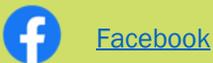




Palouse Prairie Foundation

Promoting preservation and restoration of the Palouse Prairie ecosystem

PO Box 8952
Moscow, ID 83843



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Palouse Prairie Flyer

Newsletter of the Palouse Prairie Foundation Summer and Fall 2021



Western asters welcoming fall at the John Crock Pollinator Garden (photo by Elisabeth Brackney)

The transition from summer to fall is starting. Mornings are brisk. Daylight is relinquishing itself to the night. Rosehips are ripening. The fall-blooming natives such as goldenrods and asters are showing their colors before frost arrives. There is still a bit of time to get out and enjoy the native ecosystems and time to attack the invasive weeds that challenge them. This month we have provided an in-depth article on *Bryonia alba* to help you understand why this plant is so harmful and so difficult to eradicate.

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

- [Bryonia alba on the Palouse](#)
- [Fourth Annual Whelan Cemetery Weeding Party](#)
- [Summer at the John Crock Pollinator Garden](#)

Did You Know...?

Bryonia alba has a rich history in folklore. There are many mentions of medicinal use. Over the years, the plant was given several names, including the following:

- Stitch root
- Paralyzing turnip
- Dog's turnip
- Devil's turnip
- Wild pumpkin
- Gout root

Source: Monica Kujawska, Ingvar Svanberg, "From medicinal plant to noxious weed: *Bryonia alba* L. (Cucurbitaceae) in northern and eastern Europe," J Ethnobiol and Ethnomed, May 9, 2019. Online: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6509761/>.



Illustration from Eduard Winkler, Sämtliche Giftgewächse

Bryonia alba on the Palouse

by David Hall and Shelley Chambers-Fox

Bryonia alba, white bryony, wild hops, devil's turnips—no matter what you call it, it is here to stay. *Bryonia alba* is spreading so fast, and has such severe consequences on wildlife habitat and tree plantings, that it has been listed as a noxious weed in Latah County, Idaho. An introduction to North America from Europe, it has been in the Inland Empire area of the Pacific Northwest since the 1970s and was first reported in Latah and Nez Perce counties in 1984.

White bryony thrives in full sun. It is one of the first plants on the Palouse to show frost injury, and it often grows on the sides and tops of trees and shrubs, effectively excluding light to the leaves of and thereby weakening the enshrouded plant. In the winter, the bryony stems and leaves capture and accumulate snow, which can lead to damage of the supporting plant, breaking its limbs and stems, leaving open wounds vulnerable to invasion by disease and insects.

White bryony is prevalent in native hawthorn patches and in windbreak, shelterbelt, riparian buffer, and wildlife plantings. Many of the trees and shrubs planted under these practices are selected specifically to be attractive to wildlife. With these plants overtaken by white bryony, one can expect a decrease in wildlife nesting, roosting, travel and hiding cover, berry food sources, and protection from severe winter winds and storms. The wind protection for buildings, crops, and livestock, and the supporting plants' possible attractive, aromatic spring blossoms and striking colorful fall foliage also can be lost.

Description

White bryony is a vine that will grow as much as 6 inches a day to a length of 60 to 150 feet. It has dark green, shiny leaves that resemble those of a cucumber plant—simple, up to 5 inches long, palmately five-lobed and petiolate, rough to the touch. A single, unbranched tendril is associated with each leaf. Its yellowish white flowers, borne in small panicles, yield small green berries that turn dark purple in late summer. Robins and other songbirds readily eat the ripe berries and disseminate the seed.

The root, which resembles a large white turnip, may be as large as 6 inches across, 18 inches long, and may weigh up to 5 pounds. These large roots effectively fuel spring re-growth. Like wild cucumber, white bryony spreads by seed, not by fragments of the root.



Photo courtesy of Gary O'Keefe



Bryonia alba leaves.
Photo by Gary O'Keefe.



Bryonia alba stem and tendril.
Photo by Gary O'Keefe.



Bryonia alba flowers.
Photo by Gary O'Keefe.



Bryonia alba leaf and berries.
Photo by Gary O'Keefe.



Severing the bryony vines is ineffective because the bryony plant grows back from the root. Photo courtesy of Palouse-Clearwater Environmental Institute.

This photo shows a *Bryonia alba* that was found popping up through a stream restoration site at the South Fork of the Palouse River along Palouse River Drive just south of Moscow on April 17, 2004. It resembles a cow parsnip in its young stage at first glance (similar color and size), but obviously different with the hairy stems and leaves, multiple stems, tendrils, etc. The root segment in this photo is 9 inches long, 4 inches in diameter at its widest point, and weighs 1.125 pounds.

White bryony is poisonous, causing illness and death in man and livestock. Fruits are emetic to humans; forty berries are fatal to an adult human.

Control

To be safe, wear protective gear when handling this poisonous plant.

The use of broadleaf herbicides on white bryony is not recommended if the vine is covering a deciduous, broad-leaf species unless the bryony plant is pulled away from the supporting plant canopy before application. To be effective, the herbicide must move to the root and block production of new shoots.

Control of bryony through tillage is also problematic; bryony typically grows close to the base of the supporting plant and tillage would harm the desirable plant's roots. The most effective method for control is damage to the root. Finding the root during the growing season can be difficult. It is easiest to wait until autumn, after the leaves have died, to locate the roots. Then sever the roots 3 to 4 inches below the surface with a #2 shovel. This removes the crown and prevents re-sprouting. The exposed root can be painted with undiluted glyphosate to ensure the root is no longer viable.

Be sure to walk your shrub and tree stands each year, scouting for any escapees from the previous year and for new white bryony plants. Cut and remove new growth immediately and repeatedly throughout the growing season, and return in the autumn to locate and sever the roots of the new plants.

If the root is not accessible, which is often the case when bryony vines grow on brushy trees such as hawthorn, remove the vine from desirable vegetation without severing its stem. Use gloves and long-sleeved shirt as you handle the plant. Spray the bryony foliage with 2.5% glyphosate. The preferred timing of herbicide treatment is when foliage surface is maximal and about to flower. The treatment will likely have to be applied in subsequent years until the root is beyond resprouting.

The Pullman, Washington, USDA Plant Materials Center technical staff are investigating effective methods for control of white bryony. As reports on control attempts of this harmful vine become available, local Natural Resources Conservation Service staff will make them available to the public.

Sources

Stannard, M. Revised by T. Heekin. June 2002. White Bryony: "The Pacific Northwest Kudzu." U.S. Department of Agriculture, Natural Resources Conservation Service, Pullman, WA and Moscow, ID, 4 p.

Miller, T.W. February 1995. Two wild vine plants in Idaho: one a weed, one not. Weed Watcher 2(2). University of Idaho, College of Agriculture, Weed Diagnostic Laboratory. 2 p.

O'Keefe, G. n.d. Control of white bryony (*Bryonia alba*). Latah County Noxious Weed Control, Moscow, ID. 1 p.

O'Keefe, G. n.d. White bryony (*Bryonia alba*, Cucurbitaceae – cucumber family) listed noxious weed, Latah County, Idaho. Latah County Noxious Weed Control, Moscow, ID. 1 p.

Martinson, A., Latah County Noxious Weed Control, Moscow, ID, 208-883-7210, Personal communication, July 6, 2021.

Photos by Gary O'Keefe used by permission of Gary and of the Latah County Weed Control Department.

Summer at the John Crock Pollinator Garden

by Elisabeth Brackney

This summer, PPF continues to battle the invasive weeds at the John Crock Pollinator Garden, adjacent to Highway 8 and the Latah Trail just east of Moscow city limits. The western half of the field has fewer weeds and more native grasses than the eastern half, which has a lot of prickly lettuce as well as mullein, teasel, Canada thistle, salsify, and some sow thistle, dandelions, and bindweed.

We organized a weeding party on April 27 that somewhat reduced the number of weeds. Volunteers included PPF board members Elisabeth Brackney, Shelley Chambers-Fox, and David Hall, and volunteer Melissa Rockwood. David estimated 56 pounds of weeds were collected.

Elisabeth also weeded on May 26 and (with Ann Storrar) on May 27. She found that hardly any corn gromwell had come back this spring after she had pulled every last plant of that species the year before. We had a second weeding party on June 1 with PPF board members Elisabeth, David, and Kim Sarff, and volunteers Lynn Dills, Don Arceneaux, and Terry Coldsnow. Elisabeth weeded again on June 6 and realized there were too many teasel seedlings to dig up at the base of the embankment next to the trail. She sprayed much of this teasel “carpet” with an herbicide containing glyphosate on June 11 and weeded at the west end. Elisabeth weeded again on June 15 and July 6.



May 26, 2021, a native wild hyacinth, *Triteleia grandiflora* (photo courtesy of Elisabeth Brackney)

On July 8, MRT Services mowed the Crock Garden for the first time this year and removed the cuttings. When Elisabeth weeded again on July 16, she asked the adjacent landowner to control his weeds on the south edge of the site and was assured that he would spray them.



May 26, 2021, the west half of the Crock Garden, still green (photo courtesy of Elisabeth Brackney)



July 6, 2021, west half of site, very dry after the heat wave (photo courtesy of Elisabeth Brackney)

The PPF board decided to spread seeds of native Palouse Prairie wildflowers this fall, as soon as we (hopefully) get some rain. We will focus the seeding on the intermittent strips of sparse grass and lots of bare soil that apparently were missed when we spread grass seed in the fall of 2019.

If you are interested in helping to establish native plants for pollinators at this location, please send an email to secretary@palouseprairie.org. Your assistance would be appreciated, and you will be helping to create a lovely place for pollinators (and people) to enjoy.

Fourth Annual Whelan Cemetery Weeding Party

By Joan Folwell

Ten volunteers turned out on June 19 to continue the tradition of weeding Whelan Cemetery. Many thanks to the participants from The Phoenix Conservancy (TPC) who came out to help. TPC uses Whelan as a teaching example to show its new members a prime example of Palouse Prairie. PPF is grateful for their commitment to Whelan. Additional volunteers included a new landowner who wanted to be able to identify the natives on her property and a WSU graduate student who was curious about what was happening at the site. All of us benefited from the information shared and enthusiasm created.

Numerous activities were performed. The invasive grasses at the entry gate were mowed; branches overhanging paths were trimmed; white bryony among the border hawthorns was sprayed with glyphosate to retard its growth. The greatest effort was to hand pull oyster plants, prickly lettuce, and mustard. Instead of bagging this debris and depositing it in the land fill, TPC Director Chris Duke hauled it away in burlap bags to use in his experiment with biochar composting. More about that process to come!

In addition to the weeding, efforts to reduce the number of lilac bushes encroaching into the native prairie on this site continue. Last December, a tree trimming service cut down the unwanted bushes to ground level. This \$3,500 expense was partially funded by a grant from the Washington Native Plant Society. Leafy shoots appeared on the stubs this past spring. Two applications of 2% glyphosate separated by a two-week interval were applied in June. This discouraged growth but did not kill the lilacs. In August, we applied a brush killer containing trichlopyr. The growth was retarded and many of the leaves evidenced brown spots. In September, Shelley Chambers-Fox and I applied one more dose of glyphosate in hopes that there will be no regrowth next spring. Wish us luck!



Joan Folwell working with volunteers (photo courtesy of David Hall)



Pulling weeds to let the prairie flourish (photo courtesy of David Hall)



2021 Palouse Prairie Foundation Membership Letter

PRESERVE – PROTECT – PROMOTE

Why should you support the Palouse Prairie Foundation with your 2021 membership?

In 2020, the Palouse Prairie Foundation:

- Managed weeds at Whelan Cemetery near Pullman through volunteer efforts led by Eric Anderson, removed encroaching lilacs with funding from the Washington Native Plant Society, and supported the Palouse Conservation District.
- Continued to develop the John Crock Native Plant and Pollinator Garden site on the Latah Trail near Moscow by controlling weeds through volunteer labor led by Elisabeth Brackney and a contracted mowing service; planted native trees and shrubs and monitored the development of native grasses through efforts of Elisabeth Brackney and Joan Folwell.
- Provided a mini-grant to the Appaloosa Horse Museum for establishing a native plant garden.
- Collaborated with Eastern Washington University to establish their 150-acre Palouse Prairie restoration project, which included the completion of a "Palouse Prairie Needs Assessment" and a study of Palouse Prairie soils.
- Protected Palouse Prairie remnants related to applications for two cell tower sites and one home site through PPF-initiated regulations in the Whitman County Critical Areas Ordinance.

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

- Receive invitations to local field trips.
- Get direct access to the expertise and experience of other restorers and protectors of the Prairie.
- Add your effort at the level and 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 provide the membership information requested below and send it with your dues to:

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

THANK YOU!

Membership Information

Name	_____	Dues:	<input type="checkbox"/> Student	\$10
Street Address	_____		<input type="checkbox"/> Regular	\$20
City, State, Zip	_____		<input type="checkbox"/> Family	\$35
E-mail Address	_____		<input type="checkbox"/> Sustaining	\$50
			<input type="checkbox"/> Patron	\$100
I would like	<input type="checkbox"/> John Crock Garden		<input type="checkbox"/> Lifetime	\$250
updates about	<input type="checkbox"/> Whelan Cemetery		<input type="checkbox"/> Donation	_____
these projects:	<input type="checkbox"/> Other _____			