

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

**Rare Plant Status Review: *Ceanothus impressus* var. *impressus*
Proposed Addition to California Rare Plant Rank 1B.2, G3T2 / S2**

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Background and Taxonomy

Ceanothus impressus Trel. var. *impressus* is a shrub in the Rhamnaceae known only from Santa Barbara County, California. It is included in the *Jepson eFlora* (Wilken and Burge 2016) and *Flora of North America* (Schmidt and Wilken 2016). *Ceanothus impressus* var. *impressus* is similar to *C. impressus* var. *nipomensis* which occurs allopatrically in the same region and is also concurrently under review for addition to the CNPS Inventory. Variety *impressus* is differentiated from var. *nipomensis* in having shorter leaves that are 5 to 14 mm long (vs. 11 to 25 mm), and in being generally dense and shorter with a height of 0.5 to 1.5 meters (vs. generally open and 1 to 3 meters tall in var. *nipomensis*) (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. *impressus* plants as being hemispheric in shape (vs. usually ovoid), and in having the following leaf characters: blades that are strongly convex above and concave below (vs. weakly convex above), margins conspicuously revolute (vs. thick to weakly revolute), and veins sunken into deep furrows (vs. not conspicuously furrowed in var. *nipomensis*). The specific epithet '*impressus*' means sunken or impressed, generally with the veins (Charters 2019).

Ecology

Ceanothus impressus var. *impressus* occurs on sandy substrates in chaparral at an approximate elevation of 40 to 470 meters, and is known to bloom from February to April (Consortium of California Herbaria 2019; Wilken and Burge 2016). Potential associated species may include: *Arctostaphylos purissima*, *Ceanothus cuneatus* var. *fascicularis*, *Salvia mellifera*, *Baccharis pilularis*, *Toxicodendron diversilobum*, *Adenostoma fasciculatum*, *Artemisia californica*, *Frangula californica*, *Rubus ursinus*, *Clinopodium douglasii*, *Vaccinium ovatum*, *Pteridium aquilinum*, *Eriodictyon capitatum* (Consortium of California Herbaria 2019: SBBG116222, UCSB49362, UCSB27399, UCSB39681, UCSB43808, CDA17874). Several occurrences of *C. impressus* var. *impressus* also occur within proximity of one or more of 17 additional rare plant taxa (see Appendix I, Table 1).

Distribution and Abundance

Ceanothus impressus var. *impressus* is currently known from 14 occurrences around Burton Mesa in western Santa Barbara County (Fross and Wilken 2006). Of the 14 occurrences, 12 are considered historical (occurrences not seen in over 20 years are considered historical by CNDDDB). Three occurrences are located at Burton Mesa Ecological Reserve as well as another three located at La Purisima Mission SHP; the remaining eight occurrences are located on land of unknown land ownership. Two records are outside of the expected range of *C. impressus* var. *impressus*, one of which claims to be on Nipomo Mesa and may actually be *C. impressus* var. *nipomensis*; these specimens need to be verified. Due to an abundance of *C. impressus*

specimens that have not been annotated to variety, there is the potential for an additional 14 occurrences based upon the location description of each specimen, 13 of which are considered historical. Further surveys and examinations of specimens would be beneficial.

Status and Threats

Ceanothus impressus var. *impressus* is possibly threatened by habitat fragmentation, urbanization, and development. Twelve records of *C. impressus* var. *impressus* (all records except for #'s 12 and 13) co-occur with one or more rare plants included in the CNDDDB. Some of the co-occurring rare plants include threat information, with development, non-native plant impacts, and road/trail construction and maintenance being among the most commonly listed threats. Such threats may also possibly impact occurrences of *C. impressus* var. *impressus* due to proximity. See Table 1 of Appendix I for further details on rare plants that are known to co-occur with *C. impressus* var. *impressus*.

Summary

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

Recommended Actions

CNPS: Add *Ceanothus impressus* var. *impressus* to CRPR 1B.2

CNDDDB: Add *Ceanothus impressus* var. *impressus* to G3T2 / S2

Draft CNPS Inventory Record

Ceanothus impressus Trel. var. *impressus*

Santa Barbara ceanothus

Rhamnaceae

CRPR 1B.2

Santa Barbara

Lompoc (170B) 3412064, Surf (171A) 3412065, Tranquillon Mtn. (171D) 3412055, Guadalupe (196A) 3412085, Point Sal (196B) 3412086, Casmalia (196D) 3412075

chaparral / sandy; elevation 40-470 meters.

Shrub. Blooms February to April.

Possibly threatened by development, non-native plants, and road and trail construction and maintenance. See *Proceedings of the California Academy of Sciences, Series 2* 1(8):112 (1888) for original description and *Ceanothus* pp. 219-220 (1942) by H. McMinn for revised nomenclature.

Literature Cited

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

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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.

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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. *impressus*, displaying conservation status, Element Occurrence (EO) number, year last seen (last documented), occurrence rank, and documented threats. Sources: CNDDDB and CNPS 2019.

var. <i>impressus</i> record #	Scientific name	Status	EO	Year Last Seen	EO Rank	Threats
1	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	17	2005	Unknown	None noted
1	<i>Horkelia cuneata</i> var. <i>puberula</i>	1B.1 G4T1/S1	84	2003	Unknown	None noted
1	<i>Scrophularia atrata</i>	1B.2 G2?/S2?	11	1954	Unknown	None noted
1, 2, 3, 4, 5, 10, 11	<i>Arctostaphylos purissima</i>	1B.1 G2/S2	9	2016	Good	Development; Non-native plant impacts; Road/trail construction/maint.
1, 2, 3, 4, 5, 10	<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
2	<i>Scrophularia atrata</i>	1B.2 G2?/S2?	42	1988	Unknown	None noted
2	<i>Arctostaphylos refugioensis</i>	1B.2 G3/S3	26	2004	Unknown	None noted
5	<i>Scrophularia atrata</i>	1B.2 G2?/S2?	12	1983	Unknown	None noted
5	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	1B.1 G5T2/S2	10	1982	Unknown	None noted
5, 14	<i>Ancistrocarphus keilii</i>	1B.1 G1/S1	1	1929	Unknown	None noted
5	<i>Lonicera subspicata</i> var. <i>subspicata</i>	1B.2 G5T2?/ S2?	17	1983	Unknown	None noted
5	<i>Diplacus vandenbergensis</i>	1B.1 G1/S1	8	2006	Unknown	None noted
5	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	4.3 G5T3/ S3	159	1932	Unknown	None noted

var. <i>impressus</i> record #	Scientific name	Status	EO	Year Last Seen	EO Rank	Threats
5	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	1B.2 G3T2/S2	7	2006	Unknown	None noted
5	<i>Horkelia cuneata</i> var. <i>puberula</i>	1B.1 G4T1/S1	47	1983	Unknown	None noted
5	<i>Agrostis hooveri</i>	1B.2 G2/S2	33	2008	Unknown	None noted
6	<i>Layia heterotricha</i>	1B.1 G2/S2	75	2015	Good	Grazing; Road/trail construction/maint.
6	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	41	1989	Fair	Non-native plant impacts
6	<i>Arctostaphylos purissima</i>	1B.1 G2/S2	37	1989	Unknown	None noted
7	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	6	1992	Excellent	Development; Other
7, 9	<i>Scrophularia atrata</i>	1B.2 G2?/S2?	28	1999	Excellent	Landfill
7	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	49	1935	Unknown	None noted
7	<i>Arctostaphylos purissima</i>	1B.1 G2/S2	35	1996	Unknown	None noted
7, 8	<i>Cirsium occidentale</i> var. <i>compactum</i>	1B.2 G3G4T2/S 2	29	2011	Unknown	None noted
7, 8	<i>Horkelia cuneata</i> var. <i>sericea</i>	1B.1 G4T1?/S1?	46	1982	Unknown	None noted
8	<i>Arctostaphylos rudis</i>	1B.2 G2/S2	4	1988	Excellent	Development; Other
8	<i>Arctostaphylos purissima</i>	1B.1 G2/S2	34	1992	Unknown	None noted
9	<i>Monardella undulata</i> ssp. <i>crispa</i>	1B.2 G3T2/ S2	14	1973	Unknown	None noted
11	<i>Eriodictyon capitatum</i>	1B.2 G2/S2	10	2015	Good	Mining; Improper burning regime
11	<i>Agrostis hooveri</i>	1B.2 G2/S2	5	1991	Unknown	None noted