The Perennial Word

A Publication of Cedar Mountain Perennials

June 2015 **Volume 3, Issue 2**

Cedar Mountain Perennials :

Specializes in native plants for the Inland Northwest Garden.

Offering a wide selection of native perennial wild-flowers grown from seed or cuttings at our nursery outside Athol, Idaho. We also feature a limited selection of trees and shrubs.

Our plants have been selected to be ideally suited for climate, soils, and moisture regimes of the Inland North-west.

Inside this Issue:

Editor's Note:

It's June already and a hot summer seems to be in store for the Inland Northwest. Many plants in our demonstration gardens have bloomed a few weeks ahead of schedule. It is a good time to be thinking about growing native plants since when matched to the appropriate site they are excellent plants for the landscape to aid in water conserva-tion as well as reducing pesticide use. Both of which are good practices for conserving and pro-tecting our aquifers.

In light of this we decided to dedicate our "What's Bugging Me article to the current drought, where we are, and what we might expect from this sum-mer and what the implications may be. We also wanted to share with you some of our experiences in growing native plants from seed, what does it entail, how do we do it, what have we learned? Our plant of month for this month is the Mountain Hollyhock. This is a particularly beautiful and showy plant that is native to the mountains here in the Inland Northwest.

We hope you enjoy this issue of the Perennial Word!

Penstemon fruticosus: Shrubby Penstemon

Growing Native Plants from Seed

By Bob and Jill Wilson

As readily as native plants grow in the wild one would think that these plants would be very easy to propagate for cultivation. Looks, however, can be deceiving as native plants possess mechanisms which regulate the process of seed germination that are designed to optimize survival of these plants in the wild. The enterprise of growing native plants from seed is not as easy as planting them out in spring and waiting for them to grow.

Most native perennials possess some form of seed dormancy so that their seeds won't germinate until they have passed through the appropriate conditions. This seed dormancy is designed to prevent seeds from germinating until conditions are more favorable for survival and to prevent all of the seeds from germinating at once. Understanding seed dormancy and techniques to break it is key to growing native plants!

Dormancy may be caused by physical and/or chemical barriers. An example of a physical (or mechanical) dormancy is a hard seed coat or waxy layer that prevents the seed from absorbing water. Even if a seed is surrounded by water, until the seed soaks up some of it, it will remain inactive. Dormancy caused by physical barriers is overcome in nature in several ways including mechanical rubbing, freezing and thawing, digestion by soil microorganisms, passage through the digestive tracts of animals, and fire. In the nursery, hard seed coats are broken in a number of ways. If the seeds are large enough, the seed coat can be scraped with a pocketknife. Smaller seeds may be punctured with a needle. Hot or boiling water can soften a seed coat also. Many legumes (lupines, locoweeds, sweet vetch) and mallow family (globe mallow, mountain hollyhock, checker mallow) are commonly hard-seeded.


Seed trays in refrigerator at CMP

A chemical dormancy occurs when germination inhibitors are present in the seed that prevent germination even when the seed is exposed to adequate moisture and a suitable temperature. Some chemicals responsible need to either undergo a chemical change or be leached out of the seed before germination can occur. Chemical dormancy in seeds can be broken, depending on the species, by cold conditions or light. In some species, such as many penstemons, these germination inhibitors break down over time and seeds will germinate more readily after a few years in storage. Seeds that are sensitive to light include many species with very tiny seeds such as *Campanula*, *Mimulus*, and *Achillea* as well as many asters and fleabanes. These need to have their seeds sown on the soil surface. Seeds of many perennials from cold climates require exposure to cold and moist conditions to break dormancy and grow. The duration of the cold exposure, called cold stratification, varies by species, but for most is 1-3 months. Some seeds require two seasons of cold conditions before they will germinate, which we have found with some *Iris* seeds. Freezing is not required and, for many species we grow, the cold treatment takes place in a refrigerator. Seeds are planted in moist soil, covered, then refrigerated for a specific duration. Some species give better germination rates when the seed trays

(Continued on page 3)


Phlox diffusa: Creeping Phlox

(Continued from page 2)

are left outside for the winter. We have had this experience with western columbine and arnica.

Each species is different; propagation protocols are available for some species and not others. When we don't know, we must try different techniques and then determine which one is the most effective. To do this we will expose a known number of seeds of the selected species to a variety of stratification lengths. Then we wait for the seedlings to emerge and count the number of seeds germinating under each treatment to determine the percentage germination for each. It may take a few years to pin down that process and fine tune propagation protocols for each species. Good record-keeping is required. Finding what the secret is that unlocks each seed is one of the things that makes work at the nursery interesting.

Come Visit Us!

Our demonstration gardens are in full bloom now
It is a great time to see many of the plants we sell
In containers full grown and in bloom!

We are open on Fridays from 9 til 4
Or call us to make an appt.

Featured Plant:

Mountain Hollyhock

Illiamna rivularis, commonly known as Mountain Hollyhock, is an attractive native which is very suitable for the garden. While it possesses the common name of hollyhock, this plant is in a different genus that the cultivated hollyhocks and unlike them is a perennial. Plants have many stout, erect stems that are often branched and measure from two to four feet high. The inflorescence is an open raceme with deep rose to pale pink blooms.

Mountain hollyhock may be found east of the Cascade Mts. from British Columbia south to Oregon and east to Montana and Colorado. Mountain hollyhock is often found along streams or on moist slopes in canyons and in the foothills, although it may be found up to 7500 feet in elevation in the mountains at the southern extent of its range.

In its native habitat it is known as shade intolerant, which means it prefers full sun, though we have grown it successfully in filtered shade. It is an early seral species which means it colonizes areas following disturbance such as fire or timber harvest. In studies conducted in Central Idaho the species was reported to be abundant in areas following fire, but was absent in the same habitat types prior to.

To adapt to colonizing recently disturbed areas, seeds of mountain hollyhock have a hard seed coat and in nature may remain viable in the soil for long periods of time waiting for the perfect conditions for germination and survival. This characteristic is also referred as “seed banking” and makes Mountain Hollyhock is ideally suited to growing in the mountains of the Inland Northwest.

In cultivation Mountain Hollyhock is a beautiful perennial which can be quite a center piece for a moderately moist garden bed with full sun or filtered shade .

What's Bugging Me?

Pacific Northwest Drought?

By Jill Wilson

As I thought about what to discuss in this series for this issue of the Perennial Word I looked at a number of pesky or pesty issues around the area but one topic of bigger scope stood out. And that is the subject of this issue's "What's Bugging Me".

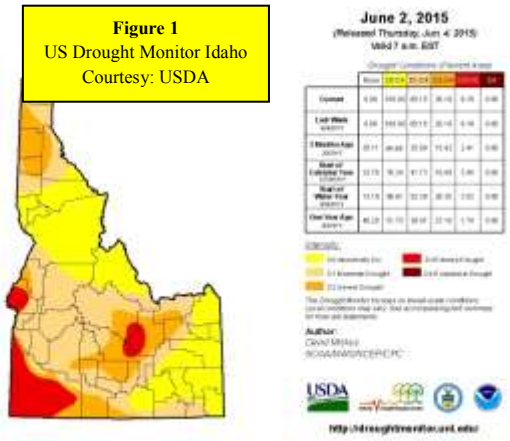


Figure 1
US Drought Monitor Idaho
Courtesy: USDA

While the drought in California has been in the news for quite a while, with the parched state in the fourth year of a crippling drought that has resulted in unprecedented water restrictions and billions of dollars in agricultural losses, the Pacific Northwest region has for the large part experienced more favorable weather and water conditions until this past winter. However, the most recent maps produced by the USDA for its drought monitor website show areas in both northeastern Washington and northern Idaho as abnormally to severely dry (fig 1). There have been drought declarations by the governors in portions of both states. This in spite of the fact that much of the same area received near average amounts of precipitation between December 2014 and June 2015. However the above average temperatures experienced during the same period resulted in much of that precipitation falling as rain as opposed to snow in the higher elevations. As a result, the snow pack data (Figure 2), prepared by the USDA Natural Resource and Conservation Service is below normal and stream flows and soil moisture levels in the region are below historical average (Figure 3). This led one writer to coin the term the "wet drought" referring to the fact that while seasonal precipitation has been close to normal, warmer temperatures have lead to snowpack and stream flow deficits.

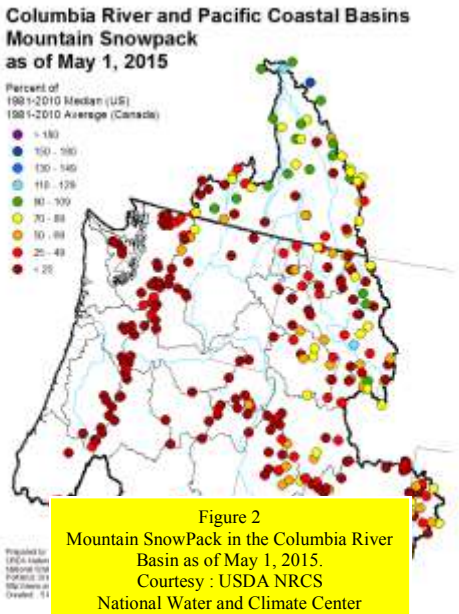


Figure 2
Mountain SnowPack in the Columbia River Basin as of May 1, 2015.
Courtesy : USDA NRCS
National Water and Climate Center

Most weather experts point to the BLOB, a persistent area of above average sea surface temperatures in the northeastern Pacific as being part of the cause of last year's winter's patterns. That same phenomenon is still present today and is reported by Atmospheric Scientist Cliff Mass in his Weather Blog (cliffmass.blogspot.com) to have strengthened (figure 4). In addition sea surface temperatures in the eastern pacific have warmed signaling the onset of another better known weather phenomenon called El Niño. With both of these phenomena in place the outlook is for continued warmer temperatures and drier conditions in the coming months.

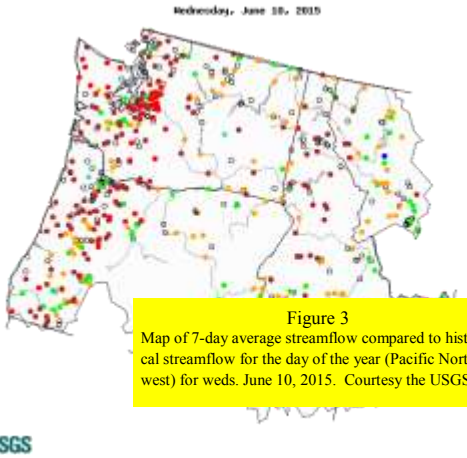


Figure 3
Map of 7-day average streamflow compared to historical streamflow for the day of the year (Pacific Northwest) for weds. June 10, 2015. Courtesy the USGS.

(Continued on page 6)

(Continued from page 5)

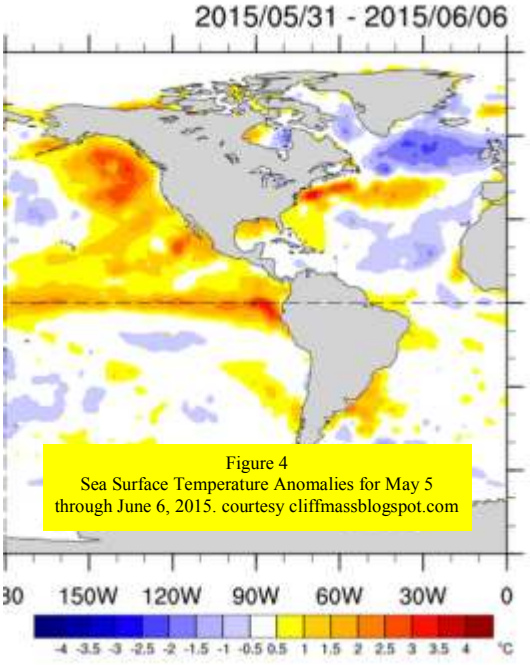


Figure 4
Sea Surface Temperature Anomalies for May 5 through June 6, 2015. courtesy cliffmassblogspot.com

As a result of this past year's so called "wet" droughty winter. The National Interagency Fire Center has released its seasonal fire outlook maps and the risk of wildfire in the Inland Northwest will be above normal for mid to late summer throughout the region (figure 5). Many regional water managers are already reducing water releases from area dams to maintain water levels in the lakes behind him.

What are the short term implications for Inland Northwest gardeners? We will probably be watering a bit more this summer, particularly thirsty landscape areas such as lawns. Other garden areas may benefit from some well timed periodic deep watering if the summer turns out to be warmer and dryer as forecast.

To date, local agencies in Idaho have not issued water conservation guidelines so most will probably go about irrigating their landscapes as usual. At this point our water is quite inexpensive compared to many other regions so this won't hit us too hard in our pocketbooks.

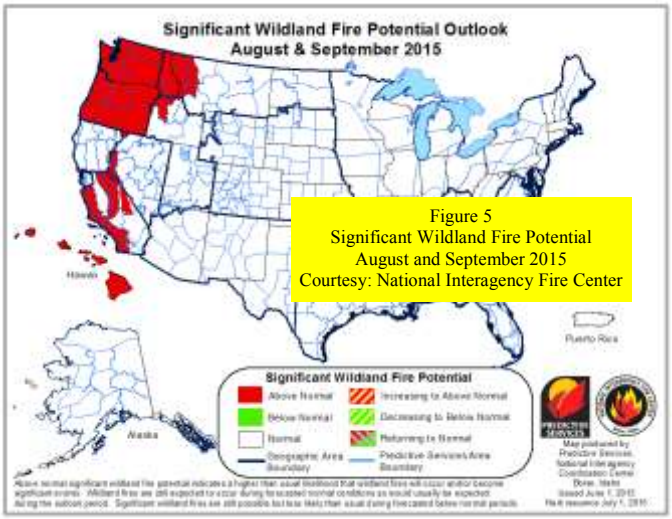


Figure 5
Significant Wildland Fire Potential
August and September 2015
Courtesy: National Interagency Fire Center

The more interesting scenario is thinking about the potential long terms impacts of recent weather phenomena and projected long term trends. Many experts seem to think that winters such as we experienced this past winter will become more the norm over the coming years. That could have significant impacts on both water availability and cost in the Inland Northwest. Our aquifers have remained relatively healthy over the years particularly in comparison to those in other portions of the country. Lower snowpack and reduced stream flows though will reduce recharge into our region's aquifers which could down the road lead to some more serious thought to regional water management and conservation. That in turn could translate to more serious thinking about creating landscapes that will be best adapted to the region's changing climate. And that's where we think the well planned and appropriate use of native plants may be quite beneficial in beautifying our Inland Northwest landscapes.

Cedar Mountain Perennials

Products and Services

Wildflowers:
Our selection includes over 60 species of local, regional and western native wildflowers.

Shrubs and Trees:
We carry a broad selection of native shrubs and some trees.

Pricing:
We offer retail sales through the Kootenai County, Sandpoint Farmer's Markets and the Six Rivers Market. Volume discounts are available to landscapers and those purchasing in quantity

Consulting:
- Site Evaluations
- Plant Identification
- Plant Selection
- Pest and Disease Diagnosis
- Training

RETAIL LOCATIONS:

Saturdays:
Kootenai County Farmer's Market
Highway 95 and Prairie Ave.
Hayden, Idaho
Note new time 9:00 AM to 1:30 PM

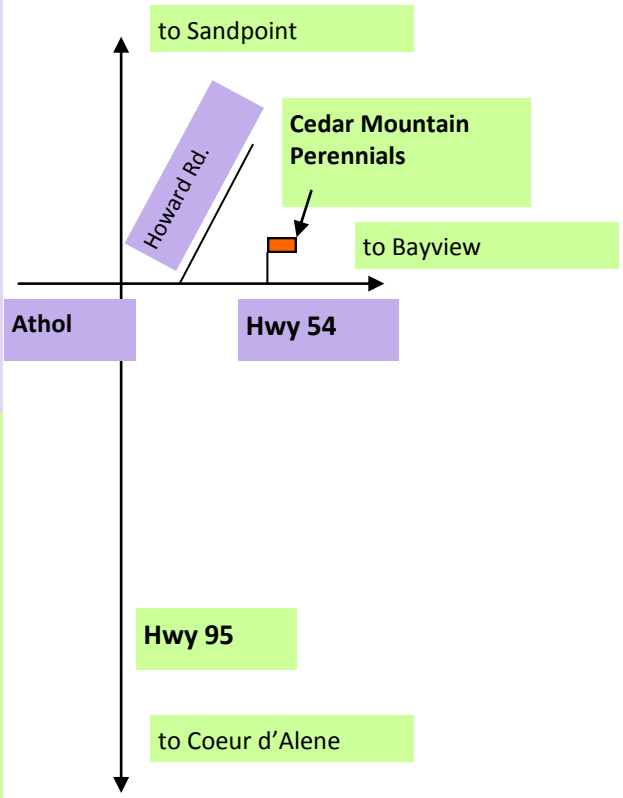
Wednesdays:
Farmer's Market at Sandpoint
Farmin Park, Sandpoint, Idaho
3:00 to 5:30 PM

Fridays:
At the Nursery
9:00 am to 4:00 pm

By Appointment:
The Nursery
7875 E Highway 54
Athol, Idaho
Please call first
(208) 683-2387

Balsamorrhiza sagitatta:
Arrowleaf Balsamroot

To Find the Nursery:



1 mile east of Highway 95 on Hwy. 54

Erigeron speciosus
Showy Daisy

Cedar Mountain Perennials
7875 E Highway 54
Athol ID 83801

Place
Stamp
Here

If you would like to receive this newsletter, please send us an email at: botanybob@frontier.com