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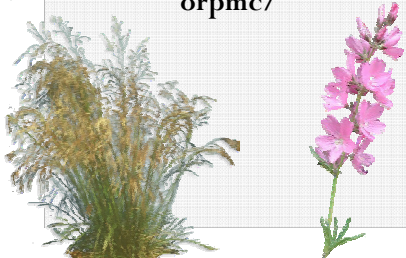
Natural Resources
Conservation Service

Since 1957, the *Corvallis Plant Materials Center (PMC)* has selected conservation plants and developed innovative planting technology to solve resource concerns. The *Corvallis PMC* service area includes the northern Pacific Coast Range, Willamette Valley, and Puget Sound as well as the Olympic, Cascade, and Siskiyou Mountains.

Joe Williams, Manager
Dale Darris, Agronomist
Amy Bartow, Botanist
Kevin Robb, Farm Foreman
Pete Gonzalves, Technician
Mike Cain, Technician
Wendy Coleman, Technician

USDA-NRCS
Plant Materials Center
3415 NE Granger Avenue
Corvallis, OR 97330-9620
Phone: (541) 757-4812

<http://plant-materials.nrcs.usda.gov/orpmc/>



Pacific Plants & Propagules

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Meadow Barley: *Versatile, Quick & Broadly Adapted*

By Dale Darris

Meadow barley (*Hordeum brachyantherum*) is native conservation bunchgrass with a lot of upsides. It generally grows 2 to 4 feet tall. Do you have a sunny wetland, shoreline, streambank, waterway, or ditch in need of some quick, reliable cover? Is it inundated in winter and dry in summer? Then this is may be the species for you. Few native grasses are as broadly adapted to a wide array of conditions as this one, including drought, wetness and salinity, yet it is easy to establish without being known as a weed menace.

Seedling vigor is high and the plant competes well with weeds early on. Observations have shown mature plants will tolerate prolonged winter flooding (November to March) to a depth of nearly 1.5 feet, and maybe more, as well as relatively infertile, droughty summer sites.

At least some populations are also adapted to wet soils that are moderately high in salts, which is why it occurs in high tidal marshes and surge plains in the Puget lowlands and along the Pacific Coast. Adaptation may be somewhat specific, so coastal seed sources may have greater salt tolerance than freshwater ones. The downsides to meadow barley are the cost of seed and its moderate value at best for grazing animals. Like most grasses, diseases may play a role, including smut, rust or ergot, so good quality seed should be purchased.

Used alone, the suggested seeding rate is 8 to 20 lbs/ac, the higher end being for broadcast applications on critical areas. As a relatively quick starter, meadow barley (at 1 to 4 lbs/ac) is a good companion for tufted hair-

grass (*Deschampsia caespitosa*), a slower establishing species with similar adaptations. The species is sometimes used as a cover crop in vineyards. The PMC plans on making a release in 2008.



Meadow barley at peak flowering (anthesis).

Lassen Peak: *The Last Cascade Joins the Native Plants for Parks Program*

By Amy Bartow

The Native Plants for Parks Program is a cooperative effort between NRCS and the National Park Service (NPS). It began in 1989 to share technical expertise and develop plant materials for use in park programs. Projects with Mt. Rainier NP, Crater Lake NP, and Olympic NP have been ongoing since the early 1990's but this year, Lassen Volcanic NP began its first project with the Corvallis PMC.

This awe-inspiring park is described on its web site: "To visit Lassen Volcanic National Park is to witness a brief moment in the ancient battle between the

earth-shaping forces of creation and destruction in northern California. Nestled within Lassen's peaceful forests and untouched wilderness, hissing fumaroles and boiling mud pots still shape and change the land, evidence of Lassen's long fiery and active past." Lassen Peak erupted in 1915, spewing ash as far as 200 miles to the east. This landscape is full of unique and amazing plants, most occurring at high elevations. Propagation techniques are not known for many plants growing in Lassen Volcanic NP.

In the spring of 2007, re-search trials were com-



Kings Creek Meadow, Lassen Volcanic National Park

pleted on ten species. The majority of the plants showed the highest germination when they were subjected to five months of cold-moist stratification (sitting on wet germination paper in a cooler at just above freezing temperatures) and then placed in a hot greenhouse, where they germinated. Some species did best when

they were cold-stratified for up to six months. This is not surprising for plants that have to survive under snow from October until July, and only have a two month growing season.

This information will be used to grow plants for the new visitor's center as well as degraded areas of the park.

Golden Paintbrush Challenge!

By Amy Bartow



Golden paintbrush

Is there any more golden paintbrush out there, anywhere? This endangered species has dwindled to just a few populations in Washington and is believed to be extinct in Oregon. If biologists could find more populations in the wild, conservation of this species could be vastly improved.

Golden paintbrush (*Castilleja levisecta*) is a perennial member of the Scrophulariaceae that is endemic to the Pacific Northwest in western British Columbia, Washington and Oregon. The species is currently considered

extirpated from Oregon. Paintbrush species are hemiparasites, meaning their roots attach to the roots of other plants and draw resources from them. Golden paintbrush is listed by the US Fish and Wildlife Service (USFWS) as endangered.

The USFWS, Washington Natural Heritage Program, the Oregon Natural Heritage Information Center, and many others have teamed up to produce a "wanted poster" to call attention to golden paintbrush. Getting the word out to landowners, especially private parties, may be key to finding new sites. The poster can be downloaded from the Institute for Applied Ecology

(IAE) web site at: <http://www.appliedeco.org/gp.htm>

The IAE has volunteered to coordinate a reward for discovery of new populations. Anyone who would like to send a donation to the "Golden Paintbrush Challenge" conservation fund is welcome to do so. Remember, they have one anonymous donor of \$100, and several others have committed to donating \$25. The IAE welcomes any and all contributions. If no rewards are made or if funds are left over, they will be used for on-the-ground restoration of golden paintbrush. Checks should be made out to "Institute for Applied Ecology."

Conservationists Share Solutions During National Pollinator Week

By Joe Williams

June 24 - 30 was National Pollinator Week, which meant a time to reflect on the enormous contributions that pollinators make in our lives. It was also a time for conservationists from NRCS, the non-profit Xerces Society, local conservation districts, and other groups to gather at the PMC to learn more about native pollinators and how to promote and enhance their habitats.

Xerces Conservation Director Mace Vaughn gave a slide presentation on

native pollinator biology and habitat conservation. The group then headed out to PMC production fields to collect and observe native bumble bees, sweat bees, mining bees, flies, wasps and moths thriving among the native plants. About 20 different species were collected and observed. Native bees help produce \$3 billion in crops across the U.S. each year. In order to thrive, these bees need protected nest sites and a diverse "buffet" of wildflowers in bloom from



early spring to fall. To come up with a species list and flowering dates for the Willamette Valley, the PMC is working with the Xerces Society and Oregon State University. This involves efforts to record flowering periods of a wide

variety of native plant species grown at the PMC as well as the different pollinator species that visit them. A detailed list of plants and a Technical Note will be coming out shortly. Stay tuned!



Common bugloss

Weed Profile: Common Bugloss

(*Anchusa officinalis* L.)

By Amy Bartow

Have you seen this plant? Common bugloss is a noxious weed that is appearing across western Oregon. With help from private landowners as well as public land managers, the spread of this plant can be contained.

Identification: Perennial herb; flowers May to October. Grows 1 to 2 feet tall. Stems and leaves fleshy; overall plant is coarsely

hairy. Basal leaves are narrowly oblong; mid leaves are progressively smaller up the stem, and the upper leaves are sessile (no petiole) or clasping. Blue to purple flowers with white throats. Petals are five equal lobes, forming an uncurved tube. Flowers found in coiled clusters at the end of stems. As the flowers open, coils unfold. Fruit is a four-chambered nutlet; each nutlet contains one seed.

Impacts: This plant invades alfalfa fields, pastures, pine forests, rangeland, riparian and waste areas. The fleshy stalks can cause hay bales to mold. Large, very dense stands can occur, offering

strong competition to native plant communities. It is exploding in large patches along roadsides and in woods in western Benton County and recently in Lane and Clackamas Counties.

Control:

Prevention – Learn to identify plants; know your property; beware of fill dirt, hay and seed from outside your area.

Cultural – Good competitive vegetation helps prevent infestation but doesn't stop it entirely.

Mechanical – Cultivation, digging and pulling can all be effective if sufficient tap root is removed.

Common bugloss in rosette stage

Chemical – Several are effective at label rates at or before bud stage with a surfactant added to penetrate the leaf hairs.

Please call:
1-866-INVADER
if you suspect you have found this species.

For more information on this weed please visit the Weedmapper web site at:

<http://www.weedmapper.org/anof.htm>

Threatened and Endangered Plants Training

By Kathy Pendergrass, *Oregon Plant Materials Specialist*

NRCS planners are required to consider whether federal funds spent to assist private landowners with conservation concerns may affect federally listed threatened or endangered species.

One thing that a planner may need to do is survey a property for threatened or endangered plants and determine whether proposed projects will have effects on populations of these species. There are currently 17 federally listed plant species across Oregon.

During 2006 and 2007, I provided field training on how to identify ten rare species and look-alikes, conduct plant surveys, and determine potential project effects for completing Biological Evaluations or Biological Assessments. During 2006, trainings focused on rare plants found in the Willamette Valley, including four sessions and five different plant species. During 2007, trainings were focused on southwestern Oregon plants.

In concert with US Fish and Wildlife staff, four training sessions were provided that included:

1. Kincaid's lupine,
2. Cook's lomatium, large-flowered wooly meadowfoam & Gentner's fritillary,
3. Western lily, and
4. Hairy popcornflower.

Due to popular demand, an additional training was provided for Willamette Valley field offices that included Kincaid's lupine, Willamette daisy, golden paintbrush, and Nelson's checkermallow.

During 2008, I plan to provide training for another batch of listed plants and develop technical notes with identification tips.

Stay tuned!



Kincaid's lupine



Large-flowered wooly meadowfoam



Western lily



Hairy popcornflower



Cook's lomatium



Gentner's fritillary