2022 (EO 28)	15-Aug-2006	11 PLANTS OBSERVED IN 2006.	SOUTHERN SUBPOPULATION IS WITHIN PROPOSED DFPZ UNDER BUZZARD PROJECT.	Lassen NF	5600
30		Plumas	Red Cinder (4012142)	NRIS polys, Aug. 2022 (050651-BOMI-018A)	15-Aug-2006			Lassen NF	
30		Plumas	Red Cinder (4012142)	NRIS polys, Aug. 2022 (050651-BOMI-018B)	15-Aug-2006			Lassen NF	

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31	NANNY CREEK WATERSHED, ALONG RD 30N16, EAST OF WILSON MEADOW.	Tehama	Lassen Peak (4012145)	CNDDB, Nov. 2022 (EO 10)	29-Jul-2008	23 PLANTS SEEN IN 2 SW-MOST POLYGONS IN 2003. 15 PLANTS SEEN IN 5 CENTER POLYGONS IN 2006. 13 PLANTS SEEN IN 2 NE-MOST POLYGONS IN 2008.	GRAZING AND CULVERT REPLACEMENT PROJECT. PART OF OCCURRENCE IN TIMBER UNIT. NON-NATIVE PLANTS PRESENT.	Lassen NF	5580
31		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-008A)	28-Aug-2003			Lassen NF	
31		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-008B)	28-Aug-2003			Lassen NF	
31		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-008C)	22-Aug-2006			Lassen NF	

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31		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-019)	22-Aug-2006			Lassen NF	
31		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-020)	29-Jul-2008	13		Lassen NF	
32	EAST SIDE OF USFS ROAD 31N17, APPROXIMATELY 0.6 AIR MILE SOUTH OF SOUTH END OF DRY LAKE.	Tehama	Lassen Peak (4012145)	CNDDB, Nov. 2022 (EO 52)	21-Sep-2010	80 PLANTS OBSERVED IN 2010. LASSEN NF POPULATION #BOMI-030.	CONSPICUOUS SIGNS OF GRAZING ARE PRESENT THROUGHOUT SITE; COW PIES, COW TRAILS, AND HERBIVORY.	Lassen NF	6100
32		Tehama	Lassen Peak (4012145)	NRIS polys, Aug. 2022 (050651-BOMI-030)	21-Sep-2010	80		Lassen NF	

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33	SOUTHWEST OF CHAPARRAL HILL; USFS ROAD 29N66, APPROXIMATELY 0.7 AIR MILE NORTHEAST OF ITS JUNCTION WITH RD 29N08Y.	Lassen	Pegleg Mtn. (4012048)	CNDDB, Nov. 2022 (EO 44)	1-Aug-2007	14 PLANTS OBSERVED IN 2007. LASSEN NF POPULATION # BOMI-24.	4 PLANTS ARE WITHIN ASPEN TREATMENT UNIT.	Lassen NF	5760
33		Lassen	Pegleg Mtn. (4012048)	NRIS polys, Aug. 2022 (050658-BOMI-024A)	1-Aug-2007	6		Lassen NF	
33		Lassen	Pegleg Mtn. (4012048)	NRIS polys, Aug. 2022 (050658-BOMI-024B)	1-Aug-2007	8		Lassen NF	
34	WEST SIDE OF FOREST SERVICE ROAD 29N20, EAST SIDE OF MORGAN MOUNTAIN.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 120)	3-Aug-2015	IN 2016, NORTHERN POLYGON HAD 16 GENETS AND SOUTHERN POLYGON HAD 4 GENETS.	LIVESTOCK TRAMPLING.	Lassen NF	4970
34		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-040)	3-Aug-2015	16		Lassen NF	

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34		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-041)	28-Jul-2015	4		Lassen NF	
35	WEST OF USFS ROAD 31N45, ABOUT 0.6 AIR MILE NORTHEAST OF HAMPTON BUTTE, NORTHWEST OF MINERAL.	Tehama	Lyonsville (4012136)	CNDDB, Nov. 2022 (EO 164)	3-Oct-2018	7 PLANTS OBSERVED IN 2018.	NONE.	Lassen NF	5930
35		Tehama	Lyonsville (4012136)	NRIS polys, Aug. 2022 (050651-BOMI-055)	3-Oct-2018	7		Lassen NF	
36	MARTIN CREEK WATERSHED, 0.2 MILE UP C SPUR FROM JCT WITH RD 29N36, 1.5 MI NNE OF MINERAL.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 25)	30-Aug-2018	NORTHERN POLYGON: 4 PLANTS OBSERVED IN 2006. SOUTHERN POLYGON: 2 PLANTS OBSERVED IN 2018.	CULVERT REPLACEMENT PROJECT IS UNDERWAY; PLANTS ARE WITHIN 6 FT. OF ROADWAY.	Lassen NF	5200
36		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-021)	22-Aug-2006			Lassen NF	

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36		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-054)	30-Aug-2018	1		Lassen NF	
37	1 MILE NORTH OF MINERAL, ON UNNAMED TRIBUARY OF MARTIN CREEK, WEST OF USFS ROAD 29N11.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 8)	10-Sep-2003	1 PLANT OBSERVED IN 2003. THE RARE BOTRYCHIUM CRENULATUM & B. MONTANUM ALSO OCCUR NEARBY.	POSSIBLE WATER DEVELOPMENT FOR THE TOWN OF MINERAL.	Lassen NF	5560
37		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-009)	10-Sep-2003			Lassen NF	
38	WEST OF ROAD 29N36A SPUR, NANNY CREEK WATERSHED, 1.4 AIR MILES NE OF MINERAL.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 26)	23-Aug-2006	3 PLANTS OBSERVED IN 2006. THIS AREA WAS SPOT-CHECKED AND WHEN BOTRYCHIUM WERE FOUND, A 6 SQ. FT. AREA WAS CENSUSED. A MORE THOROUGH SURVEY OF THIS SITE IS NEEDED.		Lassen NF	5240
38		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-022)	23-Aug-2006			Lassen NF	

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39	JUST WEST OF FOREST SERVICE ROAD 29N62A1, ABOUT 1.5 AIR MILES SSW OF THE JUNCTION OF HWY 36 AND CA-89.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 119)	21-Jul-2015	17 GENETS OBSERVED IN 2015.		Lassen NF	5520
39		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-042)	21-Jul-2015	17		Lassen NF	
40	ALONG USFS ROAD 29N25 EAST OF BROKENSHIRE PICNIC AREA, APPROXIMATELY 0.5 AIR MILE WSW OF DOE MOUNTAIN SUMMIT.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 46)	21-Aug-2008	243 PLANTS OBSERVED IN 2008, BUT THERE MAY BE MORE IN INTERIOR OF COMPLEX. THE RARE B. CRENULATUM AND B. MONTANUM ALSO OCCUR AT THIS SITE. LASSEN NF POPULATION #BOMI-26.	COULD BE VULNERABLE TO ROAD OR CULVERT DAMAGE.	Lassen NF	4900
40		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-026)	22-Jul-2008	243		Lassen NF	

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41	SW END OF LITTLE ROUND VALLEY, APPROXIMATELY 0.75 AIR MILE WEST OF CAMP TEHAMA.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 118)	21-Jul-2015	14 GENETS OBSERVED IN 2015; MORE PLANTS ARE LIKELY TO OCCUR WITHIN MAPPED POLYGON.	POWERLINE MAINTENANCE IS MENTIONED AS A DISTURBANCE/THREAT.	Lassen NF	5152
41		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-043)	21-Jul-2015	14		Lassen NF	
42	SOUTH OF MORGAN SUMMIT; APPROXIMATELY 1.6 AIR MILES WEST OF CAMP TEHAMA.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 45)	31-Aug-2011	3 PLANTS OBSERVED IN NORTHERN POLYGON AND 18 PLANTS OBSERVED IN SOUTHERN POLYGON IN 2011; MORE PLANTS ARE LIKELY TO OCCUR AT SITE. LASSEN NF POPULATION #S BOMI-35 & 36.	LOWERMOST CLUMP OF MOONWORTS COULD BE AFFECTED BY CULVERT MAINTENANCE/REPLACEMENT.	Lassen NF	5500
42		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-035)	30-Aug-2011	3		Lassen NF	

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42		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-036)	31-Aug-2011	18		Lassen NF	
43	NORTHEAST SIDE OF HAMILTON MOUNTAIN, SOUTHWEST SIDE OF USFS ROAD 29N86 AT HAIRPIN TURN STREAM CROSSING.	Lassen	Fredonyer Pass (4012037)	CNDDB, Nov. 2022 (EO 43)	25-Jul-2012	7 PLANTS OBSERVED IN 2012. LASSEN NF POPULATION # BOMI-023.		Lassen NF	5900
43		Lassen	Fredonyer Pass (4012037)	NRIS polys, Aug. 2022 (050658-BOMI-023)	26-Jun-2012	7		Lassen NF	
44	SW OF FOREST SERVICE ROAD 29N05, APPROXIMATELY 2 AIR MILES WNW OF HAMILTON MOUNTAIN SUMMIT.	Lassen	Westwood East (4012038)	CNDDB, Nov. 2022 (EO 113)	7-Sep-2016	66 PLANTS OBSERVED IN 2016.		private (Sierra Pacific Industries)	5800

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45	APPROXIMATELY 0.5 MILE NORTH OF FOREST SERVICE ROAD 29N43, ABOUT 2 AIR MILES ENE OF DIAMOND MOUNTAIN SUMMIT.	Lassen	Diamond Mtn. (4012036)	CNDDB, Nov. 2022 (EO 112)	4-Jul-2016	160 GENETS OBSERVED IN 2016. THERE WAS QUITE A BIT OF VARIATION IN SIZE AND TROPHOPHORE/SPOROPHORE DEVELOPMENT AND IN THE MARGINS OF THE PINNAE.		Lassen NF	5635
45		Lassen	Diamond Mtn. (4012036)	NRIS polys, Aug. 2022 (050658-BOMI-044)	4-Jul-2016	160		Lassen NF	
46	SOUTHEAST OF JONES VALLEY; ALONG USFS ROAD 28N06 APPROXIMATELY 0.7 AIR MILE NNE OF HOLE IN THE GROUND CAMPGROUND.	Tehama	Mineral (4012135)	CNDDB, Nov. 2022 (EO 47)	30-Aug-2011	11 PLANTS OBSERVED IN 2011. THE RARE BOTRYCHIUM CRENULATUM ALSO OCCURS AT THIS SITE. LASSEN NF POPULATION #BOMI-32.	SOME NON-NATIVE SPECIES FOUND NEARBY.	Lassen NF	4750
46		Tehama	Mineral (4012135)	NRIS polys, Aug. 2022 (050651-BOMI-032)	30-Aug-2011	11		Lassen NF	

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47	ABOUT 1 AIR MILE SOUTH OF MOUNTAIN MEADOWS RESERVOIR AND 1.75 AIR MILES NNE OF DYER MOUNTAIN.	Lassen	Westwood West (4012131)	CNDDB, Nov. 2022 (EO 84)	14-Jul-2014	194 BOTRYCHIUM PLANTS OBSERVED IN 2014, INCLUDING THE RARE B. ASCENDENS, B. CRENULATUM AND B. MONTANUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, THOUGH PLANTS ARE PROTECTED FROM HARVEST DISTURBANCE WITHIN WLPZ.	private (Sierra Pacific Industries)	5600
48	SOUTH OF MOUNTAIN MEADOWS RESERVOIR, AND ABOUT 2.77 AIR MILES NE OF DYER MOUNTAIN.	Lassen	Westwood East (4012038)	CNDDB, Nov. 2022 (EO 77)	15-Jul-2014	50 PLANTS OBSERVED IN 2014. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS. A FEW PLANTS WERE BORDERLINE B. CRENULATUM.	TIMBER HARVEST IN AREA, BUT PLANTS ARE PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	5330
49	YELLOWJACKET; ABOUT 1 AIR MILE SOUTH OF HOWARD MEADOWS, BETWEEN MCCARTY CREEK AND SOUTH FORK ANTELOPE CREEK.	Tehama	Barkley Mtn. (4012126)	CNDDB, Nov. 2022 (EO 83)	26-Aug-2014	1 PLANT OBSERVED IN 2014. AREA WAS THOROUGHLY SEARCHED BUT NO OTHER BOTRYCHIUM OBSERVED, THOUGH THERE IS A LOT OF SUITABLE HABITAT IN AREA.	SURROUNDING LAND USE IS TIMBERLAND. OCCURRENCE WILL BE BUFFERED AND PROTECTED FROM FUELBREAK OPERATION DISTURBANCES.	private (Sierra Pacific Industries)	3910

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50	NEAR HEAD OF SHEEPCAMP CREEK, ABOUT 0.7 AIR MILE SOUTH OF DYER MOUNTAIN.	Plumas	Canyondam (4012121)	CNDDB, Nov. 2022 (EO 80)	7-Aug-2015	4 PLANTS OBSERVED IN 2015. BOTRYCHIUM ASCENDENS ALSO PRESENT AT THIS SITE. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, THOUGH SITE IS WITHIN WLPZ. FORESTER IS AWARE OF SITE AND WILL IMPLEMENT ADDITIONAL PROTECTION BUFFERS.	private (Sierra Pacific Industries)	5840
51	NORTH OF OLD HAUN RD ALONG UNNAMED DRAINAGE, ABOUT 1.2 AIR MILES SOUTH OF DYER MOUNTAIN.	Plumas	Canyondam (4012121)	CNDDB, Nov. 2022 (EO 81)	11-Aug-2015	1 PLANT OBSERVED IN 2015. SITE QUALITY IS GOOD AND THERE IS A LOT OF SUITABLE HABITAT IN AREA, SO THERE MAY BE MORE PLANTS PRESENT IN A WETTER YEAR.	TIMBER HARVEST, THOUGH SITE IS WITHIN WLPZ. FORESTER IS AWARE OF SITE AND WILL IMPLEMENT ADDITIONAL PROTECTION BUFFERS.	private (Sierra Pacific Industries)	5430

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52	High Cascade Range. At a small sloping spring below the road to Carter Meadow trailhead and above Elam Creek. T27N, R5E, NE¼ of sec. 8. Humboldt Peak 7.5' quad.	Tehama	Humboldt Peak (4012124)	CCH2, Nov. 2022 (CHSC123 768)	9-Jul-2021			Lassen NF	
53	ABOUT 0.8 AIR MILE SOUTHWEST OF MOUNTAIN VIEW CAMPGROUND, SOUTHWEST SIDE OF LAKE ALMANOR.	Plumas	Canyondam (4012121)	CNDDB, Nov. 2022 (EO 163)	21-Jun-2018	3 PLANTS OBSERVED IN 2018.	NONE.	Lassen NF	4707
53		Plumas	Canyondam (4012121)	NRIS polys, Aug. 2022 (050651-BOMI-053)	21-Jun-2018	3		Lassen NF	
54	NORTH OF YELLOW CREEK, ALONG FOREST ROAD 27N65 ABOUT 3.6 AIR MILES EAST OF HUMBOLDT PEAK.	Plumas	Humbug Valley (4012123)	CNDDB, Nov. 2022 (EO 82)	16-Jul-2014	116 BOTRYCHIUM PLANTS OBSERVED IN 2014, INCLUDING THE RARE B. MINGANENSE AND B. CRENULATUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, THOUGH PLANTS WILL BE FULLY PROTECTED BY WLPZ AND ADDITIONAL PROTECTION MEASURES.	private (Sierra Pacific Industries)	5650

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55	ALONG JONES CREEK, 0.75 AIR MILE SW OF THE SUMMIT OF HUMBOLDT PEAK.	Butte	Humboldt Peak (4012124)	CNDDB, Nov. 2022 (EO 6)	24-Jul-2001	1 PLANT OBSERVED IN 2001 AND 2003.	POSSIBLE TIMBER THINNING IN AREA.	Lassen NF	6120
55		Butte	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-003)	12-Aug-2003			Lassen NF	
56	beside Willow Creek 1 mi S of jct with logging road 1.5 mi N of jct with Colby Mt. Road	Tehama	Humboldt Peak (4012124)	CCH2, Nov. 2022 (UC1751220)	7-Jul-1985			Lassen NF	5400
57	ALONG JONES CREEK, 1.1 AIR MILES SSW OF THE SUMMIT OF HUMBOLDT PEAK.	Butte	Humboldt Peak (4012124)	CNDDB, Nov. 2022 (EO 7)	24-Jul-2001	1 PLANT OBSERVED IN 2001. THE RARE BOTRYCHIUM CRENULATUM & B. SIMPLEX ALSO OCCUR NEARBY.	TIMBER HARVEST PROPOSED IN 2001.	Lassen NF	6000
57		Butte	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-004)	24-Jul-2001			Lassen NF	

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58	WILLOW CREEK ABOUT 2 MILES SOUTHWEST OF HUMBOLDT PEAK AND 1 MILE NORTH OF JONESVILLE.	Tehama	Humboldt Peak (4012124)	CNDDB, Nov. 2022 (EO 2)	29-Jun-2002	5 PLANTS OBSERVED IN 1994, 11 IN 1995, 4 IN PARTIAL SURVEY IN 1998, <9 IN 2000, 8 SEEN IN 2002 SOUTH OF ROAD, NONE IN 2003 AND 2006.	CATTLE GRAZING, TIMBER HARVEST, POSSIBLE FOOT TRAFFIC TRAMPLING, AND WATER DRAFTING BELOW THE ROAD.	Lassen NF	5280
58		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-001A)	28-Aug-2006			Lassen NF	
58		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-001B)	28-Aug-2006			Lassen NF	
58		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-001C)	28-Aug-2006			Lassen NF	

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58		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-001D)	28-Aug-2006			Lassen NF	
59	LITTLE GRIZZLY FEN. JUST NW OF LITTLE GRIZZLY VALLEY. 0.5 MILE SSE OF LITTLE GRIZZLY CAMPGROUND.	Plumas	Humbug Valley (4012123)	CNDDB, Nov. 2022 (EO 4)	9-Aug-2005	9 PLANTS OBSERVED IN 2002. 4 IN 2003 AFTER 4 OTHER PLANTS THAT WERE PREVIOUSLY MARKED WERE COVERED BY A FALLEN TREE. 3 SEEN IN 2004. 11 PLANTS SEEN IN 2005 IN UPPER PORTION OF STREAM, NOT LOWER PORTION WHERE THEY WERE PREVIOUSLY LOCATED.	SURROUNDED BY TIMBERLAND, CATTLE MAY IMPACT IN FUTURE. NO THREATS OBSERVED IN 2005.	Lassen NF	5840
59		Plumas	Humbug Valley (4012123)	NRIS polys, Aug. 2022 (050651-BOMI-007)	9-Aug-2005			Lassen NF	

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60	BELOW RD 27N06, 0.9 AND 1.1 ROAD MILES W OF RD 26N59, 3 MI SW OF HUMBOLDT PEAK.	Tehama	Humboldt Peak (4012124)	CNDDB, Nov. 2022 (EO 23)	26-Jul-2018	WEST COLONY: 9 PLANTS SEEN IN 2005. 48 IN 2006, 3 IN 2018. THE RARE B. MONTANUM, B. ASCENDENS, AND B. CRENULATUM ALSO OCCUR HERE; CLAYTONIA PALUSTRIS IS NEARBY AND MEESIA TRIQUETRA FOUND IN FEN BELOW. EAST COLONY: 107 PLANTS IN 2005.	AREA SLATED FOR THINNING, BUT NOW FLAGGED AND TAGGED.	Lassen NF	5245
60		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-013)	9-Aug-2005			Lassen NF	
60		Tehama	Humboldt Peak (4012124)	NRIS polys, Aug. 2022 (050651-BOMI-015)	31-Jul-2006			Lassen NF	

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61	BETWEEN FOREST SERVICE ROAD 26N10 AND 27N37, APPROXIMATELY 0.9 MILE EAST OF LITTLE GRIZZLY VALLEY.	Plumas	Humbug Valley (4012123)	CNDDB, Nov. 2022 (EO 117)	16-Jul-2015	26 GENETS OBSERVED IN 2015. DIFFICULT TO DETERMINE SPECIES AS THERE ARE SPORE SACS ON SOME TROPHOPHORES AND NOT ON OTHERS; COULD BE EITHER B. MINGANENSE OR B. ASCENDENS.		Lassen NF	5615
61		Plumas	Humbug Valley (4012123)	NRIS polys, Aug. 2022 (050651-BOMI-039)	16-Jul-2015	26		Lassen NF	
62	1/8 mi south of creek crossing on Colby Mtn Lookout Rd. (5 mi NE of Butte Meadows); Willow Creek	Tehama	Jonesville (4012114)	CCH2, Nov. 2022 (JEPS99044)	29-Jun-2002			Lassen NF	5165
62	2/3 mi NW of Jonesville (beside Willow Creek about 1/4 mi N of jct with road to Colby Mt. Lookout)	Butte	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751219)	7-Jul-1985			Lassen NF	5000

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
62	2/3 mi NW of Jonesville (beside Willow Creek, about 1/4 mi N of jct with road to Colby Mountain Lookout)	Butte	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751221)	7-Jul-1985			Lassen NF	5000
62	1 mi N of Jonesville (beside Willow Creek 3/4 mi N of road to Colby Mt. Lookout)	Tehama	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751222)	7-Jul-1985			Lassen NF	5100
62	beside Willow Creek 1 mi N of jct with road to Colby Mt. Lookout	Tehama	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751223)	7-Jul-1985			Lassen NF	5200
62	beside Willow Creek 1/2 mi N of jct with Colby Mt. Road	Butte	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751224)	10-Aug-1986			Lassen NF	5100

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
63	1 MILE NE OF JONESVILLE. EDGE OF JONES CREEK AT JUNCTION WITH HUMBUG (OR HUMBOLDT) ROAD.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 5)	2-Aug-1986	ONLY SOURCES OF INFO FOR THIS OCCURRENCE ARE 2 COLLECTIONS BY DEVINE. ORIGINAL FIELD NOTES SAY JONES CREEK & HUMBOLDT RD IN SEC 7, LATER HERB LABELS SAY JONES CREEK & HUMBUG RD. MAPPED ALONG 26N27, A ROAD BETWEEN HUMBOLDT & HUMBUG RDS.		Lassen NF	5300
63	1 mi NE of Jonesville (edge of Jones Creek at jct with Humboldt Road)	Butte	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751227)	2-Aug-1986			Lassen NF	5300
63	beside Jones Creek at jct with Humboldt Road	Butte	Jonesville (4012114)	CCH2, Nov. 2022 (UC1751228)	14-Jul-1985			Lassen NF	5300
64	HIGH ON TRIBUTARY OF SCOTTS JOHN CREEK JUST BELOW ROAD 26N83, 1.3 AIR MI WNW OF HUMBUG SUMMIT.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 19)	24-Sep-2005	9 PLANTS OBSERVED IN 2005.	FUEL TREATMENT PLANNED FOR AREA.	Lassen NF	6480

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64		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-012)	24-Sep-2005			Lassen NF	
65	NW OF STRONG BEND IN USFS ROAD 26N84, APPROXIMATELY 0.9 AIR MI N OF JUNCTION WITH HUMBUG SUMMIT RD (ROAD 26N27).	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 20)	24-Jul-2012	10 PLANTS OBSERVED IN JULY 2005. SITE WAS REVISITED IN AUGUST 2005; ONLY 4 OF THE 10 PLANTS OBSERVED AND WERE HARD TO IDENTIFY TO SPECIES. 31 PLANTS OBSERVED IN 2012.	FIRE, ALTERATION OF SPRING, CATTLE GRAZING AND TRAMPLING.	Lassen NF	6600
65		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-014)	24-Jul-2012	31		Lassen NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
66	MILKHOUSE FLAT; 1.5 AIR MILES SE OF HUMBUG SUMMIT.	Plumas	Belden (4012113)	CNDDB, Nov. 2022 (EO 3)	2-Aug-2004	2 PLANTS OBSERVED IN 2001 AND 2004. NO PLANTS FOUND IN 2009. BOTRYCHIUM FOUND IN AREA UNDERNEATH SHRUBBY WILLOWS WHERE IT WAS PROTECTED FROM TRAMPLING AND GRAZING; RARE PLANT FLAGGING FOUND IN 2009 BUT NO MOONWORTS OF ANY KIND SEEN.	GRAZING & TRAMPLING BY CATTLE. POSSIBLE SPRING DEVELOPMENT WITH UNKNOWN EFFECTS ON WATER TABLE.	Lassen NF	6250
66		Plumas	Belden (4012113)	NRIS polys, Aug. 2022 (050651-BOMI-005)	28-Jul-2009			Lassen NF	
67	ALONG STREAM ABOUT 0.6 AIR MILE EAST OF HUMBOLDT RD AND 0.35 AIR MILE NORTH OF FOREST ROAD 26N05, EAST OF BUTTE MEADOWS.	Butte	Butte Meadows (4012115)	CNDDB, Nov. 2022 (EO 79)	7-Sep-2015	ABOUT 40 PLANTS OBSERVED IN 2015. THE RARE BOTRYCHIUM CRENULATUM AND B. ASCENDENS ALSO FOUND AT THIS SITE. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	SURROUNDING LAND USE IS TIMBER HARVEST, THOUGH POPULATION IS FLAGGED.	private (Sierra Pacific Industries)	4530

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68	APPROX. 0.25 MI SE FROM WHERE BUTTE CREEK CROSSES FOREST RD 26N33, NEAR HEADWATERS OF BUTTE CREEK.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 21)	31-Jul-2006	21 PLANTS OBSERVED IN 2006. SOME PLANTS DON'T KEY WELL IN 2006 FARRAR KEY; BASAL PINNAE SPAN IS VERY NARROW, MUCH LESS THAN 60 DEGREES. OTHER RARE SPP: BOTRYCHIUM MONTANUM, B. ASCENDENS, AND STELLARIA OBTUSA.	TIMBER HARVEST (WILLOW PROJECT); POSSIBLE "RIPARIAN ENHANCEMENT."	Lassen NF	6240
68		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-017)	31-Jul-2006			Lassen NF	
69	BETWEEN CIRBY MEADOW AND FOREST SERVICE ROAD 26N23, ABOUT 0.8 MILE WEST OF THE BUTTE/PLUMAS COUNTY LINE.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 115)	7-Aug-2016	5 GENETS OBSERVED IN 2016. MAY BE MANY MORE PLANTS IN AREA.		Lassen NF	6375
69		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-046)	6-Aug-2016	5		Lassen NF	

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70	SOUTH OF FOREST SERVICE ROAD 26N33A, APPROXIMATELY 0.9 AIR MILE SE OF SUMMIT LAKE, EAST OF SNOW MOUNTAIN SUMMIT.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 116)	6-Aug-2016	2 GENETS OBSERVED IN 2016. PLANTS SMALL AND DIFFICULT TO DETECT AND FOUND UNDER DENSE HERBACEOUS COVER; MORE BOTRYCHIUM COULD POTENTIALLY EXIST IN AREA.		Lassen NF	6130
70		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-047)	6-Aug-2016	2		Lassen NF	
71	JUST WEST OF THE END OF FOREST SERVICE ROAD 26N23, ABOUT 1.1 AIR MILES WSW OF SUNFLOWER FLAT.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 114)	7-Aug-2016	34 GENETS OBSERVED IN 2016; PLANTS SCATTERED OVER TWO SPRING SOURCES AND FOUND GROWING UNDER ATHYRIUM.		Lassen NF	6415
71		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-045)	7-Aug-2016	34		Lassen NF	

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72	ALONG COON CREEK ABOUT 0.25 AIR MILE SE OF CONFLUENCE WITH WEST BRANCH FEATHER RIVER.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 78)	10-Sep-2015	125 BOTRYCHIUM PLANTS OBSERVED AT THIS SITE, INCLUDING THE RARE B. ASCENDENS AND B. MONTANUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	SURROUNDING LAND USE IS TIMBERLAND. POPULATION IS FLAGGED.	Coon Hollow Wildlife Area (CA Dept. of Fish & Wildlife)	5365
73	ON THE E SIDE OF HUMBUG ROAD, NE OF MEMORIAL SPRING, ABOUT 2 AIR MILES WNW OF PHILBROOK RESERVOIR DAM.	Butte	Butte Meadows (4012115)	CNDDB, Nov. 2022 (EO 22)	20-Aug-2009	ABOUT 30 PLANTS OBSERVED IN 2004. 45 PLANTS OBSERVED IN 2009.	DISTURBED BY VEGETATION MANAGEMENT ACTIVITIES.	Lassen NF	5100

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
73	About 15 feet west of the small stream, 47-55 feet north of the large round 10 feet tall boulder, northeast of Memorial Spring, east side of Humbug Road, about 2 miles (air) wet of Philbrook Reservoir Dam, about 3 miles (air) southeast of Butte Meadows. T25N R04E S10 NW1/4	Butte	Butte Meadows (4012115)	CCH2, Nov. 2022 (CHSC088 175)	23-Jul-2004			Lassen NF	5100
73		Butte	Butte Meadows (4012115)	NRIS polys, Aug. 2022 (050651-BOMI-029)	20-Aug-2009	45		Lassen NF	
74	0.2 TO 0.6 AIR MILE NORTH OF PHILBROOK LAKE CAMPGROUND, ON THE EAST SIDE OF USFS ROAD 25N05 NEAR THE HAIRPIN TURN.	Butte	Jonesville (4012114)	CNDDB, Nov. 2022 (EO 18)	10-Aug-2017	120 PLANTS OBSERVED IN LARGE MIDDLE POLYGON IN 2004. 27 PLANTS OBSERVED THROUGHOUT OCCURRENCE IN 2017.	LOGGING. SOME HERBIVORY OBSERVED.	Lassen NF	5800

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74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-010A)	26-Jul-2004			Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-010B)	26-Jul-2004			Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-010C)	26-Jul-2004			Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-010D)	26-Jul-2004			Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-010E)	10-Aug-2017	2		Lassen NF	

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74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-048)	18-Jul-2017	6		Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-050A)	27-Jul-2017	8		Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-050C)	27-Jul-2017	1		Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-051A)	27-Jul-2017	5		Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-051B)	27-Jul-2017	2		Lassen NF	

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74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050651-BOMI-052)	10-Aug-2017	1		Lassen NF	
74		Butte	Jonesville (4012114)	NRIS polys, Aug. 2022 (050654-BOMI-050B)	27-Jul-2017	2		Lassen NF	
75	NORTHEAST SIDE OF USFS ROAD 24N08, ~0.5 AIR MILE WNW OF BAGLEY PASS, NORTH OF LAKE DAVIS.	Plumas	Grizzly Valley (3912085)	CNDDB, Nov. 2022 (EO 160)	10-Aug-2019	5 PLANTS OBSERVED IN 2019.		Plumas NF	5856
75		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_011)	10-Aug-2019	5		Plumas NF	
76	TRIBUTARY TO NORTH VALLEY CREEK, APPROXIMATELY 2.44 AIR MILES NORTH OF LYNCH MEADOWS, EAST OF CONCOW ROAD.	Plumas	Kimshew Point (3912184)	CNDDB, Nov. 2022 (EO 111)	27-Aug-2014	50 BOTRYCHIUM PLANTS OBSERVED IN 2014. PLANT COUNT IS FOR B. MINGANENSE, B. CRENULATUM, AND B. MONTANUM COMBINED.		private (Sierra Pacific Industries)	4900

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77	ALONG USFS ROAD 24N85Y, ~2.5 AIR MILES WSW OF GATE PLACE, SOUTH OF GRIZZLY VALLEY.	Plumas	Grizzly Valley (3912085)	CNDDB, Nov. 2022 (EO 159)	12-Aug-2004	28 PLANTS OBSERVED IN 2004.		Plumas NF	6240
77		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_002)	12-Aug-2004	22		Plumas NF	
77		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_002A)	12-Aug-2004	3		Plumas NF	
77		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_002B)	12-Aug-2004	3		Plumas NF	

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78	ALONG TRIBUTARY TO CROCKER CREEK, ~0.6 AIR MILE NORTHWEST OF CROCKER GUARD STATION, EAST SIDE OF CROCKER RIDGE.	Plumas	Crocker Mtn. (3912084)	CNDDB, Nov. 2022 (EO 156)	13-Aug-2019	1 PLANT OBSERVED IN AUGUST 2019. THE SITE WAS VISITED IN OCTOBER 2019 AND FOUND TO BE RECENTLY TRAMPLED AND GRAZED BY CATTLE, NO BOTRYCHIUM MINGANENSE PLANTS REMAINED.	CATTLE GRAZING AND TRAMPLING.	Plumas NF	6024
78		Plumas	Crocker Mtn. (3912084)	NRIS polys, Aug. 2022 (051101_BOMI_012)	13-Aug-2019	1		Plumas NF	
79	APPROXIMATELY 2.3 AIR MILES NNW OF SMITH PEAK, SOUTHWEST OF LAKE DAVIS.	Plumas	Grizzly Valley (3912085)	CNDDB, Nov. 2022 (EO 158)	10-Aug-2004	9 PLANTS OBSERVED IN 2004.		Plumas NF	5954
79		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_004)	10-Aug-2004	9		Plumas NF	
80	APPROXIMATELY 1.25 AND 1.5 AIR MILES WNW OF SMITH PEAK, SOUTHWEST OF LAKE DAVIS.	Plumas	Grizzly Valley (3912085)	CNDDB, Nov. 2022 (EO 157)	13-Aug-2004	17 PLANTS OBSERVED IN NORTHERN POLYGON AND 1 PLANT OBSERVED IN SOUTHERN POLYGON IN 2004.		Plumas NF	6300

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80		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_003)	13-Aug-2004	2		Plumas NF	
80		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_003A)	13-Aug-2004	15		Plumas NF	
80		Plumas	Grizzly Valley (3912085)	NRIS polys, Aug. 2022 (051101_BOMI_003B)	13-Aug-2004	1		Plumas NF	
81	ROUGHLY 5 AIR MILES SW OF LAKE DAVIS. AT SPRING 0.4 AIR MILES SW OF THREEMILE VALLEY.	Plumas	Blairsden (3912075)	CNDDB, Nov. 2022 (EO 11)	4-Aug-2004	1 PLANT OBSERVED IN 2001, ORIGINALLY BELIEVED TO BE B. CRENULATUM. >50 PLANTS OBSERVED IN 2002; AT THAT TIME PLANTS WERE THOUGHT TO BE B. MINGANENSE. DNA WORK IS PENDING AS OF 2002. BOTH SPP MAPPED HERE FOR NOW. 3 PLANTS IN 2004.	BURN TREATMENTS, FOREST THINNING, AND CATTLE ARE POTENTIAL THREATS.	Plumas NF	6700

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81		Plumas	Blairsden (3912075)	NRIS polys, Aug. 2022 (051101_BOMI_001)	4-Aug-2004	3		Plumas NF	
82	ROCK ISLAND RIDGE; 0.75 MILE SE OF SOAPSTONE HILL, 1.5 AIR MILES NE OF FOUR TREES.	Plumas	Soapstone Hill (3912173)	CNDDB, Nov. 2022 (EO 14)	6-Jul-2002	4 PLANTS OBSERVED IN 2002. NO PLANTS FOUND IN 2012.	PROPOSED RESTORATION WORK MAY CAUSE SHORT-TERM DISTURBANCE. POSSIBLY THREATENED BY ALTERATION OF HYDROLOGY.	Plumas NF	5278

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82	In the large meadow are three large aspens in a south to north line, go west about 40 yards to the small lodgepole pine, about 20 feet to the north is a bracken fern bank, moonwort is just before the bracken fern and a little east, on Rock Island Ridge, about 3/4 mile southeast of Soapstone Hill and the Oroville Quincy Highway, about 1 1/2 miles (air) northeast of Four Trees. T23N R06E S22 SW1/4	Plumas	Soapstone Hill (3912173)	CCH2, Nov. 2022 (CHSC082519)	6-Jul-2002			Plumas NF	5278
82		Plumas	Soapstone Hill (3912173)	NRIS polys, Aug. 2022 (051103_BOMI_006)	28-Aug-2012			Plumas NF	

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83	EAST SIDE OF USFS ROAD 23N27Y, ~1.75 AIR MILES ESE OF PENMAN PEAK AND ~3.5 AIR MILES WEST OF DELLEKER.	Plumas	Blairsden (3912075)	CNDDB, Nov. 2022 (EO 155)	20-Aug-2013	10 PLANTS OBSERVED IN 2013; EIGHT PLANTS WITH SPOROPHYTES, TWO SMALLER PLANTS WITHOUT SPOROPHYTES, PLANTS LOOSELY CLUSTERED (EACH PLANT SEVERAL INCHES APART FROM NEAREST NEIGHBOR) IN GROUPS OF 2-3.	SPRING SOURCE LIKELY UNDERWENT HISTORIC DEVELOPMENT. WITHIN HAYDEN PROJECT MECHANICAL THIN UNIT; FLAGGED FOR PROTECTION.	Plumas NF	5381
83		Plumas	Blairsden (3912075)	NRIS polys, Aug. 2022 (051101_BOMI_007)	20-Aug-2013	10		Plumas NF	
84	ALONG PLAINS RD (USFS RD 23N28), ABOUT 1.3 AIR MILES NORTHEAST OF COYOTE GAP.	Butte	Soapstone Hill (3912173)	CNDDB, Nov. 2022 (EO 162)	5-Aug-2019	9 PLANTS OBSERVED IN AUGUST 2019. SITE VISITED IN SEPTEMBER 2019 AND THE PLANTS WERE EITHER NOT VISIBLE OR DRIED AND LAYING DOWN, APPEARING LIKE LITTER.	POTENTIALLY THREATENED BY DRYING OF SOIL FROM ENCROACHING CONIFERS.	Plumas NF	4800
84		Butte	Soapstone Hill (3912173)	NRIS polys, Aug. 2022 (051103_BOMI_013)	5-Aug-2019	9		Plumas NF	

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85	Plumas National Forest, 0.6 miles WSW of Pilot Peak.	Plumas	Onion Valley (3912078)	CCH2, Nov. 2022 (CHSC122770)	8-Sep-2019			Plumas NF	6610
85	ABOUT 0.6 AIR MILE WSW OF PILOT PEAK, ABOVE THE SOUTH FORK FEATHER RIVER.	Plumas	Onion Valley (3912078)	CNDDB, Nov. 2022 (EO 161)	8-Sep-2019	17 PLANTS OBSERVED IN 2019.	CATTLE COULD HAVE MAJOR EFFECT ON THIS SITE SINCE IT IS NOT "PROTECTED" BY SHRUBS OR TREES.	Plumas NF	6600
85		Plumas	Onion Valley (3912078)	NRIS polys, Aug. 2022 (051103_BOMI_014)	8-Sep-2019	17		Plumas NF	
86	DRAINAGE JUST SOUTH OF FOREST ROAD 22N01X ABOUT 0.8 AIR MILE NNE OF DELAHUNTY LAKE.	Sierra	Onion Valley (3912078)	CNDDB, Nov. 2022 (EO 76)	12-Aug-2013	4 PLANTS OBSERVED IN 2013.	POSSIBLE FUTURE THREATS ARE TRAMPLING FROM PIPE MAINTENANCE, AND HYDROLOGY ALTERATION FROM UPSLOPE WATER DIVERSION.	Plumas NF	6140

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86		Sierra	Onion Valley (3912078)	NRIS polys, Aug. 2022 (051103_BOMI_010)	12-Aug-2013	4		Plumas NF	
87	EAST SIDE OF USFS ROAD 22N60 APPROXIMATELY 0.5 MILE NORTH OF USFS RD 22N68, NORTHEAST OF LITTLE GRASS VALLEY RESERVOIR.	Plumas	La Porte (3912068)	CNDDB, Nov. 2022 (EO 58)	11-Sep-2019	~100 PLANTS OBSERVED IN 2010. "COMMON" AT THIS SITE IN 2013. SEEN IN 2017. 437 PLANTS IN 2018. Plumas NF POPULATION #BOMI-009. PREVIOUSLY IDENTIFIED AS BOTRYCHIUM CRENULATUM (FORMER EO #54).	POSSIBLY THREATENED BY LOGGING, OHV TRAFFIC, ATVS, MEADOW RESTORATION (SAPLINGS CUT/BURNED).	Plumas NF	5380
87	North High Sierra Nevada. On the Southeast side of Silvertip Road (22N60) approximately .9 km north of its intersection with Road 22N68. T22N R09E S27 NW1/4 of NE1/4 USGS Quadrangle: La Porte 1:24,000	Plumas	La Porte (3912068)	CCH2, Nov. 2022 (CHSC110868)	31-Jul-2013			Plumas NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
87	Plumas National Forest; small spring and seep on southeast side of Silvertip Road (22N60), about 0.9 km east of little Grass Valley Reservoir between Kenzie Ravine and South Fork Feather River. TRS: T22N, R9E, NW1/4 of NE1/4 of sec. 27. La Porte 7.5' quad.	Plumas	La Porte (3912068)	CCH2, Nov. 2022 (CHSC122626)	5-Sep-2019			Plumas NF	
87		Plumas	La Porte (3912068)	NRIS polys, Aug. 2022 (051103_BOMI_009)	27-Aug-2019	437		Plumas NF	
88	ON USFS ROAD 21N58Y, APPROXIMATELY 0.5 AIR MILE WSW OF BELLEVUE MINE, 2.9 AIR MILES NE OF LA PORTE.	Plumas	La Porte (3912068)	CNDDB, Nov. 2022 (EO 57)	6-Aug-2013	400 PLANTS OBSERVED IN A 30' BY 10' AREA IN 2011. 40 PLANTS OBSERVED IN 2013, A DRY YEAR. Plumas NF POPULATION #BOMI-008. PREVIOUSLY IDENTIFIED AS BOTRYCHIUM CRENULATUM (FORMER EO #75).	POSSIBLE FUTURE THREAT WOULD BE HYDROLOGICAL CHANGES.	Plumas NF	5440

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
88		Plumas	La Porte (3912068)	NRIS polys, Aug. 2022 (051103_BOMI_008)	16-Aug-2011	200		Plumas NF	
88		Plumas	La Porte (3912068)	NRIS polys, Aug. 2022 (051103_BOMI_008_001)	6-Aug-2013	40		Plumas NF	
89	APPROXIMATELY 1.1 AIR MILES NE OF CASCADE AND 3.3 AIR MILES WSW OF CAMEL PEAK.	Plumas	Cascade (3912162)	CNDDB, Nov. 2022 (EO 154)	18-Jul-2018	1 PLANT OBSERVED IN 2018.	WITHIN A WATERCOURSE AND LAKE PROTECTION ZONE WITHIN A PROPOSED TIMBER HARVEST UNIT.	private (Sierra Pacific Industries)	4413
90	NORTH SIDE OF CASCADE CREEK, APPROXIMATELY 0.6 AIR MILE NE OF CASCADE AND 1 AIR MILE NW OF BILLS CABIN.	Plumas	Cascade (3912162)	CNDDB, Nov. 2022 (EO 153)	17-Jul-2018	3 PLANTS OBSERVED IN 2018.	WITHIN A WATERCOURSE AND LAKE PROTECTION ZONE WITHIN A PROPOSED TIMBER HARVEST UNIT.	private (Sierra Pacific Industries)	4181

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
91	APPROXIMATELY 0.5 AIR MILE EAST AND 0.75 AIR MILE ESE OF CASCADE, ALONG TRIBUTARIES TO CASCADE CREEK.	Plumas	Cascade (3912162)	CNDDB, Nov. 2022 (EO 152)	18-Jul-2018	1 PLANT OBSERVED IN NORTHERN POLYGON AND 31 PLANTS OBSERVED IN TWO SOUTHERN POLYGONS IN 2018.	WITHIN A WATERCOURSE AND LAKE PROTECTION ZONE WITHIN A PROPOSED TIMBER HARVEST UNIT.	private (Sierra Pacific Industries)	4350
91	Cascade 7.5' USGS quad. On ground just above creek in dense shade from Alnus and Cornus.	Plumas	Cascade (3912162)	CCH2, Nov. 2022 (SPIF02127)	18-Jul-2018			private (Sierra Pacific Industries)	4463
92	ABOUT 1.7 AIR MILES NE OF MAIDEN VALLEY, AND 2.6 AIR MILES WEST OF RANDOLPH HILL, NORTH OF DARK CANYON.	Sierra	Sattley (3912054)	CNDDB, Nov. 2022 (EO 75)	4-Aug-2014	1 PLANT OBSERVED IN 2014. IDENTIFICATION UNCERTAIN AS PLANT WAS PARTIALLY EATEN, BUT IT MOST RESEMBLED B. MINGANENSE.	TIMBER HARVEST, THOUGH SITE IS PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	6240
93	ABOUT 2.2 AIR MILES ENE OF MAIDEN VALLEY AND 1.7 AIR MILES WSW OF RANDOLPH HILL.	Sierra	Sattley (3912054)	CNDDB, Nov. 2022 (EO 74)	6-Aug-2014	185 PLANTS OBSERVED IN 2014. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS. A FEW PLANTS WERE CLOSE TO B. CRENULATUM OR B. ASCENDENS, BUT ALL OBSERVED PLANTS FIT BEST AS B. MINGANENSE.	TIMBER HARVEST, THOUGH SITE IS WITHIN WLPZ AND NO YARDING, SKIDDING, OR FELLING OF TREES WILL TAKE PLACE NEAR SITE.	private (Sierra Pacific Industries)	5445

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94	ABOUT 1.8 AIR MILES EAST OF MAIDEN VALLEY AND 2.3 AIR MILES SW OF RANDOLPH HILL.	Sierra	Sattley (3912054)	CNDDB, Nov. 2022 (EO 73)	4-Aug-2014	187 BOTRYCHIUM PLANTS OBSERVED IN 2014, INCLUDING THE RARE BOTRYCHIUM MONTANUM AND B. CRENULATUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, THOUGH SITE IS WITHIN WLPZ AND NO YARDING, SKIDDING, OR FELLING OF TREES WILL TAKE PLACE NEAR SITE.	private (Sierra Pacific Industries)	6300
95	SAGEHEN CREEK TRAIL; FROM HIGHWAY 89 TO STAMPEDE RESERVOIR.	Nevada | Sierra	Hobart Mills (3912042)	CNDDB, Nov. 2022 (EO 42)	s.d.	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1990 AREA CHECKLIST BY THE REDBUD CNPS CHAPTER, UNKNOWN WHEN PLANTS SEEN. NEEDS FIELDWORK.		Tahoe NF	6200
96	COLDSTREAM VALLEY; ABOUT 0.8 AIR MILE ESE OF HORSESHOE BEND AND 2.5 AIR MILES WEST OF TRUCKEE RIVER.	Placer	Norden (3912033)	CNDDB, Nov. 2022 (EO 72)	8-Aug-2013	101 BOTRYCHIUM PLANTS OBSERVED IN 2013, INCLUDING THE RARE BOTRYCHIUM CRENULATUM. RHAMNUS ALNIFOLIA AND STELLARIA OBTUSA ALSO FOUND IN AREA.	SURROUNDING LAND USE IS TIMBERLAND, BUT PLANTS WILL BE PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	6680

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97	1 AIR MILE NNW OF KINGS BEACH, JUST SW OF THE RESERVOIR ALONG GRIFF CREEK.	Placer	Martis Peak (3912031)	CNDDB, Nov. 2022 (EO 17)	3-Aug-2005	2 PLANTS OBSERVED IN 2005. NO PLANTS FOUND IN 2009, 2010, 2011, 2014, 2015, OR 2019. HABITAT CONDITIONS DO NOT SEEM RIGHT FOR BOTRYCHIUM; IN 2015 SITE WAS VERY DRY, WITH THICK LITTER LAYER AND VERY LITTLE BARE GROUND OR MOSS.	FUEL TREATMENT. INSECT DEFOLIATION OF NEARBY ALNUS MAY ELIMINATE SHADE.	USFS Lake Tahoe Basin MU	6500
97		Placer	Martis Peak (3912031)	NRIS polys, Aug. 2022 (BOMI1)	18-Aug-2020	0		USFS Lake Tahoe Basin MU	
98	MEADOW NORTHWEST OF TADPOLE CAMPGROUND, HEAD OF TADPOLE CREEK.	Placer	Duncan Peak (3912025)	CNDDB, Nov. 2022 (EO 41)	30-Aug-2011	FEWER THAN 5 PLANTS OBSERVED IN 2011. 2018: SEARCHED ALONG CHANNEL EDGES AND WET PATCHES IN MEADOW, DID NOT FIND ANY PLANTS, POTENTIALLY TOO LATE. POPULATION VERIFIED BY DONALD FARRAR.		Tahoe NF	6240
98		Placer	Duncan Peak (3912025)	Calflora, Nov. 2022 (wb982-85)	30-Aug-2011	Less than 5 plants found.		Tahoe NF	

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98		Placer	Duncan Peak (3912025)	NRIS polys, Aug. 2022 (BOMITNF01)	20-Sep-2018	0		Tahoe NF	
99		Placer	Tahoe City (3912022)	NRIS polys, Aug. 2022 (BOMI4)	18-Aug-2020	11		USFS Lake Tahoe Basin MU	
100	NORTH SIDE OF PARSLEY BAR TRAIL, ABOUT 1.4 AIR MILES EAST OF PARSLEY BAR CROSSING, JUST N OF PLACER/EL DORADO CO LINE.	Placer	Bunker Hill (3912014)	CNDDB, Nov. 2022 (EO 110)	14-Jul-2016	15 PLANTS OBSERVED IN 2016.	2 PARTIAL PLANTS FOUND DUE TO HERBIVORY.	Eldorado NF	5825
100		Placer	Bunker Hill (3912014)	NRIS polys, Aug. 2022 (BOMI_003-01)	14-Jul-2016	15		Eldorado NF	

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101	ABOVE RUBICON BAY; APPROXIMATELY 0.7 AIR MILE WEST OF PARADISE FLAT AND 0.8 AIR MILE NNE OF RUBICON PEAK.	El Dorado	Emerald Bay (3812081) | Meeks Bay (3912011)	CNDDB, Nov. 2022 (EO 71)	11-Jun-2013	2 PLANTS OBSERVED IN 2012. 8 PLANTS IN 2013. POPULATION NEAR A LOG THAT ENTERS THE STREAM CHANNEL AND A LARGE ALGAE COVERED ROCK. PREVIOUSLY IDENTIFIED AS B. MONTANUM (FORMER EO #25). B. ASCENDENS ALSO OCCURS IN AREA.	RECREATION NEARBY, PROPOSED THINNING PROJECT, CHANGE IN HYDROLOGY.	USFS Lake Tahoe Basin MU	7100
102	APPROXIMATELY 1 AIR MILE SOUTH OF FRANCIS COW CAMP, 2.5 MILES WSW OF LOON LAKE.	El Dorado	Loon Lake (3812083)	CNDDB, Nov. 2022 (EO 131)	29-Aug-2017	14 INDIVIDUALS OBSERVED IN 2017. ONE ADDITIONAL INDIVIDUAL SEEN IN 2017 COULD BE BOTRYCHIUM CRENULATUM (SPREADING PINNAE), BUT BOTRYCHIUM MINGANENSE IS THE PREDOMINANT SPECIES IN THIS POPULATION.	NONE OBSERVED.	private (Sierra Pacific Industries)	5620

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
103	SIDE DRAINAGE OF THE SOUTH FORK RUBICON RIVER NEAR ICE HOUSE ROAD, APPROXIMATELY 1 AIR MILE WEST OF STONE CELLAR.	El Dorado	Loon Lake (3812083)	CNDDB, Nov. 2022 (EO 40)	14-Jul-2016	4-12 PLANTS OBSERVED IN 2012. 5 PLANTS SEEN IN 2015, THOUGH ENTIRE AREA WAS NOT SEARCHED. 7 PLANTS OBSERVED IN 2016. THE RARE B. MONTANUM IS FOUND GROWING NEARBY. THERE COULD BE MORE POTENTIAL HABITAT DOWNSTREAM OF THE OCCURRENCE.	RIPARIAN ZONE DISTURBANCE, HYDROLOGICAL REGIME CHANGES.	Eldorado NF	5600
103		El Dorado	Loon Lake (3812083)	NRIS polys, Aug. 2022 (BOMI_001-01)	26-Aug-2020	0		Eldorado NF	
104	JUST NORTH OF WENTWORTH SPRINGS ROAD, SOUTH OF THE SOUTH FORK RUBICON RIVER, ~2.3 AIR MILES NW OF ROBBS PEAK.	El Dorado	Robbs Peak (3812084)	CNDDB, Nov. 2022 (EO 132)	13-Sep-2017	330 BOTRYCHIUM PLANTS OBSERVED IN 2017; MAJORITY OF PLANTS WERE B. MINGANENSE WITH SOME B. ASCENDENS AND B. CRENULATUM. THE ENTIRE MEADOW COMPLEX WAS NOT SURVEYED SO THERE IS LIKELY MORE BOTRYCHIUM HABITAT PRESENT.	NONE OBSERVED.	private (Sierra Pacific Industries)	5970

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105	TRAIL OFF OF SKI RUN BLVD, ~0.15 AIR MI SSW OF ITS INTERSECTION WITH LUPINE WAY, SOUTHWEST OF HEAVENLY VALLEY SKI LODGE.	El Dorado	South Lake Tahoe (3811988)	CNDDB, Nov. 2022 (EO 38)	14-Jul-2010	8 PLANTS REPORTED ON A 2010 SURVEY FORM FOR B. ASCENDENS & B. MINGANENSE; POPULATION NUMBER PRESUMED TO BE FOR B. ASCENDENS ONLY, THOUGH IT MAY REPRESENT A COMBINED TOTAL FOR BOTH SPECIES.	TRASH, NEARBY TO TRAIL AND HOUSES.	USFS Lake Tahoe Basin MU	6580
106	ABOUT 1.1 AIR MILES SOUTH OF SUMMIT OF ROBBS PEAK, AND ABOUT 0.5 MILE WEST OF ICE HOUSE RD.	El Dorado	Robbs Peak (3812084)	CNDDB, Nov. 2022 (EO 70)	6-Jul-2016	5 PLANTS OBSERVED IN 2013 AND 2015. 3 PLANTS OBSERVED IN 2016.	CHANGE IN FIRE REGIME.	Eldorado NF	5880
106		El Dorado	Robbs Peak (3812084)	NRIS polys, Aug. 2022 (BOMI_002-01)	6-Jul-2016	3		Eldorado NF	

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107	SOUTHEAST OF SIERRA HOUSE; APPROXIMATELY 2.3 AIR MILES WEST OF HIGH MEADOWS AND 2 AIR MILES NORTHWEST OF TRIMMER PEAK.	El Dorado	South Lake Tahoe (3811988)	CNDDB, Nov. 2022 (EO 39)	6-Jun-2019	1 PLANT OBSERVED IN 2009. 4 PLANTS OBSERVED IN 2010. 42 PLANTS OBSERVED IN 2015. ONLY 1 PLANT FOUND IN 2017; HEAVY SNOWPACK AND WET SPRING, NOTICEABLE DELAY IN PHENOLOGY THIS SEASON. 3 PLANTS IN 2019. LTBMU POPULATION #BOMI2.	CLOSE TO POWERLINE RIGHT-OF-WAY. PLANNED FUELS REDUCTION, UTILITY MAINTENANCE ALSO THREATEN.	USFS Lake Tahoe Basin MU	6640
107		El Dorado	South Lake Tahoe (3811988)	NRIS polys, Aug. 2022 (BOMI2)	6-Jun-2019	3		USFS Lake Tahoe Basin MU	
108	ALONG A TRIBUTARY TO TROUT CREEK, ~1.3 AIR MILES SOUTH OF SIERRA HOUSE, EAST OF LAKE TAHOE AIRPORT.	El Dorado	South Lake Tahoe (3811988)	CNDDB, Nov. 2022 (EO 151)	11-Jul-2019	1 PLANT OBSERVED IN 2019; PLANT DID NOT SHOW ENOUGH PHENOLOGICAL TRAITS FOR FULL ID, BUT USING ALL AVAILABLE TRAITS, IDED AS BOTRYCHIUM MINGANENSE.	TIMBER HARVEST.	USFS Lake Tahoe Basin MU	6470
108		El Dorado	South Lake Tahoe (3811988)	NRIS polys, Aug. 2022 (BOMI3)	6-Jun-2019	1		USFS Lake Tahoe Basin MU	

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109	NORTHEAST OF ICE HOUSE RESERVOIR, APPROXIMATELY 1.5 AIR MILES SOUTHWEST OF FOUR CORNERED PEAK, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 149)	25-Aug-2018	4 PLANTS OBSERVED IN 2018.		Eldorado NF	5824
109		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_027-01)	25-Aug-2018	4		Eldorado NF	
110	NORTH OF ICE HOUSE RESERVOIR, APPROXIMATELY 1.5 AIR MILES ESE OF JONES PLACE, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 127)	7-Jul-2017	67 BOTRYCHIUM PLANTS OBSERVED IN 2017; THE OCCURRENCE IS PREDOMINATELY MADE UP OF B. MINGANENSE, BUT THERE WAS SOME B. ASCENDENS. EXACT NUMBER OF EACH SPECIES WAS NOT COUNTED IN THE FIELD DUE TO DIFFICULTY OF ID IN THE FIELD.	NONE. PLANTS ARE BEING PROTECTED WITHIN A NO HARVEST BUFFER WITHIN THE WATERCOURSE PROTECTION ZONE.	private (Sierra Pacific Industries)	5200

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111	NORTH OF ICE HOUSE RESERVOIR, APPROXIMATELY 1.5 AIR MILES SE OF JONES PLACE, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 128)	11-Aug-2017	1 BOMI INDIVIDUAL OBSERVED IN WESTERN POLYGON, AND 16 BOTRYCHIA OBSERVED IN EASTERN POLYGON IN 2017; EASTERN POLYGON IS A MIXTURE OF BOTRYCHIA (B. MINGANENSE, B. ASCENDENCS, B. MONTANUM), TOTAL NUMBER FOR EACH SPECIES NOT TAKEN.	NONE. PLANTS WILL BE BUFFERED AND PROTECTED WITHIN A WATERCOURSE PROTECTION ZONE FOR ANY FUTURE TIMBER PROJECTS.	private (Sierra Pacific Industries)	5250
112	TRIBUTARY TO JONES FORK SILVER CREEK, APPROXIMATELY 0.9 AIR MILE SSW OF JONES PLACE.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 129)	25-Jul-2017	3 PLANTS OBSERVED IN 2017.	NONE. PLANTS ARE BEING PROTECTED WITHIN A NO HARVEST BUFFER WITHIN THE WATERCOURSE PROTECTION ZONE.	private (Sierra Pacific Industries)	5200

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113	HEADWATERS OF TRIBUTARY TO JONES FORK SILVER CREEK, ~0.75 AIR MILE SOUTHEAST OF SUMMIT OF BIG HILL, ELDORADO NF.	El Dorado	Riverton (3812074)	CNDDB, Nov. 2022 (EO 130)	10-Jul-2017	1 PLANT OBSERVED IN 2017.		Eldorado NF	5228
113		El Dorado	Riverton (3812074)	NRIS polys, Aug. 2022 (BOMI_005-01)	10-Jul-2017	1		Eldorado NF	
114	WEST OF ICE HOUSE RESERVOIR, APPROXIMATELY 0.35 AIR MILE NORTHWEST OF ICE HOUSE CAMPGROUND, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 150)	2-Aug-2018	5 PLANTS OBSERVED IN 2018.		Eldorado NF	5400
114		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_026-01)	2-Aug-2018	5		Eldorado NF	

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115	TRIBUTARY TO ICE HOUSE RESERVOIR, APPROXIMATELY 1.5 AIR MILES SSW OF WINDMILLER CABIN, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 148)	2-Aug-2018	1 PLANT OBSERVED IN 2018.	NO NOTABLE DISTURBANCE IN THE AREA.	Eldorado NF	6227
115		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_023-01)	24-Jul-2017	3		Eldorado NF	
115		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_023-02)	24-Jul-2017	4		Eldorado NF	
115		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_023-03)	24-Jul-2017	1		Eldorado NF	
115		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_023-04)	2-Aug-2018	1		Eldorado NF	
115		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_028-01)	2-Aug-2018	1		Eldorado NF	

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116	TRIBUTARY TO ICE HOUSE RESERVOIR, APPROXIMATELY 1.8 AIR MILES SSW OF WINDMILLER CABIN, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 126)	2-Aug-2018	3 PLANTS OBSERVED IN MIDDLE POLYGON AND 5 PLANTS OBSERVED IN SOUTHERN POLYGON IN 2017. 1 PLANT OBSERVED IN NORTHERN POLYGON IN 2018.		Eldorado NF	6200
117	ALONG TRIBUTARY TO SOUTH FORK SILVER CREEK, APPROXIMATELY 2.7 AIR MILES SOUTHEAST OF ICE HOUSE DAM, ELDORADO NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 125)	20-May-2017	1 PLANT OBSERVED IN 2017.		Eldorado NF	5935
117		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_022-01)	20-May-2017	1		Eldorado NF	
118	ALONG TRIBUTARY TO SILVER FORK AMERICAN RIVER, APPROXIMATELY 0.4 AIR MILE WSW OF CHINA FLAT, Eldorado NF.	El Dorado	Kyburz (3812073)	CNDDB, Nov. 2022 (EO 124)	6-Jul-2017	11 PLANTS OBSERVED IN NORTHERN POLYGON AND 25 PLANTS OBSERVED IN SOUTHERN POLYGON IN 2017.	SOME GRAZING IN THE AREA.	Eldorado NF	5200

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118		El Dorado	Kyburz (3812073)	NRIS polys, Aug. 2022 (BOMI_024-01)	6-Jul-2017	36		Eldorado NF	
119	HEAD OF BEANVILLE CREEK, APPROXIMATELY 1 AIR MILE NW OF OSO SPRING, Eldorado NF.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 106)	21-Jul-2016	25 GENETS OBSERVED IN 2016 (8 PLANTS IN NORTHERN POLYGON, 17 PLANTS IN TWO SOUTHERN POLYGONS).	POCKING AND CATTLE GRAZING IN VICINITY.	Eldorado NF	5800
119		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_013-01)	19-Jul-2016			Eldorado NF	
119		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_014-01)	21-Jul-2016	8		Eldorado NF	
119		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_014-02)	21-Jul-2016	17		Eldorado NF	

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120	HEAD OF BEANVILLE CREEK, APPROXIMATELY 0.7 AIR MILE NNW OF OSO SPRING, Eldorado NF.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 105)	21-Jul-2016	AT LEAST 32 GENETS OBSERVED IN 2016.	SOME CATTLE POCKING IN VICINITY, BUT NOT WHERE BOMI WAS FOUND. POSSIBLY TOO ROCKY/SHRUBBY FOR CATTLE TO ACCESS.	Eldorado NF	5800
120		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_015-01)	21-Jul-2016	32		Eldorado NF	
121	ALONG GIRARD CREEK, APPROXIMATELY 1.3 AIR MILES SOUTH OF OWENS CAMP FOREST SERVICE STATION, Eldorado NF.	El Dorado	Tragedy Spring (3812062)	CNDDB, Nov. 2022 (EO 104)	8-Aug-2016	12 GENETS OBSERVED IN 2016; STEMS WERE DIFFICULT TO IDENTIFY, SO THERE MAY BE B. CRENULATUM AND B. MONTANUM PRESENT AS WELL.	THERE IS POCKING AND GRAZING BY CATTLE IN THE SEEP; BOMI WAS FOUND IN THE MORE PROTECTED AREAS.	Eldorado NF	5440
121		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_018-01)	8-Aug-2016	12		Eldorado NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
122	LIGHT CANYON, APPROXIMATELY 0.7 AIR MILE NE OF IRON MOUNTAIN SUMMIT, Eldorado NF.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 107)	14-Jul-2016	20 GENETS OBSERVED IN 2016.	THIS AREA IS DISTURBED BY CATTLE; THERE ARE COW PIES IN THE DRAINAGE AND THE BANKS ARE TRAMPLED (BUT NOT NEAR BOMI).	Eldorado NF	5430
122		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_012-01)	14-Jul-2016	20		Eldorado NF	
123	GIRARD CREEK, EAST SIDE OF ALDER RIDGE, APPROXIMATELY 2.4 AIR MILES WNW OF SILVER FORK CAMPGROUND.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 123)	13-Jul-2017	21 MATURE PLANTS OBSERVED IN 2017.		Eldorado NF	5713
123		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_025-01)	13-Jul-2017	21		Eldorado NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
124	APPROXIMATELY 1 TO 1.1 AIR MILES SW OF MORRISON, ESE OF IRON MOUNTAIN, Eldorado NF.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 109)	18-Jul-2018	21 GENETS OBSERVED IN 2016. 8 GENETS OBSERVED IN 2018.	HEAVILY TRAMPLED BY CATTLE. SOME PLANTS GRAZED.	Eldorado NF	5675
124		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_010-01)	18-Jul-2018	8		Eldorado NF	
125	APPROXIMATELY 0.9 TO 1 AIR MILE SSW OF MORRISON, ESE OF IRON MOUNTAIN, Eldorado NF.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 108)	2-Aug-2016	9 GENETS OBSERVED IN 2016.	CATTLE TRAIL NEXT TO POPULATION; PLANTS APPEAR TO HAVE BEEN STEPPED ON.	Eldorado NF	5650
125		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_011-01)	13-Jul-2016	9		Eldorado NF	
126	DARK CANYON, APPROXIMATELY 0.7 AIR MILE NORTH OF CONFLUENCE WITH CAMP CREEK, SOUTH SLOPE OF IRON MOUNTAIN.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 147)	9-Jul-2019	12 PLANTS OBSERVED IN 2019.		Eldorado NF	5615

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
126		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_030-01)	9-Jul-2019	12		Eldorado NF	
127	APPROXIMATELY 1.5 TO 2 AIR MILES NNE OF JIM QUINN SPRING, JUST EAST OF ALDER RIDGE, Eldorado NF.	El Dorado	Tragedy Spring (3812062)	CNDDB, Nov. 2022 (EO 103)	10-Aug-2016	245 GENETS OBSERVED IN 2016.	COULD BE IMPACTED BY FUTURE ROAD MAINTENANCE.	Eldorado NF	6180
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_004-01)	2-Aug-2016	20		Eldorado NF	
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_016-01)	10-Aug-2016	2		Eldorado NF	
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_016-02)	10-Aug-2016	3		Eldorado NF	
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_016-03)	2-Aug-2016	6		Eldorado NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_017-01)	2-Aug-2016	233		Eldorado NF	
127		El Dorado	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_017-02)	26-Jul-2016	1		Eldorado NF	
128	APPROXIMATELY 1.7 AIR MILES NE OF JIM QUINN SPRING, JUST EAST OF ALDER RIDGE, Eldorado NF.	El Dorado	Tragedy Spring (3812062)	CNDDB, Nov. 2022 (EO 102)	2-Aug-2016	20 GENETS OBSERVED IN 2016. THERE ARE SOME USER-CREATED TRAILS IN THE AREA, BUT NONE DIRECTLY THREATENING THE POPULATION.		Eldorado NF	6235
129		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_036-01)	27-Jul-2020	2		Eldorado NF	
130	ALONG TRIBUTARY OF NORTH FORK COSUMNES RIVER, ~2 AIR MILES NORTHWEST OF LEEK SPRING HILL, BALTIC RIDGE.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 146)	17-Jul-2019	3 PLANTS OBSERVED IN 2019.		Eldorado NF	5750

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130		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_033-01)	17-Jul-2019	3		Eldorado NF	
131	ALONG TRIBUTARY TO NORTH FORK COSUMNES RIVER, BELOW BUCKSKIN JOE SPRING, ~1.7 AIR MI WNW OF LEEK SPRING HILL.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 144)	23-Jul-2019	8 PLANTS OBSERVED IN 2019. ID IS QUESTIONABLE.		Eldorado NF	6000
131		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_035-01)	23-Jul-2019	8		Eldorado NF	
132	ALONG TRIBUTARY TO NORTH FORK COSUMNES RIVER, ~2 AIR MI WNW OF LEEK SPRING HILL, PLUMMER RIDGE.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 145)	1-Aug-2019	25 PLANTS OBSERVED IN 2019.		Eldorado NF	5750
132		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_032-01)	1-Aug-2019	12		Eldorado NF	

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132		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_032-02)	24-Jul-2019	13		Eldorado NF	
133	SE END OF STOCKTON MUNICIPAL CAMP, SOUTH OF PLASSE AND SILVER LAKE, Eldorado NF.	Amador	Caples Lake (3812061) | Tragedy Spring (3812062)	CNDDB, Nov. 2022 (EO 101)	17-Aug-2016	7 GENETS OBSERVED IN 2016.		Eldorado NF	7325
133		Amador	Tragedy Spring (3812062)	NRIS polys, Aug. 2022 (BOMI_019-01)	17-Aug-2016	7		Eldorado NF	
134	ALONG TRIBUTARY TO NORTH FORK COSUMNES RIVER, BELOW BUCKSKIN JOE SPRING, ~1.4 AIR MI WEST OF LEEK SPRING HILL.	El Dorado	Leek Spring Hill (3812063)	CNDDB, Nov. 2022 (EO 143)	7-Aug-2019	4 PLANTS OBSERVED IN 2019.		Eldorado NF	6247
134		El Dorado	Leek Spring Hill (3812063)	NRIS polys, Aug. 2022 (BOMI_031-01)	7-Aug-2019	4		Eldorado NF	

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135	NORTH SIDE OF CALDOR LOGGING ROAD, IN LOGGERS DELIGHT CANYON ABOUT 0.5 MILE NORTH OF CONFLUENCE WITH CAT CREEK.	El Dorado	Peddler Hill (3812053)	CNDDB, Nov. 2022 (EO 142)	21-Jun-2019	2 PLANTS OBSERVED IN 2019.		Eldorado NF	5355
135		El Dorado	Peddler Hill (3812053)	NRIS polys, Aug. 2022 (BOMI_029-01)	21-Jun-2019	2		Eldorado NF	
136	ALONG FOREST ROAD 08N03 ABOUT 1.3 AIR MILES SE OF DEVILS LAKE AND WEST OF WILLOW FLAT.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 69)	17-Sep-2015	2 PLANTS OBSERVED IN 2015. PLANTS WERE DRY AND WILTED WITH NO SPOROPHORES, POSSIBLY DUE TO DROUGHT STRESS.	GRAZING, DROUGHT STRESS.	Eldorado NF	7960

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137	UNNAMED DRAINAGE FROM DEER VALLEY TO BEAR RIVER RESERVOIR, ABOUT 0.85 AIR MILE SW OF HAM SPRING.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 93)	25-Aug-2016	17 PLANTS OBSERVED IN 2015; PLANTS IN SE POLYGON WERE WILTING BUT HAD NOT YET RELEASED SPORES, POSSIBLY DUE TO DROUGHT STRESS. 38 PLANTS OBSERVED IN 2016. PLANTS PREVIOUSLY IDENTIFIED AS BOTRYCHIUM CRENULATUM.	POSSIBLE FUTURE THREATS FROM GRAZING, DROUGHT STRESS, FUEL REDUCTION PROJECTS, FIRE EXCLUSION, CIRSIUM, RD MAINTENANCE.	Eldorado NF	6300
137		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_009-01)	25-Aug-2016	5		Eldorado NF	
137		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_009-02)	25-Aug-2016	2		Eldorado NF	
137		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_009-03)	25-Aug-2016	5		Eldorado NF	
137		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_009-04)	25-Aug-2016	12		Eldorado NF	

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137		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_009-05)	25-Aug-2016	14		Eldorado NF	
138	UPPER RATTLESNAKE CREEK; ~0.9 AIR MILE EAST OF HIGHWAY 88 AND ELLIS ROAD INTERSECTION.	Amador	Peddler Hill (3812053)	CNDDB, Nov. 2022 (EO 141)	12-Jul-2018	71 BOTRYCHIUM PLANTS OBSERVED IN 2018; TOTAL POPULATION COUNT IS FOR MULTIPLE BOTRYCHIUM SPECIES, EXACT COUNT FOR EACH SPECIES UNKNOWN. PLANTS WERE PREDOMINANTLY B. MINGANENSE, BUT THERE WERE A FEW B. CRENULATUM AND B. ASCENDENS.	WITHIN A PROPOSED TIMBER HARVEST UNIT, BUT WILL BE AVOIDED BY A PLANT PROTECTION BUFFER.	private (Sierra Pacific Industries)	5761
139	NORTH OF COLE CREEK, APPROXIMATELY 2.15 AIR MILES ENE OF BEAR RIVER GROUP CAMPGROUND.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 139)	30-Jul-2019	19 PLANTS OBSERVED IN 2019.		Eldorado NF	6640
139		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_034-01)	30-Jul-2019	19		Eldorado NF	

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140	APPROXIMATELY 0.75 AIR MILE NE OF BIG RIVER GROUP CAMPGROUND, Eldorado NF.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 99)	25-Aug-2016	2 GENETS OBSERVED IN 2016.	COULD BE DIRECTLY IMPACTED BY FUTURE ROAD MAINTENANCE.	Eldorado NF	6290
140		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_008-01)	25-Aug-2016	2		Eldorado NF	
141	TRIBUTARY OF BEAR RIVER, APPROXIMATELY 0.5 AIR MILE SOUTH OF SOUTH SHORE CAMPGROUND, Eldorado NF.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 98)	20-Jul-2016	20 PLANTS OBSERVED IN 2016. THIS AREA WAS BURNED IN THE POWER FIRE, HOWEVER THE SITE ITSELF APPEARS TO ONLY HAVE EXPERIENCE A LOW INTENSITY BURN.		Eldorado NF	6080
141		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_007-01)	20-Jul-2016	20		Eldorado NF	

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142	APPROXIMATELY 1.1 AIR MILES SW OF SHRINER LAKE, Eldorado NF.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 96)	16-Jul-2019	26 GENETS OBSERVED THROUGH OCCURRNCE IN 2016. 21 GENETS OBSERVED IN NW POLYGON IN 2019; SOME PLANTS WERE LARGE AND ODD LOOKING, SOME POSSIBLY OF DIFFERENT SPECIES.	AREA BURNED IN THE POWER FIRE, BUT EFFECT ON PLANTS IS UNCERTAIN.	Eldorado NF	6555
142		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_006-01)	16-Jul-2019	21		Eldorado NF	
142		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_006-02)	19-Aug-2016	5		Eldorado NF	
142		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_006-03)	19-Aug-2016	15		Eldorado NF	

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143	~2.3 AIR MILES SE OF HWY 88 AND ELLIS ROAD INTERSECTION, ~1.69 AIR MILES SW OF THE LITTLE BEAR RIVER RESERVOIR SPILLWAY.	Amador	Peddler Hill (3812053)	CNDDB, Nov. 2022 (EO 140)	31-Jul-2018	55 BOTRYCHIUM PLANTS OBSERVED IN 2018; TOTAL POPULATION COUNT IS FOR MULTIPLE BOTRYCHIUM SPECIES, EXACT COUNT FOR EACH SPECIES UNKNOWN. PLANTS WERE PREDOMINANTLY B. MINGANENSE, BUT THERE WERE A FEW B. CRENULATUM AND B. ASCENDENS.	WITHIN A PROPOSED TIMBER HARVEST UNIT, BUT WILL BE AVOIDED BY A PLANT PROTECTION BUFFER.	private (Sierra Pacific Industries)	5511
144	APPROXIMATELY 1.1 AIR MILES SE OF BEAR RIVER GROUP CAMPGROUND, Eldorado NF.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 97)	22-Aug-2016	7 GENETS OBSERVED IN 2016 (6 GENETS IN NORTHERN POLYGON, 1 GENET IN SOUTHERN POLYGON).	THIS AREA BURNED IN THE POWER FIRE, AND IS PART OF THE AREA INCLUDED IN A PRESCRIBED FIRE.	Eldorado NF	6175
144		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_020-01)	30-Sep-2020			Eldorado NF	
144		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_020-02)	22-Aug-2016	1		Eldorado NF	

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145	ALONG A TRIBUTARY TO SALT SPRINGS RESERVOIR, APPROXIMATELY 1.75 AIR MILES NORTHEAST OF SALT SPRINGS DAM, ELDORADO NF.	Amador	Bear River Reservoir (3812052)	CNDDB, Nov. 2022 (EO 122)	8-Aug-2017	1 PLANT SEEN IN SOUTHERN POLYGON AND ~25 PLANTS SEEN IN NORTHERN POLYGON IN 2017.		Eldorado NF	6435
145		Amador	Bear River Reservoir (3812052)	NRIS polys, Aug. 2022 (BOMI_021-01)	8-Aug-2017	26		Eldorado NF	
146	SOUTH OF MOORE CREEK, ABOUT 2.85 AIR MILES SW OF SALT SPRINGS RESERVOIR.	Calaveras	Calaveras Dome (3812042)	CNDDB, Nov. 2022 (EO 95)	11-Jul-2016	90 BOTRYCHIUM PLANTS OBSERVED IN 2016; THIS NUMBER IS FOR B. MINGANENSE, B. CRENULATUM, AND B. ASCENDENS COMBINED.	PLANTS ARE WITHIN A RIPARIAN HABITAT AND WITHIN A BUFFERED WATERCOURSE LAKE PROTECTION ZONE.	private (Sierra Pacific Industries)	5540
146	Calaveras Dome 7.5' USGS quad. Found within 1000 foot radius of point.	Calaveras	Calaveras Dome (3812042)	CCH2, Nov. 2022 (SPIF00032)	13-Jul-2016			Stanislaus NF	5612

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147	DRAINAGE NEAR HEAD OF MIDDLE FORK MOKELUMNE RIVER, ABOUT 2.1 AIR MILES SW OF PUMPKIN HOLLOW.	Calaveras	Calaveras Dome (3812042)	CNDDB, Nov. 2022 (EO 64)	18-Jun-2014	1 PLANT OBSERVED IN 2014.	LIVESTOCK TRAMPLING.	Stanislaus NF	6050
147		Calaveras	Calaveras Dome (3812042)	NRIS polys, Aug. 2022 (0516_BOMI_001_52)	18-Jun-2014	1		Stanislaus NF	
148	ABOUT 0.3 AIR MILE EAST OF LAKE MORAN AND 1.7 AIR MILES NW OF LIBERTY HILL.	Tuolumne	Tamarack (3812041)	CNDDB, Nov. 2022 (EO 63)	29-Jul-2015	1 PLANT OBSERVED IN 2015.		Stanislaus NF	6550
148		Tuolumne	Tamarack (3812041)	NRIS polys, Aug. 2022 (0516_BOMI_002_52)	8-Jul-2015	1		Stanislaus NF	
149	ALONG THE SOUTH SIDE OF FOREST ROUTE 6N58, ~1.2 AIR MILES WSW OF COTTAGE SPRINGS.	Calaveras	Boards Crossing (3812032)	CNDDB, Nov. 2022 (EO 138)	19-Jul-2018	16 PLANTS OBSERVED IN 2018. THE AREA NORTH OF THE ROAD AND ALONG AIROLA CREEK WERE NOT SURVEYED, SO THERE MAY BE MORE INDIVIDUALS.	HEAVILY IMPACTED BY CATTLE GRAZING. THERE ARE MANY DEEP POCKETS FROM THE COW PRINTS.	private (Sierra Pacific Industries)	5500

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150	NORTH OF FOREST ROAD 5N48A AND CRANE CREEK, ABOUT 2.2 AIR MILES NE OF INTERSECTION WITH BEAVER CREEK.	Tuolumne	Boards Crossing (3812032)	CNDDB, Nov. 2022 (EO 61)	10-Jul-2014	31 BOTRYCHIUM PLANTS OBSERVED IN 2014, INCLUDING THE RARE B. MONTANUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, HEAVY GRAZING AND TRAMPLING FROM CATTLE. SITE WILL BE PROTECTED FROM HARVEST ACTIVITIES WITHIN WLPZ.	private (Sierra Pacific Industries)	6000
151	NE OF BOARDS CROSSING ALONG SEEP BETWEEN FOREST ROAD 5N48A AND CRANE CREEK, ABOUT 1.75 AIR MILES NE OF BEAVER CREEK.	Tuolumne	Boards Crossing (3812032)	CNDDB, Nov. 2022 (EO 60)	10-Jul-2014	16 BOTRYCHIUM PLANTS OBSERVED IN 2014, INCLUDING THE RARE B. CRENULATUM. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	AREA HAS BEEN TRAMPLED BY COWS AND HEAVILY GRAZED. TIMBER HARVEST IN AREA, THOUGH SITE WILL BE PROTECTED WITHIN WLPZ.	private (Sierra Pacific Industries)	5715

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152	ALONG LITTLE BEAVER CREEK, ABOUT 2.1 AIR MILES ENE OF BOARDS CROSSING.	Tuolumne	Boards Crossing (3812032)	CNDDB, Nov. 2022 (EO 62)	10-Jul-2014	10 PLANTS OBSERVED IN 2014. AREA HAS BEEN HEAVILY GRAZED AND TRAMPLED BY COWS, THOUGH MOST PLANTS ARE PROTECTED FROM GRAZING DISTURBANCE BENEATH LOW-BRANCHING TREES. PLANTS KEYED OUT USING THE FARRAR AND JEPSON MANUAL II KEYS.	TIMBER HARVEST, CATTLE GRAZING/TRAMPLING. SITE PROTECTED FROM HARVEST ACTIVITIES BY WLPZ.	private (Sierra Pacific Industries)	5285
153	0.5 AIR MILE NORTH OF BIGELOW PEAK AND 1.5 AIR MILES SW OF BOND PASS, EAST OF BIGELOW LAKE.	Tuolumne	Emigrant Lake (3811926)	CNDDB, Nov. 2022 (EO 92)	s.d.	ONLY SOURCE OF INFORMATION FOR THIS SITE IS STANISLAUS NF DIGITAL DATA WITH LIMITED ATTRIBUTE INFO. NEEDS POPULATION AND ECOLOGICAL INFORMATION. NO OBSERVATION DATE GIVEN, BUT PROBABLY OBSERVED IN THE 2000S.		Stanislaus NF	9750

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
154		Tuolumne	Cherry Lake North (3811918)	NRIS polys, Aug. 2022 (0516_BOMI_0005A_51)	23-Aug-2018	4		Stanislaus NF	
155		Tuolumne	Cherry Lake North (3811918)	NRIS polys, Aug. 2022 (0516_BOMI_0004A_51)	21-Aug-2018	22		Stanislaus NF	
155		Tuolumne	Cherry Lake North (3811918)	NRIS polys, Aug. 2022 (0516_BOMI_0004D_51)	21-Aug-2018			Stanislaus NF	
156	ALONG LILY CREEK 0.8 AIR MILE WEST OF HULL CREEK CAMPGROUND, AND ABOUT 2 AIR MILES NNE OF HULLS MEADOWS.	Tuolumne	Hull Creek (3812011)	CNDDB, Nov. 2022 (EO 136)	21-Jul-2016	7 BOTRYCHIUM GENETS OBSERVED IN 2016; AT LEAST 1 B. MINGANENSE AND 2 B. CRENULATUM, THE REST ARE UNKNOWN.		Stanislaus NF	5800

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
157	E SLOPE OF A TRIBUTARY OF RETURN CREEK NEAR HEAD OF VIRGINIA CANYON, ABOUT 0.75 MILE ENE OF VIRGINIA PEAK, YOSEMITE NP.	Tuolumne	Dunderberg Peak (3811913)	CNDDB, Nov. 2022 (EO 35)	24-Aug-2007	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2007 COLLECTION BY COLWELL.		Yosemite NP	10400
157	At margin of mineralized seep on east slope of a tributary of Return Creek near head of Virginia Canyon.	Tuolumne	Dunderberg Peak (3811913)	CCH2, Nov. 2022 (UC1965916)	24-Aug-2007			Yosemite NP	10500
157	At margin of mineralized seep on east slope of a tributary of Return Creek near head of Virginia Canyon. Datum: NAD83. GPS Error: 1.6 meters	Tuolumne	Dunderberg Peak (3811913)	CCH2, Nov. 2022 (YOSE216863)	24-Aug-2007			Yosemite NP	10500
157	At margin of mineralized seep on east slope of a tributary of Return Creek near head of Virginia Canyon. Datum: NAD83. GPS Error: 1.6 meters	Tuolumne	Dunderberg Peak (3811913)	CCH2, Nov. 2022 (YOSE216864)	24-Aug-2007			Yosemite NP	10500

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
158	MEADOW OFF OF USFS ROAD 3N01N, APPROXIMATELY 0.25 AIR MILE SSE OF JAWBONE PASS POND, STANISLAUS NF.	Tuolumne	Cherry Lake North (3811918)	CNDDB, Nov. 2022 (EO 36)	27-Aug-2011	ABOUT 20 PLANTS ESTIMATED IN 2011. THE RARE BOTRYCHIUM PEDUNCULOSUM AND B. CRENULATUM ALSO OCCUR IN THIS MEADOW.	FIRE.	Stanislaus NF	6140
158	Meadow off FR3N01N -- Stanislaus NF	Tuolumne	Cherry Lake North (3811918)	Calflora, Nov. 2022 (wb1194-417)	27-Aug-2011			Stanislaus NF	6140
159	Sierra Nevada; Yosemite National Park; Gaylor Lakes Basin	Tuolumne	Tioga Pass (3711983)	CCH2, Nov. 2022 (LA91636)	5-Aug-1961			Yosemite NP	10400
159	GAYLOR LAKES BASIN, YOSEMITE NATIONAL PARK.	Mono | Tuolumne	Tioga Pass (3711983)	CNDDB, Nov. 2022 (EO 34)	5-Aug-1961	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1961 COLLECTION BY KLIKOFF. NEEDS FIELDWORK.		Yosemite NP	10400

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
160	EAST OF LAKE DOROTHY, HEADWATERS OF CONVICT CREEK ABOUT 0.8 MILE SSE OF MILDRED LAKE.	Mono	Convict Lake (3711857)	CNDDB, Nov. 2022 (EO 121)	20-Sep-2001	15 PLANTS SEEN IN 2001. IDENTIFICATION NEEDS CONFIRMATION. REPORTED BY INYO NF AS "BOTRYCHIUM CF. ASCENDENS" IN 2006 DIGITAL DATA. 2016 INYO NF DIGITAL DATA HAS SPECIES LISTED AS B. MINGANENSE BUT INDICATES SPECIES WAS NOT VERIFIED.		Inyo NF	9850
160		Mono	Convict Lake (3711857)	NRIS polys, Aug. 2022 (0504_BOMI_001)	20-Sep-2001	15		Inyo NF	
161	NORTH END OF GRIZZLY MEADOW, JUST NW OF THE JUNCTION OF FOREST SERVICE RD 06S001 AND 06S066, SIERRA NATIONAL FOREST.	Madera	Little Shuteye Peak (3711944)	CNDDB, Nov. 2022 (EO 94)	19-Aug-2013	9 PLANTS OBSERVED IN 2013. SITE SHOULD BE REVISITED EARLIER IN THE SEASON.	MEADOW IS HEAVILY GRAZED.	Sierra NF	5640
161		Madera	Little Shuteye Peak (3711944)	NRIS polys, Aug. 2022 (BOMI-15-01)	19-Aug-2013	9		Sierra NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
162	ROUND MEADOW, KAISER WILDERNESS.	Fresno	Kaiser Peak (3711932)	CNDDB, Nov. 2022 (EO 59)	2014	UNKNOWN NUMBER OBSERVED IN 2010 AND/OR 2014.		Sierra NF	8500
163	Kings River 2nd fork below Palisade Creek.	Fresno	North Palisade (3711815)	CCH2, Nov. 2022 (RSA-684918)	24-Jul-1920			Kings Canyon NP	
163	KINGS RIVER, SECOND FORK BELOW PALISADE CREEK.	Fresno	North Palisade (3711815)	CNDDB, Nov. 2022 (EO 1)	24-Jul-1920	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1920 COLLECTION BY PERKINS. NEEDS FIELDWORK.		Kings Canyon NP	
164	Grand Palace Hotel Mdw, Upper Cloud Cyn ["Grand Palace Hotel" is at the junction between Cloud Canyon and the Colby Pass Trail in Kings Canyon NP.]	Tulare	Sphinx Lakes (3611865)	CCH2, Nov. 2022 (SEKI6116)	22-Aug-1968			Kings Canyon NP	
164	GRAND PALACE HOTEL MEADOW, UPPER CLOUD CANYON.	Tulare	Sphinx Lakes (3611865)	CNDDB, Nov. 2022 (EO 167)	22-Aug-1968	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1968 RICE COLLECTION. NEEDS FIELDWORK.		Kings Canyon NP	9040

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
165	TABLELAND; NORTH SIDE OF LAKE NORTH OF TABLE MEADOWS, SEQUOIA/KINGS CANYON NATIONAL PARK.	Tulare	Mt. Silliman (3611866)	CNDDB, Nov. 2022 (EO 33)	14-Aug-2000	UNKNOWN NUMBER OF PLANTS OBSERVED IN 2000.		Sequoia NP	10561
166	TABLELAND; APPROXIMATELY 0.7 AND 1 AIR MILES ENE OF TABLE MEADOWS, SEQUOIA/KINGS CANYON NATIONAL PARK.	Tulare	Triple Divide Peak (3611855)	CNDDB, Nov. 2022 (EO 31)	15-Aug-2000	UNKNOWN NUMBER OF PLANTS OBSERVED IN 2000.		Sequoia NP	10800
167	TABLELAND; JUST EAST OF TABLE MEADOWS, SEQUOIA/KINGS CANYON NATIONAL PARK.	Tulare	Lodgepole (3611856)	CNDDB, Nov. 2022 (EO 32)	11-Aug-2000	UNKNOWN NUMBER OF PLANTS OBSERVED IN 2000.		Sequoia NP	10429
168	Sequoia National Park, Hockett Meadow	Tulare	Moses Mtn. (3611836)	CCH2, Nov. 2022 (HSC-37179)	9-Jul-1974			Sequoia NP	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
168	HOCKETT MEADOW, SEQUOIA NATIONAL PARK.	Tulare	Moses Mtn. (3611836) | Silver City (3611846)	CNDDB, Nov. 2022 (EO 30)	9-Jul-1974	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1974 COLLECTION BY DEBENEDETTI. NEEDS FIELDWORK.		Sequoia NP	8500
169	BRUSH MEADOW, HEAD OF MONACHE CREEK, SW OF OLANCHA PEAK.	Tulare	Templeton Mtn. (3611832)	CNDDB, Nov. 2022 (EO 16)	2006	UNKNOWN NUMBER OF PLANTS OBSERVED AT MAPPED SITE IN 2005. PLANTS SEEN IN THE UPPER MONACHE CREEK AREA IN 2006 BY WEIS AND FARRAR.		Inyo NF	9840
169	Ridge between forks of Monache Creek, SW of Olancha Peak, southern Sierra Nevada.	Tulare	Templeton Mtn. (3611832)	CCH2, Nov. 2022 (RSA-58712)	24-Jul-1950			Inyo NF	10300
169	Plants of California, Lodgepole Pine Forest, ridge between forks of Monache Creek, s.w. of Olancha Peak, southern Sierra Nevada, Tulare County	Tulare	Templeton Mtn. (3611832)	CCH2, Nov. 2022 (US 2201114)	24-Jul-1950			Inyo NF	10300
169		Tulare	Templeton Mtn. (3611832)	NRIS polys, Aug. 2022 (0504_BOMI_002)	3-Sep-2005			Inyo NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
	Cienega at Coldwater Fork of Lytle Creek. Eastern San Gabriel Mountains, San Bernardino Mountains. Alt. 7000 ft.	San Bernardino	Telegraph Peak (3411735)	CCH2, Nov. 2022 (RSA-85006)	20-Jul-1922			San Bernardino NF	7000

Appendix 2: Additional Considerations at the Forest Level

<This section, including the next 5 subheadings, would be filled out by **Forest Service botanists**.>

<Forest Name>

Geographic distribution within the Forest

A. Scarce or isolated
B. Patchy or gaps
C. Contiguous

<Select a geographic distribution rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Abundance of the species on the Forest

A. Rare – current abundance is low enough that stochastic and other factors could lead to potential imperilment.
B. Uncommon – current abundance is large enough that demographic stochasticity is not likely to lead to rapid local extinction, but, in combination with highly variable environmental factors, could pose a threat.
C. Common – current abundance is large enough that species persistence is not threatened by demographic stochasticity in combination with environmental variation.
D. Insufficient information to draw inferences about criterion.

<Select a species abundance rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Population trend on the Forest

A. Significant downward or suspected downward population trend.
B. Stable population.
C. Upward population trend.
D. Insufficient information to draw inferences about criterion.

<Select a population trend rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Habitat trend on the Forest

A. Decline in habitat quality or quantity.
B. Stable amounts of suitable or potential habitat, relatively unchanged habitat quality.
C. Improving habitat quality or increasing amounts of suitable or potential habitat.
D. Insufficient information to draw inferences about criterion.

<Select a habitat trend rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Vulnerability of habitat on the Forest

A. Substantial modification of habitat has occurred or is anticipated with conditions departing from expectations based on NRV, and/or habitat is impacted by modern stressors such as drought, climate change, high intensity wildfire and wildfire suppression disturbances, loss of natural openings due to historical wildfire suppression, nonnative invasive species, water impoundments and diversions, and recreation, etc.
B. Habitat modification is likely to result in ecological patterns similar to the range of historical conditions, but is being impacted by modern stressors.
C. Habitat resilient, changes are similar in frequency and intensity to those expected from NRV, and modern stressors not significant.
D. Insufficient information to draw inferences about criterion.

<Select a habitat vulnerability rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Additional Forest specific information related to the SCC determination

<This section is provided for Forest botanists to add additional Forest specific information that is not captured in the section above, if necessary. Provide a narrative description here of the additional relevant information. State "No additional information" if this section is not used.>