

BEFORE THE SECRETARY OF THE INTERIOR

PETITION TO LIST

STANSELL'S DAISY (*Erigeron stanselliae*)

UNDER THE ENDANGERED SPECIES ACT



Center for Biological Diversity

November 10, 2025

NOTICE OF PETITION

Doug Burgum, Secretary
U.S. Department of the Interior
exsec@ios.doi.gov

Paul Souza
Acting Director, U.S. Fish & Wildlife Service
paul_souza@fws.gov

Hugh Morrison
Regional Director, USFWS Pacific Region
Hugh_Morrison@fws.gov

Bridget Fahey
Asst Reg Director, USFWS Pacific Region
Bridget_Fahey@fws.gov

Pursuant to Section 4(b) of the Endangered Species Act (ESA), 16 U.S.C. §1533(b); section 553(e) of the Administrative Procedure Act (APA), 5 U.S.C. §553(e); and 50 C.F.R. §424.14(a), the Center for Biological Diversity hereby petitions the Secretary of the Interior, through the U.S. Fish and Wildlife Service (USFWS), to protect the Stansell's daisy (*Erigeron stanselliae*) as an endangered or threatened species under the ESA.

This petition requests listing of Stansell's daisy based on threats from mining, livestock grazing, off-road vehicles and fire suppression, the inadequacy of existing regulatory mechanisms, climate change, and risks due to small population size. Petitioner also requests that critical habitat be designated concurrently with the listing, pursuant to 16 U.S.C §1533(a)(3)(A) and 50 C.F.R. §424.12.

The USFWS has jurisdiction over this petition. This petition sets in motion a specific process, placing definite response requirements on USFWS. USFWS must issue an initial finding as to whether the petition "presents substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C. §1533 (b)(3)(A). USFWS must make this initial finding "(t)o the maximum extent practicable, within 90 days after receiving the petition."

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law, supported by more than 1.7 million members and online activists. The Center works to secure a future for all species, great or small, hovering on the brink of extinction.

We submit this petition on behalf of our staff and members who hold an interest in protecting Stansell's daisy.

Submitted this 10th day of November, 2025

Executive Summary

Stansell's daisy (*Erigeron stanselliae*) is a small white and yellow daisy that grows only on nutrient-poor soils. It is endemic to serpentine gravel substrates in grassy forest openings and meadow habitats in southwestern Oregon, from 2,400-3,200 feet of elevation. Stansell's daisy has an extremely limited range and is only known from two small sites on the Rogue River-Siskiyou National Forest in Curry County. One population at Signal Buttes has between 2,200 and 10,000 individual plants and the second population at Fly Catcher Spring has less than 500 individuals.

Stansell's daisy is at risk of extinction due to the present or threatened destruction, modification, or curtailment of its habitat or range, from proposed nickel strip mining, livestock grazing, and off-road vehicles. It is also jeopardized by fire suppression, which allows encroaching trees and shrubs to crowd grassy forest openings and meadow habitats for Stansell's daisy. The interruption of the natural fire cycle can also result in increased fuel loads that can lead to more catastrophic fires. Stansell's daisy is subject to predation by cattle.

Other natural or manmade factors affecting its continued existence are climate change and small population size. Climate change is a severe threat for Stansell's daisy because of the predicted increase in temperatures and changes in precipitation, given the narrow thermal, hydrological, and habitat niches for this plant. Due to its small population size, Stansell's daisy is at increased risk of a catastrophic event, decreased genetic diversity, and impaired seed production.

Existing regulatory mechanisms are inadequate to prevent the extinction of Stansell's daisy. The Forest Service classifies Stansell's daisy as a "sensitive species," which offers little substantive protection, and does not prevent damaging mining, livestock grazing, off-road vehicle use, or fire suppression activities in its habitat. More than 10 years ago, conservation groups proposed designation of a 4,094-acre Veva Stansell Botanical Area in the Rogue River-Siskiyou National Forest to help protect Stansell's daisy and a suite of other unique plants that grow in serpentine soils in the area, but the Forest Service has refused to designate the botanical area.

In 2023 the Oregon Department of Agriculture listed Stansell's daisy as a state endangered species in Oregon, but the state protections only apply to non-federal public land, while the known occurrences of the species are entirely on federal land.

Stansell's daisy needs immediate protection as an endangered species under the federal Endangered Species Act to ensure its continued existence.

Biology and Natural History

Taxonomy

Stansell's daisy (*Erigeron stanselliae*), also sometimes called Stansell's fleabane, is a perennial member of the Aster family (Asteraceae). It was formally described as a species in 2011 (Chambers 2011). Its taxonomy is accepted by the scientific community, such as Flora of Oregon, USDA PLANTS, Consortium of Pacific Northwest Herbaria, and others (ODA 2023a). *Erigeron stanselliae* was first collected by Oregon botanist Veva Stansell in 1982 and was named in her honor when formally described in 2011.

Description

Stansell's daisy is a perennial plant that grows 7-25 cm tall and is tap-rooted with few-branched caudices. The stems are erect to decumbent, glabrous to sparsely strigose, and sometimes minutely glandular. The species has basal leaves that are linear to oblanceolate, 40-120 mm long and 2-5 mm wide, that are gradually or abruptly reduced distally. The surfaces of the leaves are glabrous to loosely strigose. Cauline leaves are linear to narrowly elliptic, 5-40 mm long by 1-3 mm wide, and are gradually or abruptly reduced distally with surfaces glabrous to loosely strigose. The disc flowers are yellow and the ray florets are white. Stansell's daisy has 1-2 radiate heads with involucre measuring 5-7 mm by 5-11 mm. The phyllaries are in a series of 2-3 with sparsely to densely pilose or strigose surfaces that are minutely glandular. Disc florets are 3-4 mm. Fruits are 3-4 mm, sparsely to densely strigose with inner pappi having numerous barbellate bristles. (ODA 2022)

Ecology and Life History

Very little is published on the life history of Stansell's daisy, other than it grows in nutrient-poor serpentine soils with gravel substrates (known as shingle), and the associated plants at known locations (see habitat requirement below). This plant flowers from June through July (ODA 2022). Pollinators are unknown.

Habitat Requirements

Stansell's daisy is a serpentine endemic, growing in nutrient-poor but iron- and magnesium-rich soils with gravel substrates. *Erigeron stanselliae* grows in a serpentine influenced mix of scrubland and woodland habitats at elevations ranging from 2,400-3,200 feet. The sites where Stansell's daisy grows are within grassy forest openings and meadow habitats which have ultramafic serpentine gravel substrates (known as shingle) with perennial, high-gradient streams. The alluvium soil is described as having a coarse sandy loam texture. Stansell's daisy is commonly associated with a mixed tree canopy of Jeffrey pine, western white pine, knobcone pine, Douglas fir, Port Orford cedar, and shrubs including pinemat manzanita, huckleberry oak, boxleaf silktassel, common juniper, and Siskiyou mat. Other native plant associates include *Iris innominate*, *Calochortus tolmiei*, *Carex* sp., *Castilleja* sp., *Ceanothus pumilus*, *Horkelia sericata*, *Festuca romeri*, *Garrya buxifolia*, and *Ranunculus occidentalis*. (USFS 2022; ODA 2022, 2023a)

Current and Historic Range

Erigeron stanselliae has a very limited range and is only known from two element occurrences at two small sites on the Rogue River-Siskiyou National Forest in Curry County, in southwestern Oregon (ODA 2022; ORBIC 2022). See Figure 1. The species is known from only two extant occurrences within less than 4 miles of each other, at Signal Buttes and Fly Catcher Spring (ODA 2023a). Additional undetected plants could still be present at both Curry County sites (ODA 2023a), but there have been several unsuccessful attempts to find additional *Erigeron stanselliae* populations, including checking suitable habitat in California (USFS 2022).

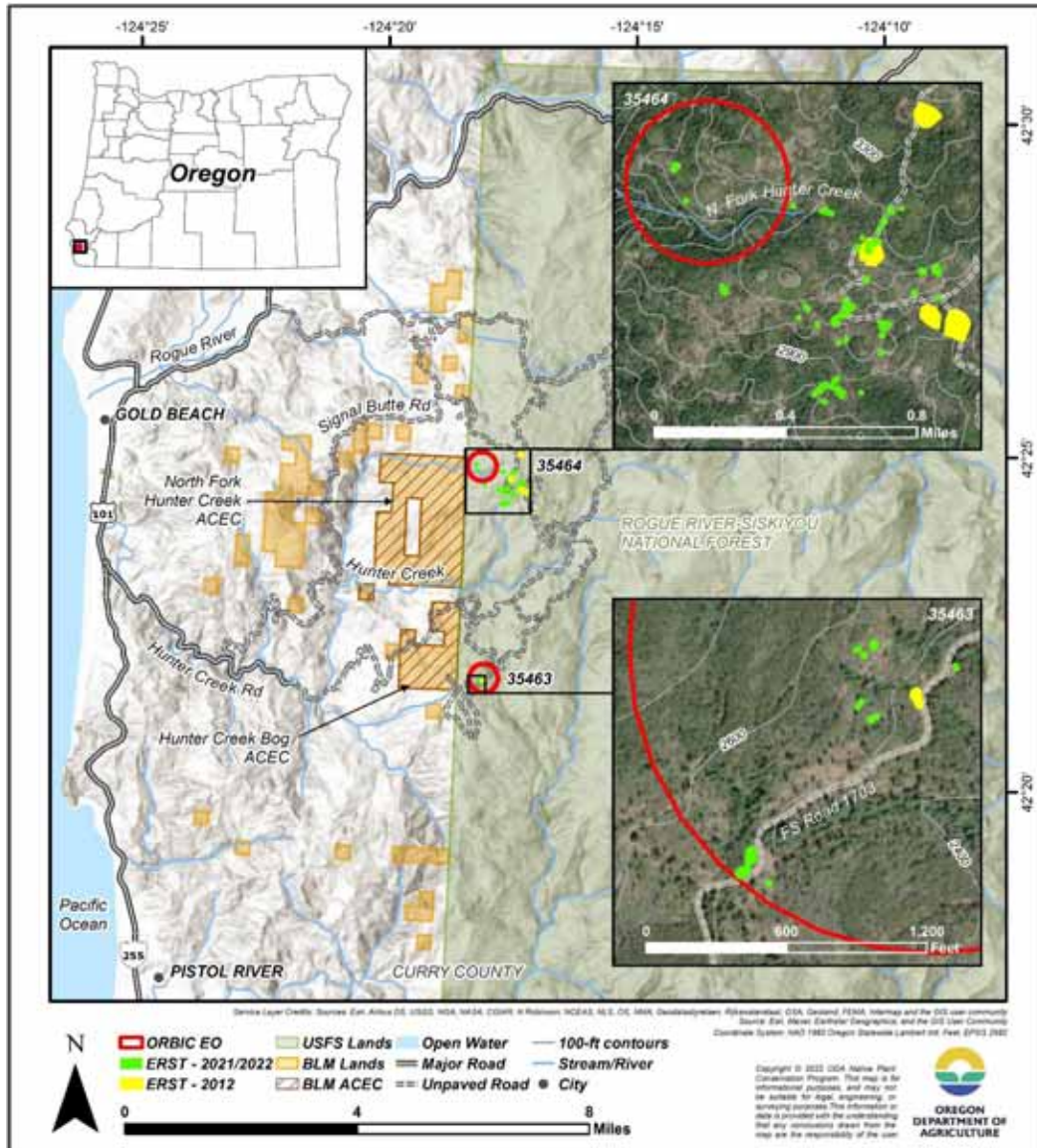


Figure 1. Map of known *Erigeron stanselliae* occurrences from Oregon Biodiversity Information Center. Map by Oregon Department of Agriculture.

Population Status

NatureServe uses element occurrence records and data to rank species conservation status, including range extent, population size, number of occurrences, trends, and threats. Stansell's daisy is listed as globally critically imperiled (G1) and critically imperiled in Oregon (S1) because of rarity and threat factors (NatureServe 2022). Stansell's daisy is ranked on Heritage List 1 by the Oregon Biodiversity Information Center (ORBIC 2022), meaning it is a species most at risk and should be highest priority for conservation action.

An ODA (2023a) status assessment compiled the best available occurrence data for the species, from multiple sources. In 2012 the USFS censused the Fly Catcher Spring population and estimated the Signal Buttes population. In 2021 the USFS began more thorough mapping of the Signal Buttes population. In 2022 ODA joined USFS to gather additional data; only areas not documented in 2021 were mapped and censused at Signal Buttes (incomplete census: 837 plants); additional unsearched areas remain. At Fly Catcher Springs, plants were found in new areas in 2022, increasing the population count (478 plants); similarly, there were additional areas not searched and this could be an underestimation. Anecdotally, according to USFS botany staff, there appeared to be fewer flowering *Erigeron stanselliae* in 2022 compared to 2021 due to increased precipitation and a “late” spring season in 2022 that seemed to delay the phenology of many native plants, which could have delayed flowering in *Erigeron stanselliae*, potentially resulting in population underestimates (ODA 2023a). Both populations have been checked for the presence of plants since the 2022 surveys by either the USFS or members of the Kalmiopsis Audubon Society (ODA 2023a).

The Signal Buttes population has been surveyed since 1970: the species was noted as present but with no population count or estimates in 1970, 2009, and 2013; and an herbarium sample was collected in 1982 (ODA 2023a). An estimate of ~10,000 plants was made in 2012; and partial counts were made in 2021 (with an incomplete census of 1,362 plants) and survey of additional areas in 2022, with a count of 837 plants (ODA 2023a). Recent census work detected 2,199 plants at the Signal Buttes population (ODA 2023a). The population trend is unknown.

The Fly Catcher Spring population has also been surveyed since 1970: herbarium samples were collected in 1970 and 2009; the species was noted as present but with no population count or estimate in 2017. A census of 30 plants was made in 2012; and a count of 478 plants in new areas was made in 2022. The population trend is unknown.

ODA was unable to do a population count in 2025, but ODA biologists observed healthy plants at both sites in 2025 (D. Marshall, pers. comm, 2025).

In summary, there are two extant populations in Oregon, and based on the best available information, ODA (2023a) believes it likely that there are between 2,500 and 10,000 individuals.

ODA (2023a) evaluated the representation, resiliency, and redundancy of Stansell's daisy using the definitions from Smith et al. (2018).

Representation

A species conserved across an array of environments in which it occurs should have genetic and environmental diversity within and among populations. Representation of a species across such genetic, ecological, or life-history diversity gradients enables them to adapt to changing conditions (Smith et al. 2018). The USFWS and others have used population viability analyses to determine the minimum viable population necessary to maintain genetic diversity (i.e. the smallest population size required to survive for a period of time). However, these models are often data-limited, and do not address key components of recovery, such as representation across the species' historic range (Wolf et al. 2015). There is insufficient research or monitoring data of *Erigeron stanselliae* to make definitive assessments of its representation, however since the species' habitat is so unique and the range so limited, it is unlikely that there is sufficient representation at the two populations to maintain genetic diversity and broad adaptability for future survival (ODA 2023a). Conservation collections of seeds or plant materials aim to capture the diverse genetic representation of a species' wild populations and are a means to reduce the risk of extinction of rare species (CPC 2018), but as of March 2022 there were no *Erigeron stanselliae* seed accessions conserved at the Rae Selling Berry Seed bank at Portland State University (ODA 2023a).

Resiliency

Abundance and other demographic factors, population growth rate, and connectivity are key to a species' resiliency (i.e. the ability of a population to survive stochastic events; Smith et al. 2018). *Erigeron stanselliae* populations have <500 individuals (2019, Fly Catcher Spring) and between 2,200 (2021-2022) and 10,000 individuals (2012, Signal Buttes). Based on the limited data, ODA (2023a) could not make meaningful inferences about the species' ability to withstand stochastic disturbances. The two populations are relatively close, <4 miles from each other, and it is unknown whether this distance is insurmountable for pollination and gene flow among populations.

Redundancy

A species with numerous populations can minimize risk from catastrophic events through redundancy, spreading potential risks across a broader landscape (Smith et al. 2018). While Oregon has two extant *Erigeron stanselliae* populations, they are in such proximity that a single catastrophic event would likely negatively impact them both (ODA 2023a).

Due to the exceptionally low number of populations (2), small population size, and limited habitat and geographic range, ODA (2023a) found that the natural reproductive potential of *Erigeron stanselliae* is in danger of imminent or continual failure.

Threat Factors

Present or Threatened Destruction, Curtailment, or Modification of Habitat or Range

Mining

Mining is the most significant threat to *Erigeron stanselliae* as there are active nickel mining claims located in Stansell's daisy habitat that could result in sanctioned destruction of its habitat (ODA 2022). There have been three nickel laterite mining (strip mining) proposals within the Rogue River Ranger District of the Rogue River-Siskiyou National Forest and adjacent BLM lands. See Figure 2 for mining claims in the Rogue River-Siskiyou National Forest within known and potential Stansell's daisy habitat.

The extraction and processing of nickel laterite is devastating to natural ecosystems and vegetation. Nickel laterite mining is a surface mining process known as open-pit mining or strip mining. The first step is to use bulldozers to clear all the vegetation, topsoil, and non-valuable overburden to expose the ore deposit. All this material is piled nearby. Once the physical pit mine infrastructure is built, the process of drilling, blasting, excavation, loading, and transporting of the nickel laterite ore begins. The waste rock is piled in a "waste dump" near the edge of the pit. Because of the cost of transportation, the ore is processed near the mining pit. First, the nickel laterite rock is run through a mill and ground into a wet pulp. Then, the pulp is processed by a high-pressure acid leach which uses sulfuric acid under high pressure and temperature to leach out the nickel and other minerals. The processed ore, known as "tailings," is pumped into a settling pond until the water evaporates. These tailings ponds are often toxic due to the presence of unextracted sulfide minerals.

Strip mining and acid heap leaching are incredibly damaging. The former Formosa copper mine in Douglas County, Oregon was operated by a Canadian company from 1989-1993 and then abandoned. Formosa Mine in Oregon has contaminated surface water, groundwater, soils, and sediment with heavy metals, severely harming salmon and threatening other fish and aquatic species (USEPA 2025). A former mine site in the South Umpqua watershed near Riddle is now a Superfund site since it is contaminating the surrounding area with toxic metals and acid rock drainage, discharging toxic metals such as lead, zinc, cadmium and other poisons into nearby streams.

In 1962, 1,702.5 acres of the Rogue River National Forest around the southern Fly Catcher Spring population (Wrangle Campground, Star Ranger Station Administrative Site, Squaw Peak Lookout Station, Thompson Creek Campground, Sturgis Campground, and Whiskey Peak Lookout Station) were first withdrawn from mineral prospecting, location, entry and purchase (USBLM and USDOI 1962).

In 2013, a foreign-owned mining company (Red Flat Nickel Co.) with extensive mineral claims proposed to conduct exploratory drilling operations in the Red Flat Botanical Area and surrounding areas south of Hunter Creek with the aim of developing a nickel strip mine, potentially within Stansell's daisy habitat.

A coalition of conservation groups proposed to withdraw the greater Red Flat area from mining. In 2015, Congressman DeFazio and Senators Wyden and Merkley introduced

the Southwestern Oregon Salmon and Watershed Protection Act, legislation that would withdraw the Red Flat area and other threatened areas at the headwaters of the National Wild and Scenic North Fork Smith and Illinois Rivers. The USFS and USBLM temporarily withdrew these headwaters areas and held public hearings and prepared an Environmental Assessment for the Southwestern Oregon Mineral Withdrawal. In 2017 the Department of the Interior approved a 20-year mineral withdrawal for the headwaters areas, including Red Flat, the proposed Veva Stansell Botanical Area, and two Areas of Critical Environmental Concern on adjacent BLM lands. The mineral withdrawal is temporary, not permanent, and could be overturned.

The temporary withdrawal means no new mining claims will be allowed until 2037, and existing claims must prove "valid" before any mining proposal can advance. Validity is determined through a formula related solely to the profitability of minerals. "Mineral withdrawals" do not apply to valid existing claims. There are extensive mining lode claims surrounding the southern Stansell's daisy population. See Figure 2.

A Canadian mining company (Homeland Nickel) has purchased many of the Red Flat Nickel Co. mining claims, including the Cleopatra Property (39 lode mining claims covering a total area of 1,162 ha (2,872 ac) on BLM lands; and Red Flat (84 lode mining claims covering an area of 815 ha (2,015 ac) on BLM lands, with USFS land access over part of the property. Homeland Nickel is trying to continue with exploration. In August 2025, the USFS approved further exploration of the Red Flat mining claims by Homeland Nickel (Homeland Nickel 2025). The USFS has issued a Surface Use Determination that approves exploratory drilling of 44 sonic holes, including plans to drill to bedrock where its depth is less than 50 feet below surface. The USFS is apparently initiating a NEPA review for the exploration project.

The global demand for nickel is growing due to its critical role in lithium-ion electric vehicle battery manufacturing and other modern technologies.

There is no guarantee the mining withdrawal will not be administratively overturned, nor that it will be renewed after 20 years. Under the first Trump administration, there was an attempt in 2017 to revoke the mineral withdrawal and given the second Trump administration Executive Orders and directives on critical minerals, it is likely that the temporary mineral withdrawal could be revoked.

The withdrawal does not address the continued threat of mining in potential Stansell's daisy habitat outside of the Red Flat Botanical Area.

Livestock Grazing

Cattle grazing is a major and direct threat to *Erigeron stanselliae* populations since cattle damage Stansell's daisy by trampling, browsing, causing soil erosion, and introducing invasive species (USFS 2022; ODA 2022, 2023a). ODA documented cattle disturbance in Stansell's daisy habitat in 2022 (ODA 2023a). See Figure 2 for USFS livestock grazing allotments in the Rogue River-Siskiyou National Forest within Stansell's daisy habitat.

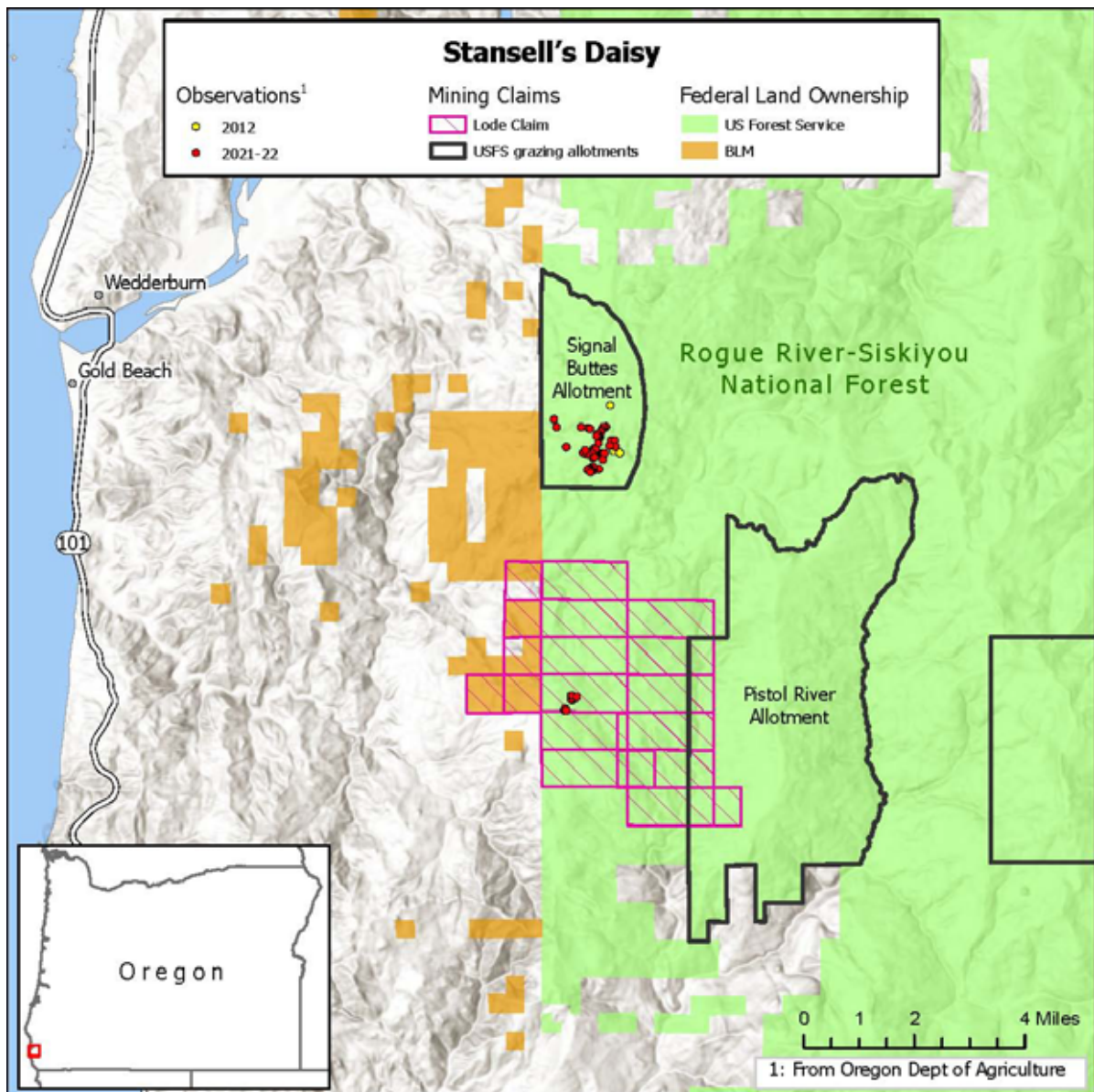


Figure 2. Map of mining claims and USFS livestock grazing allotments in the Rogue River-Siskiyou National Forest within Stansell's daisy habitat. Map by Center for Biological Diversity.

Off-Road Vehicles

Off-road vehicle use is negatively impacting Stansell's daisy as a species and the suitable habitat, as can mountain bike and trail use (ODA 2022, 2023a). ODA documented off-road vehicle disturbance in Stansell's daisy habitat in 2022 (ODA 2023a).

Fire Suppression

Fire suppression and exclusion allows encroaching tree species and shrubs to crowd grassy forest openings and meadow habitat for Stansell's daisy (ODA 2022, 2023a). The interruption of the natural fire cycle can result in an increase in fuels that can lead to

more catastrophic fires than what the plant community is historically adapted to (ODA 2022, 2023a).

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Not known to be a threat

Disease or Predation

Predation by cattle is known to be a threat (USFS 2022; ODA 2022, 2023a).

Inadequacy of Existing Regulatory Mechanisms

Federal

Stansell's daisy has no federal protected status.

The USFS classifies Stansell's daisy as a sensitive species (USFS 2021). Sensitive species are defined as those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density and habitat capability that would reduce a species' existing distribution. Management of sensitive species "must not result in a loss of species viability or create significant trends toward federal listing." The Regional Forester is responsible for identifying sensitive species and coordinating with federal and state agencies and other sources, as appropriate, in order to focus conservation management strategies and to avert the need for federal or state listing as a result of National Forest management activities.

However, the designation as a "sensitive species" offers little protection for Stansell's daisy. The designation merely requires that the impacts to the species be considered but does not prevent agency actions which could harm the species or its habitat, such as mining permits, livestock grazing, allowing off-road vehicle use, or fire suppression. Sensitive species cannot be impacted without an analysis of significance of adverse effects on the populations, their habitat, and on the viability of the species as a whole. All Forest Service planned, funded, executed, or permitted programs and activities are reviewed under NEPA for possible effects on sensitive species, through a Biological Assessment and Evaluation. Yet the Forest Service can conclude in a Biological Evaluation that even though Stansell's daisy will be harmed or destroyed by an action, it can still carry out this action.

In 2013 the Kalmiopsis Audubon Society and Native Plant Society of Oregon submitted a nomination to designate a 4,094-acre Veva Stansell Botanical Area in the Rogue River-Siskiyou National Forest to help protect the Stansell's daisy and a suite of other unique plants that grow in nutrient-poor serpentine soils. Designated USFS botanical areas benefit from research and monitoring, and vegetative manipulation, including the cutting of trees, is permitted only when necessary for the protection and interpretation of the unique plant species and unique plant communities within the area. The proposed botanical area would have connected the North Fork Hunter Creek Area of Critical Concern (ACEC) with the Hunter Creek Bog ACEC on BLM lands, but the USFS

declined to designate the botanical area and has no plans to include it in the revisions to the Rogue River-Siskiyou Forest Plans that are already underway (ODA 2022, 2023a).

The Siskiyou National Forest Land and Resource Management Plan (USFS 1989) discusses USFS management of sensitive plant species, and the objective to maintain the genetic diversity and viability of all species. The management plan claims that if management activities are detrimental, sensitive plants are protected from significant reduction by the Standards and Guidelines in the management plan. However, the USFS allows detrimental activities such as mining, livestock grazing, off-road vehicle use, and fire suppression that jeopardize the existence of Stansell's daisy, to the point where the state of Oregon listed it as an endangered species in 2023.

State

The Oregon Department of Agriculture (ODA) Native Plant Conservation Program is responsible for the periodic review of the Oregon State List of Endangered and Threatened Plants, Oregon Administrative Rule ([OAR 603-073-0060](#) & [0070](#)). In June 2023 ODA updated the state of Oregon's list of threatened and endangered plant species for the first time in 22 years (ODA 2023b), and designated Stansell's daisy as a state endangered species.

Per OAR 603-073-0003, the state list of threatened and endangered plant species extends protections on all non-federal public land including highways and other rights-of-way, county lands, city lands, and other state lands (including but not limited to state parks, state forests, state fish and wildlife refuges, and airports). Oregon laws for threatened and endangered plants do not extend to private land, but landowners who do have a state listed plant on their property do have resources to help manage and conserve their populations if they choose.

The law states that willful or negligent cutting, digging, trimming, picking, removing, mutilating, or in any manner injuring, or subsequently selling, transporting, or offering for sale any of these species is prohibited. It is unlawful to take, import, export, purchase, sell, collect material from, store, preserve, possess, cultivate, propagate, knowingly transport, or attempt any of these actions for any species on Oregon's threatened and endangered plant list without a written permit.

Since the entire species is known to occur on only two small sites on federal land in the Rogue River-Siskiyou National Forest, the state endangered status for the Stansell's daisy does not offer any substantive protections and does not prevent the USFS from allowing activities such as mining, livestock grazing, off-road vehicles, or fire suppression in Stansell's daisy habitat that jeopardize the existence of the species.

ODA has begun conservation collections for Stansell's daisy and in 2025 were able to collect seeds from about 50 maternal lines at each site for long term storage, a first step towards ensuring the species will not become locally extirpated at either site (D. Marshall, pers. comm, 2025).

Other Natural or Manmade Factors Affecting the Continued Existence of the Species

Climate Change

Climate change will likely affect *Erigeron stanselliae* in Oregon. Temperatures in Oregon are predicted to get warmer over the coming decades (increase of 5 degrees F by the 2050s; Dalton and Fleishman 2021), while precipitation is predicted to increase in winter and decrease in summer, with some precipitation falling as rain rather than snow. OBIC (2020) has listed *Erigeron stanselliae* as highly vulnerable to climate change under their latest assessment, indicating that the species' dispersal distance and physical habitat restrictions increase its vulnerability, while the species' historic thermal and hydrological niches greatly increase its vulnerability. Hotter drier summers also increase herbivory pressure on flowering plants, which can be particularly harmful for rare species.

Changing serpentine communities are already being observed in Oregon. Damschen et al. (2010) re-surveyed endemic flora in serpentine soils which had previously been sampled more than 50 years before and found a sharp decline in herb and forb coverage, along with a significant loss in percent cover of edaphic endemics (Damschen et al. 2010, 3613). These changes accompanied a general shift in species composition which favored species from warmer, south-facing, more xeric sites, indicating that a shift in climate was at play in this loss of edaphic endemics (p 16).

Small Population Size

The only two populations of Stansell's daisy grow in such close proximity (<4 miles apart) that a single catastrophic event could negatively impact them both (ODA 2023a).

Small populations face greater risk of extinction due to numerous factors, including declines in number of reproductive individuals, genetic diversity, seed production and viability, and potential increase in negative impacts from demographic and environmental stochasticity (Ellstrand and Elam 1993; Lande 1993; Oostermeijer 2003; Matthies et al. 2004). The Signal Buttes population may be more than 2,000 individuals, while the Fly Catcher Springs population likely has fewer than 2500 individuals, making both precariously small populations more prone to local extinction (ODA 2023a). The small population size of *Erigeron stanselliae* is a threat specifically due to the risks of decreased genetic diversity and impaired seed production (ODA 2022, 2023a). Though there is not sufficient data to assess the diversity within and among the two Stansell's daisy populations, the limited species habitat and range indicate it is likely lacking genetic diversity and adaptability (ODA 2023a).

Request for Critical Habitat

Petitioners urge the Service to designate critical habitat for the Stansell's daisy concurrent with listing the species as threatened or endangered under the ESA. Critical habitat as defined by Section 3 of the ESA is: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the provisions of section 1533 of the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) the specific areas outside the

geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species. 16 U.S.C. § 1532(5).

Congress recognized that the designation and protection of habitat is essential to the recovery and/or survival of listed species, stating that: "classifying a species as endangered or threatened is only the first step in ensuring its survival. Of equal or more importance is the determination of the habitat necessary for that species' continued existence... If the protection of endangered and threatened species depends in large measure on the preservation of the species' habitat, then the ultimate effectiveness of the Endangered Species Act will depend on the designation of critical habitat." H. Rep. No. 94-887 at 3 (1976).

Critical habitat is an extremely effective and important component of the ESA, without which the Stansell's daisy's chance for survival significantly diminishes. Petitioners request that the Service propose critical habitat for Stansell's daisy concurrently with its listing, consisting of known locations of the species along with nearby suitable potential habitats in meadows which have ultramafic serpentine gravel substrates. Both occupied and unoccupied suitable habitat should be included in the designation.

Conclusion

Stansell's daisy urgently needs protection under the Endangered Species Act due to its extremely limited range and multiple threats to the only two known populations. The continued existence of the daisy is jeopardized by habitat damage from mining, livestock grazing, and off-road vehicles; and habitat alteration due to fire suppression and climate change. Due to its small population size, Stansell's daisy is at increased risk of a catastrophic event, decreased genetic diversity, and impaired seed production. Existing regulatory mechanisms, such as the Forest Service classification as a sensitive species and Oregon state endangered species status, are inadequate to prevent the extinction of Stansell's daisy.

Endangered Species Act listing of the Stansell's daisy can reduce the threats to the species, provide protections for its limited habitat, and could prompt adoption of the proposed Veva Stansell Botanical Area.

References Cited

- Center for Plant Conservation (CPC). 2018. CPC Best Plant Conservation Practices to Support Species Survival in the Wild. <https://saveplants.org/wp-content/uploads/2020/12/CPC-Best-Practices-5.22.2019.pdf>
- Chambers, K.L. 2011. A New Species of *Erigeron* (Asteraceae) from Southwestern Oregon. Journal of the Botanical Research Institute of Texas, 5(2): 415-419. <https://archive.org/details/biostor-158048/mode/2up>
- Dalton, M. and E. Fleishman, editors. 2021. Fifth Oregon Climate Assessment. Oregon Climate Change Research Institute, Oregon State University, Corvallis, Oregon. <https://www.oregon.gov/highered/public-engagement/Documents/Commission/Full-Commission/2021/Feb%2011/4.2%20Public%20Comment-Erica%20Fleishman%20OCAR5.pdf>
- Damschen, E. I., Harrison, S., and Grace, J. B. (2010). Climate change effects on an endemic-rich edaphic flora: resurveying Robert H. Whittaker's Siskiyou sites (Oregon, USA). Ecology, 91(12): 3609–3619.
- Ellstrand, N.C. and D.R. Elam. 1993. Population Genetic Consequences of Small Population Size: Implications for Plant Conservation. Annual review of Ecology, Evolution, and Systematics 24: 217-242.
- Homeland Nickel. 2025. Homeland Nickel Exploration Update at Red Flat and Property Acquisition. <https://homelandnickel.com/wp-content/uploads/2025/08/Homeland-Nickel-Red-Flat-and-Woodcock-Mountain.pdf>
- Lande, R. 1993. Risks of Population Extinction from Demographic and Environmental Stochasticity and Random Catastrophes. The American Naturalist 142: 911-927.
- Matthies, D., I. Brauer, W. Maibom and T. Tschardt. 2004. Population Size and the Risk of Local Extinction: Empirical Evidence from Rare Plants. Oikos 105(3): 481-488.
- NatureServe. 2022. NatureServe Network Biodiversity Location Data.
- Oostermeijer, J.G.B. 2003. Threats to Rare Plant Persistence. Pages 17-58 in Brigham, C.A. and M.W. Schwartz, editors. Population Viability in Plants: Conservation, Management, and Modeling of Rare Plants. Berlin: Springer.
- Oregon Biodiversity Information Center (OBIC). 2020. Climate Change Vulnerability Index Assessment for Stansell's daisy (*Erigeron stanselliae*). Institute for Natural Resources, Portland State University, Portland, OR.
- Oregon Biodiversity Information Center (OBIC). 2022. Element Occurrence Reports for *Erigeron stanselliae*. Unpublished cumulative data current to July 27, 2022. Institute for Natural Resources, Portland State University, Portland, OR.
- Oregon Department of Agriculture (ODA). 2022. Stansell's Daisy (*Erigeron stanselliae*) Profile.

Oregon Department of Agriculture (ODA). 2023a. 2023 Listing Status Assessment for *Erigeron stanselliae* (Stansell's Daisy). Marshall, D.A. and J. Brown. ODA Native Plant Conservation Program, Salem, OR.

Oregon Department of Agriculture (ODA). 2023b. Native Plant Conservation Program Update 2023.

Oregon Flora. 2022. Herbarium database current to August 2022. Oregon State University Department of Botany & Plant Pathology. Corvallis, OR. www.oregonflora.org

Smith, D.R., N.L. Allan, C.P. McGowan, J.A. Szymanski, S.R. Oetker and H.M. Bell. 2018. Development of a Species Status Assessment Process for Decisions under the U.S. Endangered Species Act. *Journal of Fish and Wildlife Management* 9(1): 302-320.

U.S. Environmental Protection Agency (USEPA). 2025. Formosa Mine Riddle, OR. <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=1002616>

U.S. Forest Service (USFS). 1989. Land and Resource Management Plan for the Siskiyou National Forest. Final Environmental Impact Statement Land and Resource Management Plan. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5315175.pdf

U.S. Forest Service (USFS). 2021. FINAL Region 6 Regional Forester and OR/WA State Director Special Status Species List. June 21, 2021. <https://www.blm.gov/sites/default/files/docs/2021-08/OR-P-IM-2021-004-att1.pdf>

U.S. Forest Service (USFS). 2022. *Erigeron stanselliae* Monitoring Data. Unpublished data current to 2022.

Personal Communications

Danielle Marshall, Conservation Biologist, Oregon Department of Agriculture, Native Plant Conservation Program