Rare Plant Status Review: *Lomatium repostum*
Proposed Change from California Rare Plant Rank 4.3, G3 / S3 to 1B.2, G2G3 / S2S3

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Changes made to the original document are in blue text.

Background

Lomatium repostum (Jeps.) Mathias is a California Rare Plant Rank 4.3 plant in Apiaceae that has been included in the CNPS Inventory since 1974 (Powell 1974; CNPS 2020, see http://www.rareplants.cnps.org/detail/1000.html). It is being proposed to change to California Rare Plant Rank (CRPR) 1B.2 due to having a high number of historical occurrences and many occurrences that have declined due to high intensity fires over the past several years.

Lomatium repostum was proposed for rank change by R. McNeill (pers. comm. 2020) over concerns of fire and urban and agricultural development in the areas it occurs. Over the past several years, McNeill has been conducting field work on *L. repostum* in order to conduct a genetic study on the species. Based on his observations, *L. repostum* seems to need light disturbance due to only being found at the top of roadcuts throughout cismontane woodland. McNeal observed that roughly a meter up from stands of plants he visited had dense oak with no signs of *L. repostum*. *Lomatium repostum* is a long lived perennial that, according to McNeill, is not well adapted to fire; its roots can survive light intensity fires and allow for regrowth, but it is not likely to survive high intensity fires. Due to its preference for openings, the absence of regular, low intensity fires has drastically reduced its available habitat and viability, and a reduction of available habitat has been further exacerbated by development and land use changes throughout the wine country where it occurs. Currently, the areas where it occurs have become overgrown due to lack of fire and are now prone to much more intense fires that may result in plant mortality.

As a CRPR 4 plant, *Lomatium repostum* has not been mapped at the occurrence level by the California Natural Diversity Database (CNDDB) and all occurrences presented herein are an estimate of those that would be mapped in the CNDDB if its status is changed. There are currently an estimated 43 occurrences of *L. repostum*, of which 16 are considered historical (occurrences not seen in over 20 years are considered historical by CNDDB) with five of 16 being over 50 years old. Additionally, 25 of the 43 occurrences fall within areas that have been impacted by fires within the past six years. Since only a small number of records have been recorded after a fire event it is difficult to know how well *L. repostum* is adapted to fire. Observations made by McNeill indicate that it is not well suited to survive intense fire disturbance, which have increased in number in recent years.

With only 43 known occurrences and an increased threat from high intensity fires, development, and habitat conversion to agriculture, we propose to change *Lomatium repostum* from CRPR 4.3 to 1B.2 in the CNPS Inventory and CNDDB. If new research and information on the status of *L. repostum* becomes available, we will reevaluate its status at that time.

After this document was sent out for review, A. Howald (pers. comm. 2020) indicated that there were 39 observations for *L. repostum* in iNaturalist that were not reviewed or assessed in the

total occurrences of this species. Thereafter, CNPS and CNDDB reviewed all iNaturalist observations and determined that only three to four appear to possibly represent additional occurrences that were not reported in the original estimated 43 occurrences of this species. These additional potential occurrences do not represent a significantly increase in the species total number of occurrences and will be further assessed and evaluated when this species changes from CRPR 4.3 to 1B.2 in the CNDDB.

Recommended Actions
CNPS: Change *Lomatium repostum* from CRPR 4.3 to 1B.2
CNDDB: Change *Lomatium repostum* from G3 / S3 to G2G3 / S2S3

Current CNPS Inventory Record
Lomatium repostum (Jeps.) Math.
Napa lomatium
Apiaceae
CRPR 4.3
Lake, Napa, Solano, Sonoma
Mt. George (499C) 3812232, Yountville (500A) 3812243, Sonoma (500C) 3812234, Kenwood (501A) 3812245, St. Helena (516C) 3812254, Mount St. Helena (517B) 3812266, Calistoga (517D) 3812255, Middletown (533D) 3812275, Wilbur Springs (547C) 3912214
Chaparral, cismontane woodland/serpentinite; elevation 90-830 meters.
Perennial herb. Blooms March to June.
Possibly threatened by development. Potentially threatened by agriculture and road maintenance.

Draft CNPS Inventory Record
Lomatium repostum (Jeps.) Mathias
Napa lomatium
Apiaceae
CRPR 1B.2
Lake, Napa, Solano, Sonoma
Fairfield South (482A) 3812221, Mt. Vaca (499A) 3812241, Capell Valley (499B) 3812242, Mt. George (499C) 3812232, Fairfield North (499D) 3812231, Yountville (500A) 3812243, Rutherford (500B) 3812244, Sonoma (500C) 3812234, Kenwood (501A) 3812245, Santa Rosa (501B) 3812246, Aetna Springs (516B) 3812264, St. Helena (516C) 3812254, Detert Reservoir (517A) 3812265, Mount St. Helena (517B) 3812266, Mark West Springs (517C) 3812256, Calistoga (517D) 3812255, Jimtown (518A) 3812267, Geyserville (518B) 3812268, Wilson Valley (532B) 3812284, Lower Lake (533A) 3812285, Clearlake Highlands (533B) 3812286, Whispering Pines (533C) 3812276, Kelseyville (534A) 3812287, The Geysers (534D) 3812277, Wilbur Springs (547C) 3912214
Chaparral, cismontane woodland/serpentinite; elevation 90-1030 meters.
Perennial herb. Blooms March to June.
Threatened by alteration of fire regimes, development, and agriculture. Potentially threatened by road maintenance. See *Madroño* 1(9): 149-150 for original description, and *Annals of the Missouri Botanical Garden* 25(1): 237 (1938) for revised nomenclature.

Literature Cited

[CNPS] California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed October 2020].

Powell, W.R. (ed.). 1974. Inventory of Rare and Endangered Plants of California. Special Publication No. 1. California Native Plant Society, Berkeley. 56 pp.

Personal Communications

Howald, Ann. 2020. Botanist. Comment posted on Rare Plant Status Review Forum, 10 December 2020.

McNeill, Rick. 2020. Botanist. Email and phone call regarding *Lomatium repostum*. 13 October 2020.