

**Added to California Rare Plant Rank 1B.2 of the CNPS Inventory on May 15, 2019**

**Rare Plant Status Review: *Ceanothus impressus* var. *nipomensis***

**Proposed Addition to California Rare Plant Rank 1B.2, G3T2 / S2**

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**Background and Taxonomy**

*Ceanothus impressus* Trel. var. *nipomensis* McMinn is a shrub in the Rhamnaceae known only from southern San Luis Obispo and northern Santa Barbara counties, California. It is included in the *Jepson eFlora* (Wilken and Burge 2016) and *Flora of North America* (Schmidt and Wilken 2016). *Ceanothus impressus* var. *nipomensis* is similar to *C. impressus* var. *impressus* which occurs allopatrically in the same region and is also concurrently under review for addition to the CNPS Inventory. Variety *nipomensis* is differentiated from var. *impressus* in having longer leaves that are 11 to 25 mm long (vs. 5 to 14 mm), and in being generally open and tall with a height of 1 to 3 meters (vs. generally dense and 0.5 to 1.5 meters tall in var. *impressus*) (Wilken and Burge 2016). The distinctness of each variety has been called into question in that their key characters can overlap, with individuals of *C. impressus* on both Nipomo Mesa as well as Burton Mesa looking very similar to each other, leading to potentially misidentified plants (Chestnut pers. comm. 2018; Hoover 1970). Additional characteristics from Fross and Wilken (2006) distinguish var. *nipomensis* plants as being ovoid in shape (vs. usually hemispheric), and in having the following leaf characters: blades that are weakly convex above (vs. strongly convex above and concave below), margins thick to weakly revolute (vs. conspicuously revolute), and veins not conspicuously furrowed (vs. sunken into deep furrows in var. *impressus*). The specific epithet '*nipomensis*' comes from the general area it is found on Nipomo Mesa, San Luis Obispo County, California (Charters 2019).

**Ecology**

*Ceanothus impressus* var. *nipomensis* occurs on sandy substrates in chaparral at an approximate elevation of 30 to 245 meters and is known to bloom from February to April (Consortium of California Herbaria 2019; Wilken and Burge 2016). Potential associate species may include: *Adenostoma fasciculatum*, *Cercocarpus betuloides*, *Salvia mellifera*, *Ceanothus ramulosus*, *Quercus agrifolia*, *Ceanothus cuneatus*, *Baccharis pilularis*, *Quercus agrifolia*, *Pholistoma auritum* (Consortium of California Herbaria 2019: CDA17633, OBI5005, OBI72356, UCSB73242).

**Distribution and Abundance**

*Ceanothus impressus* var. *nipomensis* is currently known from 16 occurrences around Nipomo Mesa in southern San Luis Obispo and northern Santa Barbara counties (Fross and Wilken 2006). Of the 16 occurrences, 10 (~62%) are considered historical (occurrences not seen in over 20 years are considered historical by CNDDDB). One occurrence is located on La Purisima Mission SHP, another is located on Guidetti, Ranch, a third is located on Burton Mesa Ecological Reserve, and the remaining 13 are on land of unknown ownership. There is a potential 17th occurrence near Vandenberg Air Force Base, but it is more likely to be an occurrence of variety *impressus* and may have even been planted as landscape (Wilken pers. comm. 2019). There are an additional 46 specimens of *C. impressus* that have not been annotated to variety. Based on their location they may be var. *nipomensis*, but require verification. Due to an abundance of *C. impressus* specimens that have not been annotated to variety, there is the

potential for an additional eight occurrences based upon the location description of each specimen, all of which are considered historical. Further surveys and examinations of specimens would be beneficial.

### **Status and Threats**

There are no known direct threats to *Ceanothus impressus* var. *nipomensis*, but its limited geographic range implies that even small changes in land use within its distribution could have drastic reductions in population size. The main range of variety *nipomensis*, Nipomo Mesa, has been heavily developed in more recent years which has likely led to the extirpation of several historical occurrences, and warrants surveys of historical sites. In comparing documented threats to other rare plants that occur within the same area as *C. impressus* var. *nipomensis*, development, non-native plant impacts, and road/trail construction and maintenance are reoccurring threats that could possibly also impact occurrences of var. *nipomensis* due to proximity (see Appendix I).

### **Summary**

Based on the available information, CNPS and CNDDDB recommend adding *Ceanothus impressus* var. *nipomensis* to California Rare Plant Rank 1B.2 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of *C. impressus* var. *nipomensis* changes in the future, we will re-evaluate its status at that time.

### **Recommended Actions**

CNPS: Add *Ceanothus impressus* var. *nipomensis* to CRPR 1B.2  
 CNDDDB: Add *Ceanothus impressus* var. *nipomensis* to G3T2 / S2

### **Draft CNPS Inventory Record**

*Ceanothus impressus* Trel. var. *nipomensis* McMinn

Nipomo Mesa ceanothus

Rhamnaceae

CRPR 1B.2

San Luis Obispo, Santa Barbara

Lompoc (170B) 3412064, Casmalia (196D) 3412075, Nipomo (220C) 3512014, Arroyo Grande NE (221A) 3512025, Pismo Beach (221B) 3512026, Oceano (221D) 3512015

chaparral/ sandy; elevation 30-245 meters.

Shrub. Blooms February to April.

Possibly threatened by development and non-native plants. See *Ceanothus* pp. 219-220 (1942) by H. McMinn for original description.

### **Literature Cited**

[CNDDDB] California Natural Diversity Database. 2019. RareFind 5 [Internet]. California Department of Fish and Wildlife [Government Version, February 2019]

[CNPS] Rare Plant Program, California Native Plant Society. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 11 March 2019].

Charters, M. 2019. Botanical Names. Website

<http://www.calflora.net/botanicalnames/index2.html> [accessed 19 December 2018]

Consortium of California Herbaria. 2019. Data provided by the participants of the Consortium of California Herbaria. Regents of the University of California, Berkeley. Website <http://ucjeps.berkeley.edu/consortium/> [accessed 19 January 2019].

Fross, D. and D. Wilken. 2006. *Ceanothus*. Timber Press, Portland, OR. 272 pp

McMinn, H. E. 1942. Part II, A systematic study of the genus *Ceanothus*. Pp. 219-220 in Rensselaer, M. van and H. E. McMinn, *Ceanothus*. Santa Barbara Botanic Garden, Santa Barbara, CA. 308 pp. (Original description.)

Schmidt, C and D. Wilken. 2016. *Ceanothus*. Pp. 77-108 in Flora of North America Editorial Committee (eds.), *Flora of North America North of Mexico*, Vol. 12. New York and Oxford.

Wilken, D. H. and D. O. Burge. 2016. *Ceanothus*. In: Jepson Flora Project (eds.), *Jepson eFlora*. Website <http://ucjeps.berkeley.edu/IJM.html> [accessed 19 December 2018].

## APPENDIX I – TABLES AND FIGURES

Table 1: CNDDDB occurrences of rare plants that are known to co-occur or occur within proximity of *Ceanothus impressus* var. *nipomensis*, displaying conservation status, Element Occurrence (EO) number, year last seen (last documented), occurrence rank, and documented threats. CR = California State-listed Rare, FE = Federally-listed Endangered. Sources: CNDDDB and CNPS 2019.

var. <i>nipomensis</i> record #	Scientific name	Status	EO	Year Last Seen	EO Rank	Threats
1, 3	<i>Horkelia cuneata</i> var. <i>sericea</i>	1B.1 G4T1?/S1?	4	1969	Unknown	None noted
1	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	1B.1 G4T1/S1 CR/FE	10	2006	None	Development; Vandalism/dumping/litter; Foot traffic/trampling; Erosion/runoff
1, 3, 6	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	1B.2 G4T2/S2	23	1936	Unknown	None noted
2, 12	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	28	1948	Unknown	None noted
4, 8	<i>Arctostaphylos pilosula</i>	1B.2 G2?/S2?	15	1936	Unknown	None noted
5	<i>Arctostaphylos pilosula</i>	1B.2 G2?/S2?	22	2001	Unknown	None noted
5	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	30	1947	Unknown	Non-native plant impacts
5	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	1B.1 G4T1/S1 CR/FE	3	1983	Unknown	Development; Road/trail construction/maint.
5	<i>Agrostis hooveri</i>	1B.2 G2/S2	28	1947	Unknown	None noted
6	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	16	2004	Poor	Development; Road/trail construction/maint.
7	<i>Calochortus obispoensis</i>	1B.2 G2/S2	17	2013	Good	Development; ORV activity; Grazing; Non-native plant impacts; Other; Road/trail construction/maint.; Foot traffic/trampling; Improper burning regime; Erosion/runoff; Military operations; Recreational use (non-ORV); Feral pigs
7	<i>Horkelia cuneata</i> var. <i>puberula</i>	1B.1 G4T1/S1	53	1966	Unknown	None noted

var. <i>nipomensis</i> record #	Scientific name	Status	EO	Year Last Seen	EO Rank	Threats
7	<i>Agrostis hooveri</i>	1B.2 G2/S2	10	1980	Good	Grazing; Mining
7	<i>Arctostaphylos pilosula</i>	1B.2 G2?/S2?	14	2003	Unknown	Agriculture; Grazing; Mining; Road/trail construction/maint.
7	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	31	1939	Unknown	None noted
7	<i>Castilleja densiflora</i> var. <i>obispoensis</i>	1B.2 G5T2/S2	49	2005	Good	None noted
7	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	1B.2 G4T2/S2	27	1978	Unknown	None noted
7	<i>Eriodictyon altissimum</i>	1B.1 G1/S1	5	2016	Excellent	Development; Improper burning regime; Wood cutting or brush clearing
10	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	1B.1 G4T1/S1 CR/FE	2	2016	Good	Development; Non-native plant impacts; Road/trail construction/maint.; Foot traffic/trampling
11	<i>Cladium californicum</i>	2B.2 G4/S2	9	199X	Unknown	None noted
11	<i>Lupinus nipomensis</i>	1B.1 G1/S1	3	1988	None	Development
11	<i>Erigeron blochmaniae</i>	1B.2 G2/S2	33	1998	Unknown	None noted
11	<i>Monardella undulata</i> ssp. <i>undulata</i>	1B.2 G2/S2	1	2012	Unknown	ORV activity; Non-native plant impacts
12	<i>Arenaria paludicola</i>	1B.1 G1/S1 CE/FE	11	1899	None	None noted
12	<i>Arctostaphylos pilosula</i>	1B.2 G2?/S2?	33	1985	Unknown	None noted
12	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	24	2010	Unknown	Development
13	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	1B.1 G5T2/S2 CE	10	1982	Unknown	None noted
13	<i>Lonicera subspicata</i> var. <i>subspicata</i>	1B.2 G5T2?/S2?	17	1983	Unknown	None noted

var. <i>nipomensis</i> record #	Scientific name	Status	EO	Year Last Seen	EO Rank	Threats
13	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	4.3 G5T3/S3	159	Unk.	Unknown	None noted
13	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	7	2006	Unknown	None noted
13	<i>Horkelia cuneata</i> var. <i>puberula</i>	1B.1 G4T1/S1	47	1983	Unknown	None noted
13	<i>Agrostis hooveri</i>	1B.2 G2/S2	33	2008	Unknown	None noted
14	<i>Scrophularia atrata</i>	1B.2 G2?/S2?	42	1988	Unknown	None noted
14	<i>Arctostaphylos purissima</i>	1B.1 G2/S2	9	2016	Good	Development; Non-native plant impacts; Road/trail construction/maint.
14	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	1	2012	Good	Development; Non-native plant impacts; Road/trail construction/ maint.; Vandalism/dumping/ litter; Improper burning regime; Wood cutting or brush clearing
14	<i>Arctostaphylos refugioensis</i>	1B.2 G3/S3	26	2004	Unknown	None noted
16	<i>Layia heterotricha</i>	1B.1 G2/S2	75	1951	Unknown	None noted