

RAE SELLING BERRY SEED BANK & PLANT CONSERVATION PROGRAM



Fall 2016 Newsletter

From the Director



Director Ed Guerrant

Record rain in October has put a dent in a five year drought that has parched Oregon and especially the SW USA. Last year at this time, 100% of Oregon was classified 'Abnormally dry' at least, while east of the mountains was either in 'Moderate' or 'Severe' drought. Indeed, up until a month ago abnormal drought conditions remained, even in western Oregon, and in eastern Oregon they still prevail. The part of Southern California where I recently attended a Botanic Gardens Conservation International US board meeting remains in a state of extreme drought, but even there they are getting light showers if not substantial rain.

While I am truly happy that the rains are easing the drought, it did not mean that I and several USFS colleagues did not get very wet and cold in late October during our most recent outplanting of *Arabis hastatula*, in the Willamette NF. We were rained on the entire outing, and by the time we finished planting, the snow was beginning to stick. Earlier in October, I and my Coos Bay District BLM colleagues were fortunate to catch a narrow window of dry weather to thin the dense vegetation closing in our long running Western lily reintroduction experiment. Salal especially had exploded in the last two years.



Tejon Ranch with a hint of rain



Calochortus coxii,

This summer we also fulfilled a seed collecting contract funded by the National Fish and Wildlife Foundation, through the Center for Plant Conservation, meant to build reserves of the most vulnerable species.

Calochortus coxii, a lily endemic to serpentine soils, was our target. It grows in meadows on a 10-mile-long

MAKING A DIFFERENCE

VOLUNTEERING

Your support helps us to do our best work.

Please call Kris at (503) 725-2468 or email kfreitag@pdx.edu if you would like to support our program.

MAKE A GIFT TODAY

GIVE ►

Have you included or considered including the Rae Selling Berry Seed Bank in your estate plans? If so, or if you would like to learn more, please contact Scott Shlaes, Director of Development for Sustainability Initiatives at [\(503\) 725-2998](tel:5037252998) or shlaes@pdx.edu



Stay up-to-date with the Seed Bank on our Facebook page!

crinite mariposa lily

serpentine ridge in Douglas County, where incursion of woods and invasive species provide an increasing threat. Its seed capsules open downwards, providing a collection challenge, but Kris and her volunteer helper were able to prevail by enclosing the immature fruits in small mesh bags.



Mesh bags catch seed

The citizen science program Kris Freitag discussed in [last fall's Newsletter](#) has taken root. She provides a brief update of Citizen's Rare Plant Watch in this issue. The importance of this and other citizen science efforts is enormous. It provides a way for ordinary members of the public to make valuable contributions to 'real' science that have genuine conservation value. The efforts of citizen scientists can greatly expand the amount of information available to scientists and conservationists. Perhaps the longest running citizen science program is the Christmas Bird Count, begun in 1900 by Frank Chapman and run by the Audubon Society, partly as an alternative to what was then a traditional Christmas bird hunt. These data were critical to a [finding in 2007](#) that populations of at least 20 common bird species had been reduced by almost 70% in just forty years!

We are especially gratified that the many years of thought and effort that have gone into developing a relational database for the mountain of information we have acquired over 33 years is tantalizingly close to bearing fruit. We are now to the point that the programmer with which we're working - interrupted at times for the birth of two absolutely beautiful babies - is creating the actual entry screens.

Finally, I would like to thank both long term and new volunteers and donors, without whom our work would be considerably slower and less extensive.

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A summer of Rare Beauty

Kris Freitag



Co-leader Zak Weinstein (front) and other volunteers point out a particularly flowery hillside near the coast.

What a time we had, before all this rain! In this, our first season of Citizen's Rare Plant Watch (CRPW), we took eight groups to beautiful places throughout our region. We couldn't have asked for sweeter weather, plant-geekier volunteers or more lovely plants. Our focus unfolded with the seasons, from the early, low-elevation bloomers in the Gorge, up into the Coast Range, to high summer in the Cascades and out to the coastal dunes late in the season.

Our spring training session in April, generously hosted by Happy Valley New Seasons Market, was well attended. Jason Clinch, most recently the head of

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CRPW through the Native Plant Society of Oregon, presented training materials adapted from University of Washington's Rare Care trainings (thanks to Program Manager Wendy Gobble). I shared about The Berry Botanic Garden and the historical context of our connection to CRPW and our plans for the future.



Volunteers attend training in April



Doran Burrell (left) and Wendy Lee on the top of the world

By the end of the field season, we had received \$20,000 from the Bureau of Land Management for seed money. The Oregon Parks and Recreation Dept. and the U.S. Forest Service had provided us with this season's site data for 33 different species. We ended up taking out a total of 30 volunteers, and we completed 15 survey forms on the populations we were able to find. It has been a resoundingly successful first season for CRPW at Portland State University, and we are grateful that we have the opportunity to support these public agencies and to house and develop this valuable program.

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Hunting for Treasure

I hope to convey some of the beauty and excitement of our monitoring trips with the images that follow~



Suksdorfia violacea (violet suksdorfia), named for Northwest botanist Wilhelm Suksdorf, is a charming denizen of cliffs in the Cascadia Bioregion. In Oregon it is at the southernmost edge of its range and is uncommon, though considered stable, found as it is in rather safely inaccessible places.

We found an abundance of uncommon Northwest rock dwellers in subsequent

Gorge trips. *Erigeron oregonus* (Gorge fleabane) is a narrowly endemic "daisy" of moist and shady cliffs. (Image: Mary Nichols)



Castilleja rupicola (cliff paintbrush) is a stunning plant with a greater range than Gorge fleabane, though in similar habitats. It is beloved and pollinated by hummingbirds, as are many red flowering paintbrushes.

Bolandra oregana, called Oregon bolandra (or northern false coolwort by other states) can be found on moist cliffs or in wooded areas. (Image: Rose Madrone)



Cardamine pattersonii (Saddle Mountain bittercress) has a very narrow range in the coastal hills. What a thrill it is to seek out a plant population with little location information to go on and to find a plant we've never noticed before, blooming away!

In the Cascades, we looked for populations of *Eucephalus gormanii* (Gorman's aster) that had not been assessed for 25-35 years. It was a little tricky negotiating its favored loose rocky habitat atop steep slopes, but deeply rewarding.





New volunteers Bec Braisted and Billy Matthews noticed this small plant. We will return to the Tillamook area coast next year to verify if this species is saltmarsh starwort (*Stellaria humifusa*). (Image: Bec Braisted)

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A Glimpse into a Wider World

Ed Guerrant



View to southeast over western tip of Mojave Desert on Tejon Ranch

The mission of the Rae Selling Berry Seed Bank & Plant Conservation Program is to "Conserve the genetic resources of Oregon's native plants for current and future generations." But Oregon is not an island isolated from the rest of the world, and in our [vision statement](#) we acknowledge this fact by aiming "to use our expertise in support of plant conservation regionally, nationally and globally."

Toward these ends, much of our on-the-ground work over the years has been with plants of our region while we participate in the efforts of national and global consortia of garden-based conservationists. I described three such groups with which we are involved in the Spring 2015 Newsletter article "[Whither Plant Conservation.](#)"

One of these groups, the [Center for Plant Conservation \(CPC\)](#), has moved its headquarters from the Missouri Botanical Garden to the San Diego Zoo Global and a more secure financial and administrative footing. CPC is expanding its work in the USA and considering increasing its geographic scope to include Canadian conservation institutions. Another group, [Botanic Gardens Conservation International \(BGCI\)](#) is the parent organization of [BGCI US](#), its United States branch, upon which I will focus here.

BGCI is a membership organization of around 500 botanical gardens, arboreta, and other



Huntington Botanical Gardens

organizations concerned with plant conservation, from over 100 countries, of which about 75 are in the USA. The vision statement of BGCI is "To mobilise botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet."



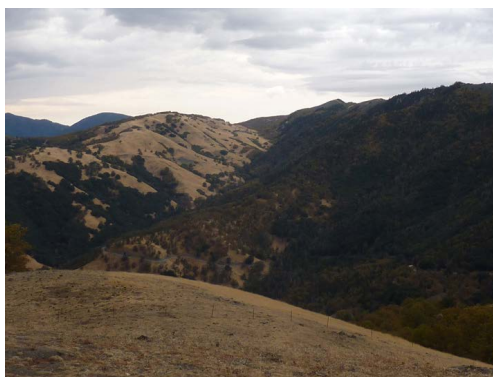
Director Abby Hird Meyer and daughter Violet

I am on the Board of the BGCI US and recently attended its annual in-person board meeting (we meet at least quarterly by conference call), held this year at the Huntington Botanical Gardens in San Marino, California. We were fortunate to be joined by the Secretary General and the Board President of BGCI global, Dr. Paul Smith and Dr. Steven Blackmore, respectively. While BGCI US hit a bump in the road when Executive Director Kate Sackman left this summer for another position, the board unanimously selected long time program director Dr. Abby Hird Meyer to replace her.

As with many conferences and meetings I've attended, there was a field trip, which is often where some of the most interesting conversations take place. The day before the board meeting began, we had a splendid tour of an area that I've long wanted to explore. Just south of California's great

Central Valley is a large piece of relatively untouched land. The **Tejon Ranch**, established through a Mexican Land Grant in 1843, covers more than 400 square miles and is the largest privately owned piece of land in California. Fortunately, much of it is being managed for long term conservation. It lies fifty or so miles north of Los Angeles, where the Sierra Nevada mountain range meets the South Coast Ranges, the Transverse Ranges and the western tip of the Mojave Desert. I grew up in the San Gabriel Valley next to the San Gabriel Mountains, and have lived in the San Bernardino Mountains, both of which are within the Transverse Ranges; it was really a treat to see an area near "home" that I'd not previously visited.

I met the group just before lunch at the edge of the Mojave Desert, yucca trees all around. We drove north into the mountains where we saw striking changes in vegetation - from desert, through several types of chaparral, and then mixed broadleaf and conifer forest, with huge grasslands and curious barrens thrown in here and there. California condors are known to nest and are often seen in that area, but we did not see any.



Tejon Ranch Landscape

A major theme flowing through much of the discussion, first on the field trip and later in the meeting, was how most effectively to make the knowledge that has been gained over the decades readily available to member gardens and others interested in conserving native plants of their regions.

Toward that end, BGCI has been very active. One of four main activities outlined for the next five years is "Coordinating efforts and building plant conservation capacity in botanic gardens and



Tejon Ranch yucca trees

broader society. We build technical capacity in the botanic garden sector and beyond by acting as a knowledge hub and a clearing house for best practice, training, resources and expertise."

A major web-based component is clearly called for. BGCI is doing much to make "best practice" information widely available on the web, but that is a one way street, and there is much to learn from practitioners around the world. I would like to see BGCI create a plant conservation wiki-style web

page that would draw a distinction between "best practices" and non-vetted contributions, which could be pretty much anything. Viewers could not edit 'best practices' information, but could freely add comments about it. The rest would be like a regular wiki, though perhaps with some mechanism to help viewers navigate what may be the most dangerous aspect of web research: what information can you trust without being an expert in the first place?

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Berry Volunteers Connect



Volunteer Kristen Wright

Volunteer **Kristen Wright** has put in steady, regular effort for over a year and a half, helping us fulfill seed bank contracts. She explains: "I'm a recent graduate of PSU with a degree in Biology (Botany focus). I have a strong interest in plant conservation biology, and seek to explore how the conservation of plants and fragile ecosystems is achieved through strategies such as seed collection, propagation and long-term restoration practices. My experience at the Rae Selling Berry Seed Bank has given me insight into ex situ conservation and an appreciation for the extraordinary work and meticulous care necessary to preserve seeds. In addition to volunteering in the seed bank, I'm involved with Metro's Seed Conservation program and the Portland State University Herbarium."

Volunteer **Chris Sirakowski** has spent much time in the lab, as well as joining us on monitoring trips this summer. He has this to say about his path to the Seed Bank: "I am an environmental science student with a strong interest in botany. I have always been drawn to the natural world, and I want to do my part in helping to save our threatened resources. In the past I have worked at a plant nursery, wrangled snakes with a conservation herpetologist in central Texas, and I was a volunteer with the Audubon Society of



Chris Sirakowski on a CRPW outing

Portland at their Wildlife Care Center. I became *in the Gorge* familiar with the efforts of the Rae Selling Berry Seed Bank through a biology class volunteer requirement. The conservation aspect of the seed bank was a natural fit. This was meant to be a only a term-long project, but I continue to put in volunteer hours when my busy school schedule allows. Currently I am co-enrolled at Portland Community College and Portland State University, and after I graduate I will continue to work for a better future."



Volunteer and friend Louise Godfrey

We were shocked and saddened to learn of the passing this spring of **Louise Godfrey**, archival and administrative volunteer with The Berry Botanic Garden for almost its entire existence. Louise was a supportive, good-natured and knowledgeable presence for about 30 years. She led visitor tours that were informed by her long acquaintance with Rae Berry's friends, the Garden organization and the many special species of plants we cared for. She cheerfully stuffed envelopes for mailings, filed slides, shelved books and edited newsletters. Her steady and kind presence, sense of humor and skilled attention to detail were

immediately missed when infirmity forced her to withdraw from volunteering, and we now deeply miss her lovely self.

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Making a Difference - Private Support



*Kris Freitag with
*Eucephalus gormanii**

Though not a "private" donation, we offer many thanks to the **Bureau of Land Management** for the \$20,000 Cooperative Agreement that is supporting the initial phases of Citizen's Rare Plant Watch.

A special thanks to all who donated in the past year:

Katherine and Roger Lintault, Audrey Moser, Lorali Reynolds, Rachel Witmer, Jerry and Stephany Anderson, Lisa Blackburn, Janice Dodd, Jane Hergenhan, Elizabeth J. Lilley, Cheryl McCaffrey, David Mull, Carol Putnam, Judith and Charles Roberts, Patricia Schleuning, Paul Slichter, Patricia Stenaros, Donald Zobel, Dean Runyan, Courtney and Anthony Vengarick, Byron E. Lippert, Shirley Lutz,

Barbara Manildi, Reid Ozaki, Stephen Wille, Frank and Sarah Chaplen, Corinne Gentner, Joan Horstkotte, Virginia Morthland, Jean and Ralph Quinsey, Kareen B. Sturgeon, David and Kay Pollack, Judy Weber, Geof Beasley, Raj Sarda, Sylvia Giustina, Dawn and Edward Kropp, Priscilla R Senior, Sylvia B. Giustina Revocable Trust, Kropp Family Trust, Elisabeth Dally, Beverly Koch, Burton Lazar, Janet Dorow, Christine Ebrahimi, Jane Hartline, Keith Karoly, Georgia M. Lee, MD, Sara and Aaron Liston, Candy Puterbaugh, Andrew Rice, Susan and John Schilke, Jim Sjulín, Marna Tallman, Diane and James Waggoner, Kenneth Jay Walters, Janet and Stephen Webster, Ellen Liversidge, Elisabeth Farwell, Dr. Marcia Freed, Pamela K Johnston, NPSO - Cheahmill Chapter, Portland Garden Club, John Bondurant, Marsh Hieronimus, Eastmoreland Garden Club Unit 1, Patricia Schleuning, Janet and William McLennan.

Private gifts and grants make all the difference in the life of our program. You can go directly to our [giving page](#), or for more information on ways to make a gift, please contact Scott Shlaes, Director of Development for Sustainability Initiatives, at 503-725-2998 or shlaes@pdx.edu.

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Upcoming Events

NPSO Monthly Meeting: Metro Native Plant Center - Connecting Community and Partners with Seed Conservation and Restoration



Oregon white oak woodland
(Image: Bureau of Land Management)

Thursday, November 10, 2016, 7:00 - 9:00 p.m.
TaborSpace, 5441 SE Belmont Street
Free, refreshments served

Hosted by **Portland Chapter of Native Plant Society of Oregon**

Speaker: **Marsha Holt-Kingsley**, Native Plant Materials Scientist.

Metro's Native Plant Center's mission is to collect, amplify, and bank herbaceous seed that is commercially unavailable, rare, threatened, uncommon or of importance to Metro restoration projects. The Seed Conservation Program, which was created in 2005 and is supported by volunteers and youth crews, participates in regional plant materials programs to further the availability of native seed for restoration projects throughout the region. Oak woodland, wetlands, and upland prairies are the NPC's focal habitats and will be featured in the presentation.

[For more details>>](#)

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Great Northern Landscape Conservation Cooperative Webinars



The Great Northern Landscape Conservation Cooperative (GNLCC) is one of 22 LCC's in an international network established by U.S. Department of the Interior to advance collaborative landscape conservation. Encompassing a binational North American landscape covering nearly 300 million acres, the GNLCC geography extends from interior British Columbia to southwest Wyoming.

The GNLCC partnership is a network of U.S. federal, Canadian provincial and federal, Tribal Nations, state, academic, and conservation organizations. Working to achieve a collective landscape vision, the partnership

implements a regional approach to address conservation issues across boundaries and jurisdictions by sharing data, science, and capacity.

Upcoming webinars include:

- November 9: Integrating climate change into State Wildlife Action Plans
- November 16: America's inventory of parks and protected areas: An overview of the PAD-US system
- December 14: Hierarchical population structure in greater sage-grouse provides insight into management boundary delineation
- December 19: Green River Basin LCD - Mapping riparian vegetation

[For more details>>](#)

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PSU's School of the Environment: Fall Seminar Series

Thursdays, 4:00-5:00 p.m.

Academic and Student Recreation Center, 1800 SW 6th Ave, Rm 230

Free and open to the public

Hosted by PSU's **School of the Environment and Geography Dept**

November 10: **Andres Holz**, Director - Global Environmental Change Lab, PSU:

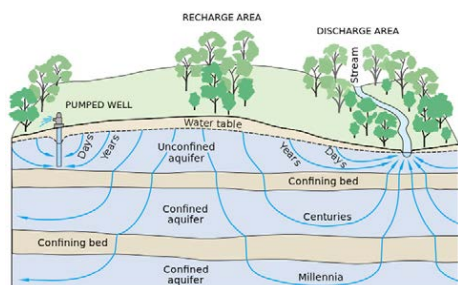
"Disturbance ecology in the southern hemisphere's temperate forests: understanding complex human-ecological processes through temporal and spatial patterns"

November 17: **Daniel Donato**, Natural Resource Scientist, Washington State Department of Natural Resources: "Post-fire and post-beetle outbreak studies in Yellowstone and the Pacific Northwest"

December 1: **John Abatzoglou**, Department of Geography, University of Idaho: "The impact of anthropogenic climate change on wildfire across western US forests"

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Groundwater 101



Thursday, November 19, 9:00 a.m. - 1:30 p.m.

16021 NE Airport Way

Registration required

Hosted by **Columbia Slough Watershed Council**

Join the Portland Water Bureau and the Columbia

Slough Watershed Council for a FREE educational workshop that teaches groundwater basics including local geology and hydrology, the role groundwater plays in our drinking water system, and what we can do to protect this important resource that lies beneath the cities of Portland, Gresham, and Fairview.

[For more details and to register>>](#)

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The Wide World of Seed Banking

Saving seeds for future use is as old as human civilization and as timely as today's headlines. Our focus has been on rare and endangered species, but the world of seed banking is far more expansive. It probably began with storing seed for next year's crop, and agricultural plants are likely still the most common focus of seed banks around the world. But recent decades have seen an explosion of seed banking of a much wider array of plants for many different purposes. In this section, we seek to provide a glimpse of the wide and wonderful world of seed banks.

In Our Country: National Tropical Botanical Garden

The Conservation Program at the National Tropical Botanical Garden is focused on protecting and conserving tropical plants. Scientists now believe that more than one-third of all tropical plants are threatened with extinction. To address this problem a number of organizations are working together to identify the global hot-spots of extinction and have implemented programs to protect these valuable plants before they are lost forever. Hawai'i and the greater Pacific region are considered hot-spots, and it is here that the NTBG is focusing its conservation program.



Hawaiian endemic, koki'o ke'oke'o, Hibiscus waimeae ssp hanneriae, once thought extinct (Image: David Eickhoff)

[Continue reading at the National Tropical BG site>>](#)

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World's tallest monocot, Ceroxylon quindiuense, is Colombia's national tree. (Image: Flints)

In the World: José Celestino Mutis Jardín Botánico de Bogotá

The overall objective of the Garden's scientific division is to generate knowledge to guide conservation and appropriate management of floristic diversity in the capital region.

Programs seek to contribute to the reduction of some of the causes of climate change and to mitigate its effects on biodiversity. To achieve these objectives, six research programs are in place, which include implementation of an ex situ conservation strategy.

[Continue reading; open in Google Chrome to translate>>](#)

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Stay informed on upcoming events and news by regularly visiting the [Rae Selling Berry Seed Bank web site](#).

at Portland State University

