

## **Palouse Prairie Flyer**

## **Newsletter of the Palouse Prairie Foundation Summer 2023**

## Summer on the Palouse



Summer means flowers and weeds!

## Palouse Prairie Foundation

Promoting preservation and restoration of the Palouse Prairie ecosystem

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Are you interested in becoming a member or donating to support us? Please see the last page for information about PPF and how to join and donate or use our new online PayPal option.

Here's what's included in this edition of your newsletter:

- Plant Pollinator Interactions
- Weeding at Whelan
- Crock Update
- Palouse Plant Kits Sold

# Understanding how plants support insect diversity in Palouse prairie wildflower communities

By Anna Hawes

Over the past two years, we have been conducting research on Palouse prairie to try to understand the relationships between the native plants and the insects that they support. Research and data analysis is ongoing, but we have been able to describe many of the relationships present in this ecosystem.

We have found that the native plants of the Palouse prairie support a wide range of insects. These insects include native bees, which are closely linked to the flora of the Palouse, as well as large numbers of flies, butterflies, beetles, bugs, wasps, and spiders.

We have focused on investigating which insects prefer which plants. Some insects are very closely linked to a specific plant species. For example, the bee *Diadasia nigrifrons* is a specialist of Oregon checker-mallow, S. oregana. The bee *Andrena astragali* is a specialist on death camas, *T. venenosum*. The moth *Greya politella* is a specialist of prairie star, *Lithophragma spp*.

Strict specialist relationships are uncommon. More frequently, a plant will be heavily visited by a particular bee. For example, larkspur, *D. nuttallianum*, lupine, *Lupinus spp.*, mule's ear, *W. amplexicaulis*, and horse mint, *A. urticifolia*, are all visited very heavily by bumble bees. These preferences may be because bumble bees have long tongues and are able to access nectar that other bees are unable to reach with their shorter tongues.

The majority of the plants we collected from were visited by a wide variety of bees and other insects. Common visitors include many different species of *Andrena, Halictus, Lasioglossum*, and *Osmia*. These bees are small and inconspicuous, but they are vitally important to the ecosystem. They are typically closely linked to the flora of the Palouse, and their life cycles tend to overlap with the prairie's native flora.

It has become clear through the course of this research that the floral diversity of prairie remnants is mirrored in the insect diversity that those plants support. We are looking forward to continuing to investigate and understand these relationships.



Sampling insects on the Palouse



The moth *Greya politella* pollinates prairie star by laying eggs into the flower.



Blister beetles are frequent visitors of western hawkweed.



Bumble bees are frequent visitors of mule's ear.

## Fifth Annual Weeding Party at Whelan Cemetery

By Joan Folwell

Mother Nature smiled upon us and furnished wonderful weather this year for the fifth annual weeding party at Whelan Cemetery. Twenty-two people volunteered for the task. Members of the general public from both Moscow and Pullman as well as members from The Phoenix Conservancy and the Palouse Prairie Foundation joined in the battle against salsify and prickly lettuce. The pulled weeds were collected in burlap bags to add to the supply of fodder for the TPC's biochar project. The reed canary grass and the hawthorns at the entry gate were trimmed into submission. The names of two lucky weeders were drawn for the door prizes which included a hori hori knife and a copy of the *Palouse Prairie Field Guide* by Dave M. Skinner, Jacie W. Jensen, and Gerry Queener. This activity always creates a lot of comradeship as we exchange information about the Palouse Prairie. Come and join us next year!



June 17 weeding party at Whelan Cemetery. Photo David Hall

# What's Happening at the John Crock Native Plant and Pollinator Garden

By Elisabeth Brackney

The John Crock Native Plant and Pollinator Garden (Crock Garden) continues to develop into a small piece of Palouse Prairie. Several species of native grasses are now covering most of the site, with a variety of native forbs getting established. Here is an update on our activities of this spring and summer:

At the end of April, members of The Society for Ecological Restoration UI Chapter helped me transplant nine established plants (slender cinquefoil, Jessica's aster, Oregon checker mallow, and Missouri goldenrod) from my yard to the Crock Garden. [Photo 1] They also assisted with watering those transplants over the next couple of weeks. All those plants survived and are thriving in their new location.



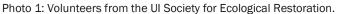




Photo 2: Meadow foxtail and ventenata.

By mid-May, some of the native forbs that were planted in the fall of 2021 were starting to bloom, but non-native meadow foxtail and invasive ventenata also made their unwelcome appearance. [Photo 2]

The White Pine Chapter of the Idaho Native Plant Society donated 69 plants left over from their native plant sale, which we planted with the help of volunteers on May 17 and 23. Twenty-five of the donated plants were snowberry, which we planted along the slope below the bike trail. Other species were roundleaf alumroot, prairie smoke, Palouse thistle, Sandberg's bluegrass, tall cinquefoil, Pacific ninebark, prairie sage, northern bedstraw, common Clarkia, Scouler willow, and Howell's pussytoes.

On May 20, our little camas patch was blooming. [Photo 3] I picked all the dandelion flowers and seedheads before the seeds blew all over the site, which was tedious but rewarding. Board member Tom Besser cut down most of the meadow foxtail and some of the ventenata on May 22, before they produced seeds. Latah County Parks and Recreation also cut the invasive tall oatgrass along the trail bordering the Crock site, which was much appreciated.





Photo 3: Camas blooming at Crock on May 20

Photo 4: Work party on May 23.

Nine volunteers and three board members came to our work party on May 23. [Photo 4] We made much progress with weeding and planting the rest of the donated plants, which we mulched and marked with yellow flags. We then hand-watered those as well as the ones planted earlier.

Photo 5: Blanket flower.



On June 7, Tom Besser and David Herbold cut down the thick stand of ventenata along the south edge of the site as well as the remaining tall oatgrass along the embankment below the trail, being careful not to disturb the snowberries. It was good to see the infestation of invasive grasses greatly reduced.

During another work party on June 8, I raked up most of the cut ventenata and meadow foxtail. Seven volunteers pulled and dug weeds (mostly salsify and prickly lettuce, as well as some curly dock, teasel, mullein, and sheep sorrel), watered new plants, and helped rake the remaining cut grass. We filled 15

tightly packed big trash bags with grass and weeds! Prairie smoke, Oregon sunshine, and slender cinquefoil were blooming, and yarrow was just getting ready.

On June 18, I spent 3 or 4 hours pulling up thick stands of prickly lettuce across the entire length of the embankment as well as a lot of salsify and some mullein. In the past, we always focused our weeding efforts on the level field, in part because the embankment seemed like a lost cause and in part hoping that Parks and Rec would take care of it. However, it's imperative to eliminate this constant source of weed seeds blowing onto our site.

By mid-June, the native bunchgrasses were in full flower and looking very vigorous, but unfortunately interspersed with ventenata wherever the native grass cover is thinner. In addition to the forb species blooming earlier, I noticed a big cluster of blanketflower [Photo 5] and a small patch of Clarkia. Jessica's aster is growing up in several places as is goldenrod and agoseris. I didn't see any penstemon this year, which is disappointing.

On June 30, I spent about 3 hours watering and weeding at the Crock Garden. Of the tiny plants planted this spring, most of the snowberries have survived, as did prairie smoke, prairie sage, and others. A couple of the Palouse thistles already have flower buds! [Photo 6] Sadly, only one of seven *Heuchera cylindrica* seems to

have survived.







Photo 6: Palouse thistle.

Photo 7: Grasses obscure the forbs.

Photo 8: Grand collomia

With the grasses so thick and tall now, the forbs are hard to see. [Photo 7] It's probably time to pull out all the tattered old flags that marked the 2021 plantings, so we can mow again next year to give the forbs more exposure to the sun. It would be great to get lots of little sunflower, sticky geranium, and various penstemon species started this fall. Very few of the seeds I spread last fall germinated, except for some grand collomia blooming now. [Photo 8]

The focus for weeding on a July 7 visit was pulling salsify and capturing all its seed heads. I also pulled some more prickly lettuce on the slope, although I saw few in the east half of the field, which in previous years was covered with them. I think persistent weeding as well as the thicker grass cover keep prickly lettuce somewhat in check.

We should probably have another weeding party as soon as there is a break in the hot weather. Canada thistle is getting ready to bloom, so we have to cut the stalks close to the ground. In addition to pulling prickly lettuce as it sends up flower shoots, we need to dig up curly dock, teasel, mullein, and cat's ear (Hypochaeris radicata) and a few invading clumps of tall oatgrass.

An exciting improvement that Tom Besser spearheaded is getting a 250-gallon water tank placed at the Crock garden, to be refilled periodically from a water truck by Latah County Parks and Recreation. [Photo 9] Having a readily accessible water source onsite will make it so much easier to keep new plants watered as they develop their root systems.

It's encouraging to see the Crock garden slowly turn from a scruffy weed patch into a promising piece of Palouse Prairie, though much remains to be done to keep invaders in check and promote more native vegetation. We are grateful for the help of volunteers and the advice of experts to achieve our goals.



Photo 9: Refillable water tank has arrived at Crock

### Sold!

By Joan Folwell

This spring, the Palouse Prairie Foundation sold native plant kits designed to support the local pollinator populations. This idea was predicated on a project that the Xerxes Society for Invertebrate Conservation conducted nationwide. Joan Folwell brought the idea to the board and the board approved the action. A committee was formed including Joan, Shelley Chambers Fox, Tom Besser, David Herbold, and Trish Heekin.

After lengthy preliminary investigation of how to achieve this goal, it was decided to create one hundred kits. These kits offered two to three plants of nine different native perennial species. The species were selected on the basis of bloom time (so pollinators would have nectar and pollen available from spring into fall), pollinator attraction ability, and easy growing characteristics. Pat Mason, owner of Pleasant Hill Nursery, was chosen to grow the plants. The plants were grown in ten-cubic-inch tubes and each kit of twenty plants was offered for \$25.00.



Native pollinator plants in ten-cubic-inch tubes.



PPF volunteers at the INPS plant sale. Photos David Hall

These kits were advertised in March at events such as the University of Idaho Pollinator Summit and the Pullman Winter Market as well as on the Moscow/Pullman Facebook Marketplace site. Those interested in purchasing a kit could sign up to reserve a kit when they became available in May.

Sales were held both in Moscow and Pullman. The White Pine Chapter of the Idaho Native Plant Society graciously included a PPF table at their annual spring plant sale on May 11 and 12. Pullman venues included the Pullman Farmers Market on May 17 and the Koppel Community Farm Open House on May 20. The goal of selling one hundred kits was reached that last afternoon!

The hope is that these natives will act as ambassadors to educate the public about their use as necessary support for the native fauna, to promote xeriscape principles and water conservation, to promote biodiversity, and to reveal their beauty in all their different forms.

There were so many steps performed to bring this project to fruition including the development of flyers and planting instructions, labeling plants, setting sales venues, getting plant sales permits, transporting plants, etc. The committee members were up to the task and never failed in their responsibilities and in their

enthusiasm. Other PPF members served at reservation and sales tables. They included Mia Rognstad, Juanita Lichthardt, Elisabeth Brackney, Kim Sarff, and Ronnie Hatley. Jacie Jensen, Pat Mason, and Kathy Hutton of Plants of the Wild lent their experienced advice.

Thank you all for this successful outcome. People are already asking if we are going to do it again next year!



Photo David Hall

## Are You Eligible for a Mini-Grant?

The Palouse Prairie Foundation (PPF) is a nonprofit organization whose mission is to promote the preservation and restoration of native Palouse Prairie ecosystems in Whitman County, Washington, and Latah County, Idaho. To this end, PPF supports the following efforts:



- Raising public awareness about issues threatening the prairie and opportunities to conserve it.
- Developing educational materials and curricula for prairie conservation.
- Conduct research regarding the prairie.
- Restoring degraded local prairieland.
- Increasing seed availability for use in local prairie restoration.

The Palouse Prairie once extended over hundreds of thousands of acres. The region's deep fertile soils supported such highly productive agriculture that it was converted to cropland beginning in the 1800s, and less than one percent of the original prairie remains in native plants today. The rare remnant patches of prairie continue to harbor native plants that serve as seed sources, including rare species such as Spalding's catchfly (Silene spaldingii), Jessica's aster (Aster jessicae), and Palouse thistle (Cirsium brevifolium). In addition, the remnants provide superlative carbon sequestration; excellent pollinator habitat; and habitat for rare animals such as the giant Palouse earthworm (Driloleirus americanus). Many people value its intrinsic beauty. PPF is committed to helping individuals and organizations to conserve and restore these prairie remnants to increase habitat connectivity and long-term sustainability of the ecosystem.

PPF has a mini-grant program available to the public for the conservation and restoration of Palouse Prairie. The maximum grant is \$1,000. Visit the PPF web site (<u>PalousePrairie.org</u>) for information about some of the mini-grants that have been awarded and how to apply.

To apply, submit the following information to <u>secretary@palouseprairie.org</u> or mail to Palouse Prairie Foundation, P.O. Box 8952, Moscow, ID 83843.

- 1. Organization name.
- 2. Organization mailing address.
- 3. Name, email address, and phone number of primary contact person.
- 4. Description of the proposal, including the following information:
  - Description of the project and how it supports the mission of PPF.
  - b. Approximate start and end dates and significant stages of project progress.
  - c. Requested funding level, maximum \$1,000.
  - d. Proposed budget, including a short list of budget items.
- 5. If this application is part of a larger proposal or project with another funding source, briefly describe.



#### 2023 Palouse Prairie Foundation Membership

#### PRESERVE - PROTECT - PROMOTE

### Why should you support the Palouse Prairie Foundation with your 2023 membership?

#### In 2022, the Palouse Prairie Foundation:

- Conducted a weeding party at Whelan Cemetery with the participation of The Phoenix Conservancy and other great volunteers; continued the removal and surveillance of invading lilac bushes partially funded by a Washington Native Plant Society grant; supported the successful award of a three-year grant to the Palouse Conservation District to continue maintenance of the on-site Spalding's catchfly (Silene spaldingii) population.
- Continued to develop the John Crock Native Plant and Pollinator Garden along the Latah Trail by controlling
  weeds; planted 225 native forbs and scattered native plant seeds mostly donated by Thorn Creek Native Seed
  Farm with the efforts of Elisabeth Brackney and other board members and volunteers; monitored the
  development of previously planted shrubs and native grasses.
- Awarded a \$1,000 mini-grant to The Phoenix Conservancy for material to grow forbs for native planting sites in Pullman; awarded a \$1,000 grant to the Appaloosa Horse and Heritage Center for signage at their public native garden display.
- Provided outreach to Eastern Washington University and Washington State University graduate students and researchers and allowed soil sample collection from Whelan Cemetery to compare the influence on growing wheat between native soil and various farmed soils.

#### Your support of PPF is a direct benefit to YOU:

- Receive invitations to local-area field trips.
- Get direct access to the expertise and experience of other restorers and protectors of the Prairie.
- Participate in the activity of your choice to help preserve this important ecosystem.
- The Palouse Prairie Foundation is a 501(c)(3) non-profit organization, and donations are tax deductible.

Email messages are the primary way that members are notified of all events and news. Please pay <u>online</u> via credit card or PayPal, or provide the membership information requested below and send it with your payment to:

Palouse Prairie Foundation, P.O. Box 8952, Moscow, Idaho 83843-1452.

#### THANK YOU!

		Membership Informa	<u>tion</u>	
Name			[] Student	\$10
Street Address			[] Individual	\$20
City, State, Zip			[] Family	\$35
E-mail Address			[ ] Lifetime	\$250
2 man / darees			[] Donation	\$
			TOTAL ENCLOSED	\$
I'm interested in:	[] John Crock Garden	[] Whelan Cemetery	[] Other	