2026 Plant Conservation Symposium - Abstracts

Featured plenary presentations:

Presenter: David Thomson, MS
Affiliation(s): USFWS

Missing the forest for the trees

You're hired to do a job; one you went to school for and maybe one you've done professionally for many years. At least it looks like one you know how to do! You feel confident that you can be successful, and for a few years you work diligently on the usual site tasks: weeding, seeding and planting. For the Oregon Silverspot Butterfly, "wash, rinse and repeat" is more than idiom to a species reliant on early seral meadow habitat.

Even better, you find opportunities to innovate: qualitative monitoring protocols to conserve effort in perpetual management, hybrid population-habitat modeling to provide quantitative habitat goals, rotational management through prescribed fire (actually I can't claim this; it belongs to the tribes), and even an online native plant materials database for sharing information between Federal and State agencies, with their NGO partners.

But maybe it's not enough; maybe down in the trenches, as you work diligently, surmounting difficulty after difficulty… maybe you've become the problem. And hopefully something will make you pick your head up, have a look around, and see the forest for the trees.

Presenter: Tom Kaye, PhD
Affiliation: Chief Scientist, Institute for Applied Ecology

Looking up, down, backward and forward: Lessons learned and unanswered questions in western Oregon grassland restoration

Habitat restoration in western Oregon is an ongoing challenge of managing weeds, selecting and establishing plants from seed or rooted material, choosing and implementing the most effective management tool, and ongoing invasive species control. Layer on to that the impacts of climate change and gaps in our understanding of the effects of seeding and management treatments, and the job is daunting on one hand, and frustrating on the other. Successful restorations are truly achievements to be celebrated. This talk reviews some successful prairie restoration projects and synthesizes a few key findings of two decades of research on species and habitat restorations. Questions that will be explored include what are the pros and cons of fire and herbicide? What are the historical prairie communities in the Willamette Valley? What species and communities should we plan for in our current and future restorations? Are there native plants waiting to come up from the soil seedbank? Can we manipulate soil nutrients to benefit native plants? How can we improve seedling establishment? And more!

Special Presentation

The West's Vanishing Wildflowers

Presenter: Barbara Ertter

Affiliation(s): Research Associate, Harold M. Tucker Herbarium at College of Idaho &j Snake River Plains Herbarium at Boise State University; Emeritus Curator of Western North American Flora, University Herbarium and Jepson Herbarium, University of California-Berkeley

Abstract: Although forbs (aka wildflowers) comprise the largest component of native plant diversity in the semi-arid western United States, most inventory and management efforts focus on woody plants, grasses, and those forbs with some level of protected status. As a consequence, much of our regional biodiversity could be bleeding away with no one paying attention. A general overview covers evidence, causes, and ways to address ongoing decline, and why it matters.

Session: The Native Seed Pipeline

1. From supply chain to supply network: Strengthening native seed systems through partnerships

Presenter: Alexis Larsen

Affiliation: Institute for Applied Ecology

Abstract: The restoration seed supply network is a complex system of interconnected stakeholders who rely on one another to fund, plan, and implement native plant materials projects for ecological restoration. While this system has traditionally been described as a linear "seed supply chain," the term network more accurately reflects the dynamic, collaborative, and often non-linear relationships that drive successful plant materials development.

To address this complexity, regional native seed partnerships are emerging across the United States to strengthen coordination, build capacity, and advance shared restoration goals. In Oregon, the Institute for Applied Ecology coordinates two regional seed partnerships serving the Willamette Valley and the Oregon Coast. By bringing together land managers, growers, researchers, agencies, and practitioners, these partnerships leverage shared resources, expertise, and capacity to expand regional native plant materials development.

This presentation explores the restoration seed supply network as a framework for understanding collaboration in native seed systems and highlights successes and lessons learned from IAE's regional partnerships. Topics include collaborative species selection, grower engagement, and strategies for increasing regional capacity through partnership-based approaches.

Session: The Native Seed Pipeline

2. Implementing the Oregon Native Seed Strategy: Building regional capacity for climate-ready restoration

Co-Presenter: Kathryn Prive

Affiliation: The Understory Initiative

Co-presenter: Mara Friddle

Affiliation: Institute for Applied Ecology

Abstract: Climate change is increasing the pace and scale of ecological disturbance across Oregon, yet restoration capacity is often limited by more than the availability of native seed. It is constrained by the "missing middle" between wild seed collection and on-the-ground restoration: the growers, infrastructure, technical assistance, relationships, and knowledge-sharing systems needed to transform wild-collected seed into restoration-ready plant materials.

This presentation explores how Oregon's Natural Working Lands Seed Strategy Implementation Project took a systems-based approach to implementing the Oregon Native Seed Strategy. Rather than focusing solely on short-term metrics such as pounds of seed produced or acres restored, the project invested in reducing barriers throughout the native seed pipeline. Efforts included expanding regional grower networks, supporting new producers, strengthening shared seed cleaning and processing infrastructure, developing technical resources through the Oregon Restoration Growers Guild, and building collaboration among growers, Tribes, agencies, and restoration practitioners.

The presentation will discuss how these investments create the social and operational capacity needed to respond to an uncertain future. By strengthening communication, coordination, and regional production networks before they are urgently needed, Oregon is building a restoration system that is better equipped to adapt, innovate, and scale when large wildfires, invasive species, or other unexpected disturbances create sudden demand for native plant materials. This systems perspective offers a model for implementing statewide restoration strategies under increasingly dynamic environmental conditions.

Session: The Native Seed Pipeline

3. Phased native seed amplification in the high desert: A case study in private-public partnerships

Presenter: Matt Shinderman

Affiliation: East Cascades Native Plant Hub, Oregon State University-Cascades

Abstract: The East Cascades Native Plant Hub (the Hub) at OSU-Cascades was formed in response to local, regional, and federal demand for native plant materials. The Hub pursues a full life-cycle approach to native plant material development, from hand collection to final delivery of seed or plugs to project sponsors. Seed amplification projects at the Hub rely on partnership with Dry Fly Land Management, a private land management company stewarding over 2600 irrigated acres in Terrebonne, Oregon. The partnership model leverages the strengths of a university-backed applied science cooperative with an entrepreneurial agricultural producer to initiate foundation seed lots at low-risk and transition to larger-scale seed amplification, ensuring appropriately sequenced and scientifically informed seed increase projects. Goals of the partnership include meeting regional and federal partner seed demand, evaluating and tracking seed production strategies and outcomes, and documenting key lessons for development of sustainable native seed supply chains. The partnership exhibits a reciprocal learning collaborative, wherein Hub staff provide native plant material ecology, sourcing, propagation and distribution expertise while the land management team brings deep knowledge of the land as well as a wealth of agricultural production experience, connections to regional agricultural service providers, and equipment expertise. As of 2026, the Hub has established 10 acres of foundation seed production fields and approximately 60 acres of large-scale increase fields, while Dry Fly Land Management has over 250 acres of seed increase fields established with native bunchgrasses. Success of the partnership thus far has relied on establishment of trust and shared vision, a spirit of problem-solving, clear and regular communication, and an adaptive approach.

Session: Recovering Oregon's Listed Plants

4. Managing *Plagiobothrys hirtus* in the I-5 corridor

Presenter: Ann Kercher

Affiliation: Oregon Department of Transportation

Abstract: Rough popcorn flower (*Plagiobothrys hirtus*) is endemic to Douglas County and most often found occupying valley floor vernal pool habitat. Between Yoncalla and Wilbur, there are five locations where rough popcorn flower occurs on ODOT owned tax lots or within the Right-of-Way. These sites include three special management areas, where existing populations were identified, as well as two mitigation sites, which were created to offset impacts from highway projects. One of the mitigation sites, known as Popcorn Swale, is located near Wilbur. Within a few years of monitoring this site, it was clearly not on track to meet the population numbers set forth in the permit performance standards. In order to address the issue, pools were constructed matching the profiles of those at a nearby location where the popcorn flower population was stable. Pool creation, in hand with vegetation management, has resulted in a stable population much exceeding expectations, let alone the original performance standards. All sites on ODOT property are consistently managed and routinely monitored year by year, the results of which show a trend toward stable, even thriving populations. Popcorn flower is on its way to becoming a success story, as it is being considered for down-listing. The populations occurring on ODOT property are a contributing factor to this remarkable recovery, as they are thoughtfully managed, routinely monitored, protected and preserved into the future.

Session: Recovering Oregon's Listed Plants

5. An exploration into introducing silvery phacelia (*Phacelia argentea*) to Oregon Dunes National Recreation Area

Presenter: Laura Estrada

Affiliation: Institute for Applied Ecology

Co-authors: Scott Harris (Institute for Applied Ecology), Armand Rebischke (US Forest Service), Chelsea Monk (US Forest Service), Maggie Graham (Wild Rivers Land Trust), Morgan Fay (The Understory Initiative)

Abstract: Silvery phacelia (*Phacelia argentea*) is an endemic to the coastal dunes of southern Oregon and northern California. The species is listed as Threatened by the Oregon Department of Agriculture and was federally designated as Threatened under the Endangered Species Act in 2023. Given ongoing threats to coastal dune habitat, active conservation efforts such as habitat management, outplanting, and seeding, will be important components of the species' recovery. Understanding how different plant materials perform in restoration settings can help refine approaches for establishing new populations while maximizing available conservation resources.

In 2023, the Siuslaw National Forest partnered with the Institute for Applied Ecology and The Understory Initiative to develop an introduction plan for silvery phacelia near Horsfall Campground within the Oregon Dunes National Recreation Area. Experimental plots were established using either seed or plugs. Plots were monitored to evaluate establishment and vigor, while project costs and management requirements were documented for each approach. By pairing ecological outcomes with financial and logistical considerations, we evaluated the relative effectiveness and feasibility of using seed versus plugs for future silvery phacelia introductions.

This project provides an opportunity to examine not only whether a restoration effort can establish a new population, but also how monitoring can inform the practical decisions that determine whether restoration approaches are scalable and sustainable. Results from this work will help guide future silvery phacelia introduction efforts on the Oregon coast and contribute to a growing understanding of effective recovery strategies for this federally threatened species.

Session: Recovering Oregon's Listed Plants

6. A holistic approach to western lily restoration (integrating ITEK and western science)

Presenter: Teresa Bird

Affiliation: Northwest American Indian Coalition

Abstract: We are in the early stages of a genetics project to learn more about hybridization, gene flow between populations, and genetic diversity within populations, in order to gain a better understanding of the status of the species and inform population augmentation work. We are also working with the Native community to remove barriers preventing them from traditional use and tending of the species, both in order to revitalize cultural practices and aid in plant propagation. This also includes fire, an important piece to tending the landscape that historically maintained the early seral fen habitat that supports western lily and a wide variety of other uncommon and culturally important plants. Through partnership with the USFWS, South Slough NERR, and an MOU (in progress) with OR State Parks, we are hoping to be able to implement cultural burns at western lily sites next fall. We will be incorporating long-term monitoring into these activities, and are also planning to collaborate with a wetland researcher from PSU to incorporate her data into our monitoring.

Session: Recovering Oregon's Listed Plants

7. Success in restoration of Kincaid's lupine – increasing native diversity and lupine cover through restoration

Co-Presenter: Denise Giles

Affiliation: Institute for Applied Ecology

Co-Presenter: Anna Merzenich

Affiliation: Institute for Applied Ecology

Abstract: Kincaids lupine (*Lupinus oreganus*) and Fender's blue butterfly (*Icaricia icarioides fenderi*) are native species endemic to the Willamette Valley and Puget Trough. Restoration efforts funded by OWEB over the last decade have contributed to recovery of these rare species in the Willamette Valley.

Reported here are activities conducted from 2019 to 2025 at 12 sites which are host to both Kincaid's lupine and Fender's blue butterfly. Sites were monitored in 2020/21 prior to implementation of restoration activities and then again in 2026. Monitoring includes measures to assess habitat quality as it relates to recovery goals and include; species diversity and richness, percent cover of functional groups, and the assessment of target weedy and woody species. Foliar cover of Kincaid's lupine was also measured at each site before and after restoration activities.

Initial site conditions roughly fall into three categories; 1) restored/remnant prairie (high quality), 2) restored/remnant prairie (medium quality) and, 3) chemical fallow/reset. Lupine cover prior to restoration was ~1,100 m^2 across the 12 restoration sites. In 2026 cover increased to more than 3,000m^2, more than doubling at six of the twelve sites. Greatest changes in lupine cover were observed in the 'reset' sites, which also showed the greatest changes in native cover and increases in native diversity.

Both lupine plugs and seed were utilized as plant materials for restoration. Seeding was more successful than plugs. Plugs are better suited for high quality, or small sites where large scale restoration actions or disturbance are not warranted. Seeding is a more cost-effective way to increase foliar cover of lupine at larger scales and in areas where more intense management actions have occurred.

Session: Recovering Oregon's Listed Plants

8. Resolving and protecting the status of the rare *Silene douglasii* var. *oraria,* Cascade Head Catchfly, based on new data

Presenter: Susan Kephart

Affiliation: Willamette University

Abstract: The Cascade Head Catchfly, an Oregon endemic, was first collected by Morton Peck 100 yrs ago. He described it as a new species, *Silene oraria*, Sea-Bluff Campion, in 1930, visible at Neahkanie Mt. and Cape Lookout to the North. Later, Hitchcock and Maquire (1947) and Kruckeberg (1964) split them into three varieties that Kephart and Sturgeon (1993) named as *Silene douglasii* var. *douglasii*, *S. d.* var. *oraria*, and *S. d.* var. *rupine.* The latter taxon is limited to shallow rocky sites in the Columbia River Gorge. Plants are defined by narrow leaves, borne on glandular to eglandular stems and calyces; fruit capsules narrow. Instead, *S. d.* var. *oraria* has short, broad, thick sessile basal leaves tomentose stems with a strongly inflated calyx and wide, petal limb, often 2-3 cleft at margin; capsules broad. Plants of *S. d.* var. *douglasii* are more variable in leaf size but shorter than wide than in *S. d.* var. *rupine* stems with strictly eglandular; calyces not strongly inflated; and petals limbs mostly lack cleft margins. In contrast to other varieties, its populations range widely from the west coast of British Columbia, Washington, and Oregon to California's Sierra Nevada and eastward to the Rocky Mountains.

In the last 4-7 yrs, populations of *S. d.* var. *oraria* have declined rapidly, linked to trampling by deer, elk, humans, and shifting climate. Demographic study showed higher finite growth rates in rocky areas than grassy sites; in one year deer browsing damaged 87% of grassy native fescue. Plants at Cape Falcon no longer exist, likely due to human foot foot traffic.

Timing is critical for management and federal protection, due to low population numbers, and the reliance of critically imperiled organisms on scarce native grasslands, e.g., Oregon's Silverspot butterfly, native bees and flies. Moreover, Federal status provides more resources for appropriate management, and in engaging diverse organizations.

Session: Restoration at Landscape Scale

9. Ecological legacies shape floral community response to high severity wildfire across managed forests

Presenter: Laura Berger

Affiliation: University of Oregon

Co-author: Lauren Ponisio

Abstract: Patterns and processes of wildfire are rapidly changing, becoming more severe, frequent, and widespread, driven by climate change and fire suppression. As wildfire becomes more prevalent across terrestrial landscapes, it increasingly intersects with anthropogenic land use — a pattern especially apparent in the Pacific Northwest, where wildfire now overlaps with more than a century of active timber harvest. While many species within this region are adapted to a moderate, mixed-severity fire regime, it remains unclear how the ecological legacies of prior timber harvest interact with altered fire regimes to shape post-fire plant community recovery.

We draw on five years of post-fire vegetation data collected across three private landowners, all managed for timber production, impacted by the Holiday Farm Fire, to examine how ecological legacies of pre-fire stand age interact with fire severity to shape plant community recovery. At each site, we recorded plot-level species counts to track community composition over time. We find that younger pre-fire stands contain greater post-fire species diversity, but this increase is driven by non-native plants, suggesting that older forest legacies may buffer against non-native invasion after high-severity burns. These results indicate that pre-fire stand age could serve as a practical screening variable for prioritizing weed management efforts, helping coordinate post-fire restoration in fire-prone, actively harvested landscapes.

Session: Restoration at Landscape Scale

10. Wood chips, hidden seeds, and other surprises: Lessons we have learned so you won't have to

Presenter: Andy Neill

Affiliation: Greenbelt Land Trust

Abstract: Site preparation and weed control are essential to successful landscape-scale restoration and planting success, but projects do not always proceed as planned or stay within budget. Greenbelt has restored upland and wet prairies, oak savannas and woodlands, and floodplain forests, each presenting distinct challenges for native plant establishment and weed control. Some lessons apply broadly, while others may be unique to a particular project. These experiences include projects involving abundant wood chips, a hidden crop in the seedbank, and other unexpected restoration challenges that can keep us up at night. By sharing these lessons, we aim to help restoration practitioners anticipate challenges and adapt site preparation and planting strategies to the conditions of each project.

Session: Restoration at Landscape Scale

11. Lower Deschutes rangeland restoration

Presenter: Hilary Doulos

Affiliation: Oregon Department of Fish and Wildlife

Abstract: The Oregon Department of Fish and Wildlife (ODFW) received Natural and Working Lands Funds to support rangeland restoration on the Lower Deschutes Wildlife Area. This geography in north-central Oregon, similar to many areas across eastern Oregon, has been severely impacted by annual grass invasion, decrease of native perennial bunchgrass communities, and continued loss of valuable native shrub steppe vegetation. Historic grazing practices combined with changes to the historic fire regime and the increase in high severity wildfires have altered the plant communities across the lower Deschutes landscape.

ODFW completed annual grass treatments using Rejuvra across approximately 5800 acres of the Lower Deschutes Wildlife Area and adjacent private lands. Following herbicide treatment, nearly 50,000 native shrub plugs were planted within the treated areas to enhance the native shrub steppe community. ODFW is completing monitoring across the treatment area using a modified Oregon Rangeland Monitoring Protocol (ORMP), and will continue to pursue opportunities to add to this landscape restoration effort and address concerns highlighted through monitoring.

This presentation will describe this project's planning process, collaboration with partners, lessons learned following two years of monitoring since the initial treatment, and next steps.

Session: Restoration at Landscape Scale

12. TBD

Presenter:

Affiliation:

Abstract:

Session: Tools for Conservation and Management

13. The role of plant diversity data in informing management and conservation efforts

Presenter: Linda Hardison

Affiliation: OregonFlora

Abstract: Knowledge of the plant diversity of a region is the foundation for effective land management practices. The ability to monitor the distribution of taxa comprising plant communities gives necessary context for the study of both rare taxa and invasive species. Similarly, successful restoration relies on an understanding of the plant communities that existed prior to disturbance, and those which can adapt to anticipated changes due to climate disruption.

OregonFlora's plant diversity dataset encompasses herbarium records, observations from professionals, and citizen science contributions. Leveraging OregonFlora's capacity to catalog and distribute these comprehensive resources for the state frees conservation efforts to focus on their specialties; it is a means to nurture necessary connections between programs and to expand the impact of topic-focused tools and data. This presentation explores some of the data needs within conservation and weed management endeavors as well as opportunities to maximize the efforts of organizations through OregonFlora's consolidated dataset.

Session: Tools for Conservation and Management

14. The future is now: Why seed banks have never been so important

Presenter: Roxy Olsson

Affiliation: Rae Selling Berry Seed Bank and Plant Conservation Program

Abstract: Conservation Seed Banks were initiated as an *ex situ* strategy to safeguard genetic diversity of rare and threatened species in the event of catastrophic loss experienced *in situ*. These seeds are meticulously documented and cared for in long-term storage. However, the purpose of both depositing and withdrawing seed is emphasised as our landscapes and climates are changing at a pace like never before. Between climate change and noxious weed pressures, the adaptability of rare plants becomes an ever-looming question. This elevates the importance of utilizing conservation seed banking as an imperative resource for both providing genetically robust seed sources and tracking that data. Using the Rae Selling Berry Seed Bank and Plant Conservation Program as an example, we illuminate how consistent wild seed collection, preservation storage, germination research, and propagation planning help provide the material needed to establish resilient native populations.

Early coordination among seed banks, noxious weed experts, agencies, and land managers can help identify the gaps of resources and knowledge, ensure that appropriate genetic material is captured, and plants are made available to help prevent biodiversity loss. Just as seeds hedge their bets in germination, the ability for conservation networks to navigate an uncertain future depends on the wealth of strategies we employ to establish native plant populations with the genetic diversity and adaptive capacity for resiliency.

Session: Tools for Conservation and Management

15. Rangeland seeding suitability soil map layer for management planning

Presenter: Rory C. O'Connor

Affiliation: USDA-Agricultural Research Service

Co-authors: Jennifer Moffit, (USDA-NRCS), Steve Campbell (USDA-NRCS), Steve Campbell (USDA-NRCS)

Abstract: Seeding success in rangelands is frequently unsuccessful because of several reasons: lack of moisture, inadequate seed bed preparation, unsuitable soils and climate for species being planted, etc. However, after disturbances like fire, restoration plans require seedings to occur often in a quick timeframe. Understanding the pressures land managers have surrounding restoration project requirements, we utilized the Soil Survey Geographic Database (SSURGO) and integrated ten soil and climate properties that influence seeding establishment on rangelands to create a mapping product. This mapping product assesses the suitability of soils for native seeds to establish assuming that the site was prepared, appropriate plant species were selected, and adequate weather conditions occur. This mapping product does not provide the probability of seeding success, but it does provide a guide to where on the landscape a land manager should prioritize their finite resources for potential seeding success on Oregon's rangelands.

Session: Tools for Conservation and Management

16. Opportunities for monitoring native and nonnative plants in forestlands using Forest Inventory and Analysis plots

Co-Presenter: Tyson Wepprich

Affiliation: Oregon Department of Forestry

Co-Presenter: Jason Reinhardt

Affiliation: Oregon Department of Forestry

Abstract: The Oregon Department of Forestry (ODF) manages ca. 745,000 acres of state forestland to provide economic, environmental, and social benefits. Within ODF, the State Forests Division monitors and reports management outcomes on state forestland under a partnership with the US Forest Service Forest Inventory and Analysis (FIA) program. Since 2001, FIA has established 1 permanent plot per ca. 6,000 acres across all forest ownerships in Oregon. ODF tripled the FIA plot density on state forestlands in 2020. While plot measurements focus on tree inventory, tree health, and site disturbances, vegetation data are collected on the most abundant native species and targeted nonnative species. We will demonstrate how ODF uses FIA plots to track native plant diversity across geographic regions and management emphasis zones (i.e., conservation or timber focus). Most treatment of invasive weeds occurs along roads or in areas with forest operations. However, ODF can use FIA plots to estimate prevalence at larger landscape scales with the extensive sampling design. Repeated measurements (about 1/10 of the ca. 10,000 forested plots in Oregon are visited annually) can show changes in both native or nonnative plant responses to forest operations or environmental changes. FIA vegetation data are underutilized in landscape-scale assessments of forestland plant community changes and ODF encourages others to use this publicly available monitoring resource.