

The Newsletter of the Palouse Prairie Foundation

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The **September meeting** of PPF will feature slides and a presentation by George Hatley. The meeting is at 7 pm on September 14 in the Edith Hecht Reading Room at Neill Public Library, 210 N. Grand Ave, Pullman WA. Access the parking lot from Olsen Street. Enter through the door on the east side of the building, near the parking lot. The October meeting will be a business meeting at a location to be determined. Plans for the November meeting are not yet formalized. Watch the PPF website for details.

Copies of past issues of the Newsletter of the Palouse Prairie Foundation are available online on the PPF website at <http://www.palouseprairie.org/pppubs.html>

Native Planting Strip at Neill Public Library

by Sarah Moore

In autumn of 2005 I began attending PPF meetings, in part because I am volunteering to do some plantings around Neill Public Library in Pullman and I thought it would be interesting to have a native plants garden. Members of PPF have been extremely helpful with information about, and sources of, native Palouse plants. This spring Dave Skinner generously offered seedlings that he had left over from germination studies, for the Neill plantings. I received seedlings of *Arnica sororia*, *Aster occidentalis*, *Geum triflorum*, *Helianthella uniflora*, *Penstemon confertus*, *Potentilla arguta*, *Sidalcea oregana*, and *Gilia aggregata* from him. I planted out dozens of seedlings between rainstorms in June over several days, into sopping wet soil. I planted the seedlings in groups of 5-7 plants of each kind rather than try to distribute them evenly, as I thought grouping them would better show off the qualities of each. I marked the groups of plants with colored plastic tags (Genus, species and common name) in an attempt to help people to recognize that something is going on in the narrow strip between the parking lot and sidewalks next to Grand Avenue and the library. In September Neill is hoping to purchase grasses and more forbs from Plants of the Wild to fill in between what has been planted already. A sprinkler system provides water and many of the plants are growing well. An ongoing challenge is that people on foot and on bicycle frequently cut across the strip from Grand Avenue to the parking lot, and people walk across the strip from the parking lot to the library sidewalks. A basalt stepping stone path is planned for the Grand Avenue strip, and several other stepping stone paths are planned for passage from parking lot to sidewalk. Eventually we plan to have signs in the garden, and information in the library, so that interested people can learn more about native Palouse plants. Thanks to all the PPF members who provided lists of plants, tips and information on sources for native plants. Thanks especially to Dave for his generosity, and thanks also to Jacie Jensen, who provided seeds that I hope to grow into seedlings for planting out spring of 2007. This project is in the beginning stages but we look forward to seeing it evolve into a beautiful and interesting little patch of Palouse Prairie. I'll keep you all updated and in the meantime, swing by Neill and check on the progress in person.

Forb Spreadsheet Available

A database of landscaping characteristics for Palouse native forbs was compiled by Dave Skinner and Paul Warnick. The spreadsheet allows one to sort by various plant characteristics such as family, flower color, mature height, bloom time, sun requirement, soil moisture requirement, longevity, and planting time. The spreadsheet is available on the PPF website at http://www.palouseprairie.org/plants/forb_species.html Click on the underlined column heading on the web page to sort by that characteristic.

Status of seed increase activities at Palouse Prairie Natives.

by Jacie Jensen



A lot has happened since May 19, 2004 when the Palouse Prairie Foundation first came to Paradise Ridge to help identify forbs, grasses, shrubs and trees on our property. Fall 2004 we collected seeds from 13 different species. The lomatiums were direct seeded in the fall. With PPF volunteers, we were able to propagate 9 species over the winter and plant the plugs into 20 – 145 ft paired rows on May 7, 2005.

We were so encouraged by the growth and seed production of the species on the plot, we decided to increase the plot size and add new species. Fall 2005 we collected seed from ten additional species. These species were either direct seeded or put into plugs by Plants of the Wild. Unfortunately, the plugs were not ready to plant in spring 2006. Due to our heavy soils we have not had good luck with fall plug plantings. Hopefully they will all be in the ground spring 2007.



We had a lot of successes and failures in 2006. First, due to the wet, wet spring we had four springs pop up in the plot forcing many forbs to stand in water for over a month. Most of the plants survived but the areas with the most water pushed the plugs out of the ground or drowned them out. Blanketflower does not like wet feet but since they are prolific producers, new plants came up as soon as the area dried.

We had enough successes that we decided to expand three species into 5 acre lots this fall and 2007 spring: yarrow (*Achillea millefolium*), blanketflower (*Gaillardia aristata*) and little sunflower (*Helianthella uniflora*). With healthy seed production in the four paired rows of yarrow and blanketflower, we decided to swath and combine the rows to get an idea on how we would harvest larger fields. The evening we swathed, the Palouse wind blew hard and furious. The yarrow stayed in the windrows but the blanketflower tumbled all over. We fed the blanketflower into the combine with a pitchfork. There will be blanketflower growing everywhere next spring! Fortunately we had hand collected the blanketflower several times prior so that we should have enough seed to put into a 5 acre field. We were able to pick up the wind-rows of yarrow with the combine just fine. We cleaned the seed and sent samples off to the Idaho Seed Lab for weed, germination and purity tests. The tests are required when producing certified seed. The test results are not known yet.



We harvested seed from most of the plot species this summer: *Gaillardia aristata*, *Helianthella uniflora*, *Potentilla gracilis*, *P. arguta*, *Geum triflorum*, *Penstemon attenuatus*, and *Galium boreale*. There is still *Aster occidentalis* and goldenrod (*Solidago missouriensis*) to collect. The lomatiums, planted in fall 2004, are finally coming up. A BIG thank you needs to go to PPF volunteers who helped with plot and Ridge collections this summer. Some of the seeds will be sold and some will be put back into the plot.

This year we collected three grasses to add to the plot: Idaho fescue (*Festuca idahoensis*), blue wildrye (*Elymus glaucus*) and prairie junegrass (*Koeleria macrantha*).

Thank you PPF for making this all happen! Because you unselfishly share your time and your experience, and give encouragement and ideas, we are able to produce Palouse Prairie seeds.

Palouse Prairie Foundation Display

If you would like to have the Palouse Prairie display at a gathering or meeting, please contact us. The display consists of a free standing 4 panel poster explaining Palouse Prairie, and a myriad of printed information regarding the prairie. A smaller version of the poster is also available for more limited spaces. You can view the poster on the PPF website at <http://www.palouseprairie.org/display/>

Salvaged Seed Still Available

Some seed is still available of *Heracleum lanatum* (cow parsnip) and *Lomatium dissectum* (fern-leaf lomatium) to members who have a place to plant it out. The Pullman PMC also has some seed of *Penstemon deustus* (hotrock penstemon) available for the same purpose. All three species require stratification and should be fall sown.

Poa secunda

Classic plant taxonomy relied mostly on morphological characteristics to determine the classification and relationships among plant species. On this basis taxonomists once recognized a number of species in our native *Poa*. More recently, taxonomists have been able to use cytogenetic research techniques to classify the native *Poa* species. Based on this research many former species are now combined as a single species, *Poa secunda*. These include *P. ampla*, *P. canbyi*, *P. gracillima*, *P. incurva*, *P. juncifolia*, *P. nevadensis*, *P. scabrella*, and *P. sandbergii*. The reason for so much variability within a single species is that *Poa secunda* is facultatively apomictic and both polyploidy and aneuploidy are common (recorded counts for $2n$ range from 42 to 106). These processes have allowed rather distinct ecotypes to develop and be maintained because sexual recombination of genes is limited and reproduction is essentially clonal. Although *Poa secunda* can and sometimes does reproduce sexually, because the gene pool in a given population is rather consistent and because *Poa secunda* is capable of self pollination (autogamy), the opportunity for xenogamous (outcrossed) recombination is usually very limited. While the variability within *Poa secunda* has been shown to be without taxonomic significance, it still can be of significance to range managers and ecologists.

The bluegrass inflorescence is a panicle with 2 or more florets/spikelet. Glumes are shorter than florets and disarticulation is above the glumes, leaving the glumes attached to the inflorescence after the seeds have ripened and shattered. The florets are awnless. There are 2 medial lines on the upper surface of the leaf next to the midrib and the leaf tips are boat shaped. The sheath is open and auricles are absent. Leaves are wider than the fescues and flat or somewhat folded rather than involute (rolled). The members of the *P. secunda* complex are bunchgrasses (caespitose).

There are several introduced bluegrasses which may also be found on the Palouse. Kentucky bluegrass (*P. pratensis*) is a rhizomatous perennial with the stems round in cross section, a more open panicle, and webby hairs at the base of the floret. The ligule is long and squared. Canada bluegrass (*P. compressa*) is a rhizomatous introduced perennial with stems which are elliptical or flattened in cross section. Bulbous bluegrass (*P. bulbosa*) is an introduced perennial which has bulbs at the base of plant. *P. bulbosa* develops very early in the spring and the panicle is quite distinct because it bears bulblets rather than seed in the florets.

On the deeper soils of the Palouse, *Poa secunda* is usually a minor component of the vegetative cover. On shallow soils where stored soil moisture is limited, it is a major component of the vegetation and is able to persist even when invasion by exotic annual grasses is severe. *P. secunda* avoids the summer drought on such sites by being photosynthetically active in the fall and winter, then maturing early in the

spring while moisture is still available. It becomes dormant as the site dries out. On the Palouse, seed is often ripe in early June and the plants are completely dormant soon afterward. Livestock and large wildlife species such as deer graze the plants early in the season and the seeds are eaten by birds and small mammals.

Seed germinates at a wide range of temperatures without pretreatment, although newly harvested seed may have an after-ripening requirement. Seedlings lack the ability to emerge from deep in the soil. Seed growers joke that *P. secunda* should be planted about ¼ inch above the soil surface. Seriously though, seed should be placed no deeper than ¼ inch. However, germination on the soil surface is minimal unless some cover such as litter or mulch is provided.

If you have ideas, suggestions, or contributions for the newsletter, please send them to Dave Skinner at <abbie1 at pullman.com> (you will need to replace “at” with the symbol “@” in the address line of your email program) or call him at 334-7009. Look for the next newsletter in December.