

California Fish and Game Commission

NOTICE OF FINDINGS

Clara Hunt's milkvetch (*Astragalus claranus*)

NOTICE IS HEREBY GIVEN that the California Fish and Game Commission (Commission), at a meeting on June 16, 2021, found pursuant to Fish and Game Code section 2075.5, that the information contained in the petition to list Clara Hunt's milkvetch (*Astragalus claranus*) and other information in the record before the Commission, warrants adding Clara Hunt's milkvetch to the list of endangered species under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). (See also Cal. Code Regs., tit. 14, § 670.1, subd. (i).)

NOTICE IS ALSO GIVEN that, at its August 18, 2021 meeting, the Commission adopted the following findings outlining the reasons for its determination.

I. Background and Procedural History

Petition History

Clara Hunt's milkvetch has been listed as a threatened species pursuant to CESA since 1991 and is included in the list of threatened plants found in Title 14 Section 670.2. California Fish and Game Code Section 2077 mandates that the status of species listed by FGC under CESA be reviewed every five years, if funding is available. The Department transmitted a five-year status review concerning Clara Hunt's milkvetch recommending up-listing the species from threatened to endangered status (Cal. Reg. Notice Register 2020, No. 4-Z, p. 133). This five-year status review is considered the equivalent of a petition with a Department recommendation to accept and consider the petition (Fish and Game Code sections 2072.7 and 2077).

At its December 2019 meeting, the Commission publicly received the Department's five-year status review report concerning Clara Hunt's milkvetch. At its February 2020 meeting, the Commission determined a change in status may be warranted. Notice of that decision was published (Cal. Reg. Notice Register 2020, No. 11-Z, p. 421). Upon publication of the notice, Clara Hunt's milkvetch is a candidate species for listing. The notice also indicated this status.

Status Review Overview

The Commission's notification regarding Clara Hunt's milkvetch status as a candidate species triggered the Department's process for conducting a status review to inform the Commission's decision on whether to list the species.

The Department submitted a report to the Commission titled "STATUS REVIEW OF CLARA HUNT'S MILKVETCH (*ASTRAGALUS CLARANUS*)" and dated March 2021 ("Status Report"); the Status Report was received by the Commission at its April 2021 meeting. The Status Report represents the Department's final written review of the status of Clara Hunt's milkvetch and is based upon the best scientific information available to the Department. The Department recommended that the Commission list Clara Hunt's milkvetch as an endangered species.

Species Description

Clara Hunt's milkvetch is a short annual herb of the legume family that has white petals with bright purple tips. There are six small populations of Clara Hunt's milkvetch, all located in Napa and Sonoma Counties within ten miles of St. Helena. The species is generally found in oak woodlands, in sparsely vegetated openings without significant shrub or tree overstory, and appears to be adapted to poor quality, acidic soils that may limit competition from other plants. Clara Hunt's milkvetch only occurs in California, in the northern Coast Range near St. Helena in Napa County, and northeast of Santa Rosa in Sonoma County, at elevations of about 95 to 360 m (320 to 1175 feet) above sea level (CNDDDB 2020). There are currently six occurrences of Clara Hunt's milkvetch, which are documented in the Status Report: (1) the Lake Hennessey population, (2) the Lewelling Lane Population, (3) the Taplin Road Population, (4) the Alpine School Population, (5) the Bothe Population, and (6) the Saddle/Hayfork Population.

II. STATUTORY AND LEGAL FRAMEWORK

The Commission, as established by the California Constitution, has exclusive statutory authority under California law to designate endangered, threatened, and candidate species under CESA. (Cal. Const., art. IV, § 20, subd. (b); Fish & G. Code, § 2070.) The CESA listing process for the Clara Hunt's milkvetch began in the present case with the Department's submittal of a five-year status review.

The regulatory and legal process that ensued is described in some detail in the preceding section above, along with related references to the Fish and Game Code and controlling regulation. The CESA listing process generally is also described in some detail in published appellate case law in California, including:

- *Mountain Lion Foundation v. California Fish and Game Commission* (1997) 16 Cal.4th 105, 114-116;
- *California Forestry Association v. California Fish and Game Commission* (2007) 156 Cal.App.4th 1535, 1541-1542;
- *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597, 600;
- *Natural Resources Defense Council v. California Fish and Game Commission* (1994) 28 Cal.App.4th 1104, 1111-1116;
- *Central Coast Forest Association v. California Fish and Game Commission* (2017), 2 Cal. 5th 594, 597-598; and
- *Central Coast Forest Association v. California Fish and Game Commission* (2018) 18 Cal. App. 5th 1191, 1196-1197.

The "is warranted" determination at issue here for Clara Hunt's milkvetch stems from Commission obligations established by Fish and Game Code section 2075.5. Under this provision, the Commission is required to make one of two findings for a candidate species at the end of the CESA listing process; namely, whether listing a species is warranted or is not warranted. Here, with respect to Clara Hunt's milkvetch, the Commission made the finding under section 2075.5(e)(2) that listing the species as endangered is warranted.

The Commission was guided in making these determinations by statutory provisions and other controlling law. The Fish and Game Code, for example, defines an endangered species under CESA as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease.” (Fish & G. Code, § 2062.) Similarly, the Fish and Game Code defines a threatened species under CESA as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter.” (*Id.*, § 2067.)

The Commission also considered Title 14, section 670.1, subdivision (i)(1)(A), of the California Code of Regulations in making its determination regarding Clara Hunt’s milkvetch. This provision provides, in pertinent part, that a species shall be listed as endangered or threatened under CESA if the Commission determines that the species’ continued existence is in serious danger or is threatened by any one or any combination of the following factors:

1. Present or threatened modification or destruction of its habitat;
2. Overexploitation;
3. Predation;
4. Competition;
5. Disease; or
6. Other natural occurrences or human-related activities.

Fish and Game Code section 2070 provides similar guidance. This section provides that the Commission shall add or remove species from the list of endangered and threatened species under CESA only upon receipt of sufficient scientific information that the action is warranted. Similarly, CESA provides policy direction not specific to the Commission per se, indicating that all state agencies, boards, and commissions shall seek to conserve endangered and threatened species and shall utilize their authority in furtherance of the purposes of CESA. (Fish & G. Code, § 2055.) This policy direction does not compel a particular determination by the Commission in the CESA listing context. Nevertheless, “[l]aws providing for the conservation of natural resources’ such as the CESA ‘are of great remedial and public importance and thus should be construed liberally.’” (*California Forestry Association v. California Fish and Game Commission*, *supra*, 156 Cal. App.4th at pp. 1545-1546, citing *San Bernardino Valley Audubon Society v. City of Moreno Valley* (1996) 44 Cal.App.4th 593, 601; Fish & G. Code, §§ 2051, 2052.)

Finally, in considering these factors, CESA and controlling regulations require the Commission to actively seek and consider related input from the public and any interested party. (See, e.g., *Id.*, §§ 2071, 2074.4, 2078; Cal. Code Regs., tit. 14, § 670.1, subd. (h).) The related notice obligations and public hearing opportunities before the Commission are also considerable. (Fish & G. Code, §§ 2073.3, 2074, 2074.2, 2075, 2075.5, 2078; Cal. Code Regs., tit. 14, § 670.1, subds. (c), (e), (g), (i); see also Gov. Code, § 11120 et seq.) All of these obligations are in addition to the requirements prescribed for the Department in the CESA listing process, including an initial evaluation of the petition and a related recommendation regarding candidacy, and a review of the candidate species’ status culminating with a report and recommendation to the Commission as to whether listing is warranted based on the best

available science. (Fish & G. Code, §§ 2073.4, 2073.5, 2074.4, 2074.6; Cal. Code Regs., tit. 14, § 670.1, subds. (d), (f), (h).)

III. Factual and Scientific Bases for the Commission's Final Determination

The factual and scientific bases for the Commission's determination that designating Clara Hunt's milkvetch as an endangered species under CESA is warranted are set forth in detail in the Commission's record of proceedings including the five-year status review, the Department's status review, written and other evidence included in the Commission's record of proceedings.

The Commission determines that the continued existence of Clara Hunt's milkvetch in the State of California is in serious danger or threatened by one or a combination of the following factors as required by the California Code of Regulations Title 14, section 670.1, subdivision (i)(1)(A):

1. Present or threatened modification or destruction of its habitat;
2. Overexploitation;
3. Predation;
4. Competition;
5. Disease; or
6. Other natural occurrences or human-related activities.

The Commission also determines that the information in the Commission's record constitutes the best scientific information available and establishes that designating Clara Hunt's milkvetch as an endangered species under CESA is warranted. Similarly, the Commission determines that Clara Hunt's milkvetch, is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

The items highlighted here and detailed in the following section represent only a portion of the complex issues aired and considered by the Commission during the CESA listing process for Clara Hunt's milkvetch. Similarly, the issues addressed in these findings represent some, but not all of the evidence, issues, and considerations affecting the Commission's final determination. Other issues aired before and considered by the Commission are addressed in detail in the record before the Commission, which record is incorporated herein by reference.

Background

The Commission bases its "is warranted" finding for Clara Hunt's milkvetch most fundamentally on the continued existence of the threats identified when originally listed in 1991 coupled with threats by invasive plants, climate change, and vegetation community succession. Additionally, habitat modification and destruction, predation, competition, its small population, and climate change place the remaining Clara Hunt's milkvetch populations at risk of extinction.

Threats

Present or Threatened Modification or Destruction of Habitat

The threat of habitat elimination primarily comes from agricultural or other development activities, and these activities have eliminated some Clara Hunt's milkvetch habitat in the past. The threat of habitat degradation primarily comes from recreational land use, maintenance of infrastructure, improper domestic animal grazing regimes, equipment use, or other unforeseen activities in the future, particularly if those activities result in trampling, excessive or inadequate soil disturbance, hydrological changes, excessive winter or spring herbivory, or the creation of conditions that are favorable for the establishment and spread of invasive plant species. While regulatory mechanisms are in place to protect Clara Hunt's milkvetch habitat from some threats, impacts could still occur from unpermitted activities, or activities that occur and cannot be mitigated. Three Clara Hunt's milkvetch populations have a moderate to high risk of habitat elimination or degradation, and three populations have a low risk of habitat elimination or degradation (CDFW 2021).

The Commission finds habitat modification and destruction to be a significant threat to the continued existence of Clara Hunt's milkvetch.

Overexploitation

Clara Hunt's milkvetch does not appear to be threatened by overexploitation. The species is not known to be in the nursery trade, nor is the Department aware of any other use of the species by humans (CDFW 2021). As a threatened plant species under CESA, possession of Clara Hunt's milkvetch is unlawful without a permit from the Department. The Department does not consider overexploitation to be a significant threat to the continued existence of Clara Hunt's milkvetch (Id.).

Predation

Clara Hunt's milkvetch may be threatened to some degree by predation, but more information on this potential threat is needed. The degree and immediacy of threats from herbivory and predation are not currently known (Id.). The Department does not know whether or not herbivory and predation are significant factors affecting the ability of Clara Hunt's milkvetch populations to survive and reproduce (Id.).

Competition

Invasive plants are present at all Clara Hunt's milkvetch populations and pose an immediate and ongoing threat to the species throughout its range, particularly in situations where an organic thatch layer is allowed to accumulate.

Studies have not been conducted on the impact of invasive species on Clara Hunt's milkvetch specifically; however, the negative impacts of plant invasions on Mediterranean ecosystems have been well demonstrated (Gaertner et al. 2009; Fried et al. 2014).

Invasive Mediterranean grasses such as barbed goatgrass, soft chess, annual false brome (*Brachypodium distachyon*), rattlesnake grass (*Briza maxima*), ripgut brome (*Bromus diandrus*), medusahead (*Elymus caput-medusae*), and Italian ryegrass (*Festuca perennis*), have been observed in close proximity to Clara Hunt's milkvetch populations and pose a

significant risk to the species (Ruygt 1994; CDFW 2021). Additional invasive species that are not grasses, such as yellow star-thistle (*Centaurea solstitialis*), bearded creeper (*Crupina vulgaris*), red-stem filaree (*Erodium cicutarium*), French broom (*Genista monspessulana*), burclover (*Medicago polymorpha*), English plantain (*Plantago lanceolata*), and curly dock (*Rumex crispus*) have also been documented in close proximity to Clara Hunt's milkvetch populations (Ruygt 1994; CDFW 2021).

The Bothe, Alpine School, and perhaps other populations are also threatened by vegetation community succession, which may be a result of reduced fire frequencies. Vegetation community succession appears to have already had a significant adverse effect on the Bothe Population, and the population may now be extirpated or may only exist in the soil seed bank (CDFW 2021).

The Commission finds competition with other plants to be a significant threat to the continued existence of Clara Hunt's milkvetch.

Disease

Disease does not appear to be a significant threat to the continued existence of Clara Hunt's milkvetch.

Other Natural Events or Human-Related Activities

Small Populations

Clara Hunt's milkvetch occurs in such low numbers over such small geographical areas, that even localized accidents and chance events could lead to the extirpation of a population or could have severe and long-lasting negative effects on the ability of the species to survive and reproduce. Species with few populations and/or small population sizes are highly vulnerable to extinction due to stochastic (chance), demographic, environmental, and genetic events (Shaffer 1981, 1987; Primack 2006; Groom et al. 2006). Due to the small number of Clara Hunt's milkvetch individuals and the presence of only six or fewer small Clara Hunt's milkvetch populations, the loss of any Clara Hunt's milkvetch population, or the loss of a significant portion of a Clara Hunt's milkvetch population would represent the loss of a significant portion of Clara Hunt's milkvetch's total range (CDFW 2021).

The Commission finds that the inherent vulnerability of small populations is a significant and immediate and ongoing threat to the continued existence of Clara Hunt's milkvetch.

Climate Change

The climate of California is certain to change due to global climate change. By 2050, climate change is likely to have affected Clara Hunt's milkvetch abundance and/or range extent, particularly if conditions in Clara Hunt's milkvetch habitat become more favorable for invasive plant species such as cheat grass (CDFW 2021). Climate change is a factor that may influence Clara Hunt's milkvetch's ability to survive and reproduce, but the relative impact that climate change will have on Clara Hunt's milkvetch populations in the future is unknown. However, Department staff assessed the vulnerability of Clara Hunt's milkvetch to climate change using the NatureServe Climate Change Vulnerability Index Version 3.02 (NatureServe 2016; CDFW 2019a). Based upon the Department's assessment, Clara Hunt's milkvetch has a climate change vulnerability index value of Moderately Vulnerable (MV), indicating that abundance

and/or range extent of Clara Hunt's milkvetch within the geographical area assessed is likely to decrease by 2050 due to climate change (CDFW 2021).

The Commission finds that climate change is a significant and immediate and ongoing threat to the continued existence of Clara Hunt's milkvetch.

IV. FINAL DETERMINATION BY THE COMMISSION

The Commission has weighed and evaluated the information for and against designating the Clara Hunt's milkvetch as an endangered species under CESA. This information includes scientific and other general evidence in the Petition; the Department's Petition Evaluation Report; the Department's status review; the Department's related recommendations; and other evidence included in the Commission's record of proceedings.

Based upon the evidence in the record the Commission has determined that the best scientific information available indicates that the continued existence of Clara Hunt's milkvetch is in serious danger or threatened by present or threatened modifications or destruction of the species' habitat, competition, or other natural occurrences or human-related activities (including small population and impacts from climate change), where such factors are considered individually or in combination. (See generally Cal. Code Regs., tit. 14, § 670.1, subd. (i)(1)(A); Fish & G. Code, §§ 2062, 2067.) The Commission determines that there is sufficient scientific information to indicate that designating Clara Hunt's milkvetch as an endangered species under CESA is warranted at this time and that with adoption and publication of these findings Clara Hunt's milkvetch for purposes of its legal status under CESA and further proceedings under the California Administrative Procedure Act, shall be listed as endangered.

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