

Rush Skeletonweed Community Education Night (Mosier, OR, September 17th, 2026)

Sponsored and hosted by: Humble Roots Nursery, Main Street Mosier, and the Mosier Greenspace Gardeners.

Speakers/Panel members:

Brad Mead - Columbia Land Trust/Columbia Gorge Cooperative Weed Management Area

Scott Susi - Wasco County Soil & Water Conservation District

Sarah Skelly - Friends of the Columbia Gorge Land Trust

Ann Maslen - Annie's Apricots/Native Plant Society of Oregon

Drew Merritt & Kristin Currin - Humble Roots Nursery

RSW=Rush skeletonweed

Intro: Rush skeletonweed (*Chondrilla juncea*) is taking over our greenspaces at an exponential rate and can be a difficult plant to control. It can feel like an overwhelming problem, but if we can get everyone aware of the situation and doing even just a little bit to address the problem, then we don't have to feel alone and the solution seems more attainable. Many hands make light work, and we can get a lot done when we work together! This Community Education Night is about sharing information, so everyone has the knowledge they need to be able to address the problem in whichever way they choose.

Presentation by Brad Mead:

Brad Mead is a land steward with Columbia Land Trust, and steering committee member of the Columbia Gorge Cooperative Weed Management Area (CGCWMA), which is a regional partnership of public and private entities working to prevent and control invasive noxious weeds throughout the Columbia River Gorge. columbiagorgecwma.org

Brad spoke about native plants and the impact exotic noxious weeds have on our native flora. We have many special and important native plants present in the area. All species of plant are unique, as is their role in the ecosystem. Rush skeletonweed is invasive from an ecological perspective. Exotic weeds tend to be generalists that can adapt to different conditions and are not limited by any co-evolved organisms, which keep them in check in their native ranges. This gives them a huge "newcomer" advantage. But many of our native plants are specialists that have unique characteristics and needs and only grow in specific places. These native specialist plants are pushed out by RSW. Studies by entomologists found that native plants support greater biomass and biodiversity than non-native exotic plants, which is important from an ecological perspective. Brad showed photos of dense patches of RSW on Mill Creek Ridge, which were intensified by grazing, that he has been working to eradicate.

The following are notes compiled from both the presentation and panel:

Rush skeletonweed (*Chondrilla juncea*) facts:

Eurasian origin.

Each plant produces thousands of seeds. Seeds remain viable for about 4 years. Seeds do not need stratification to break dormancy and can germinate within 24 hrs of being planted or coming into contact with soil if conditions are right. Plants do not require pollination to produce viable seed.

Good at growing in areas with poor soil and low moisture. It is a degraded soil specialist.

Grazing increases RSW because livestock avoid it. It is not palatable to livestock and wildlife; they only eat it if desperate. There are some reports that sheep may eat RSW.

Resistant to control.

Mowing can cause plants to increase, and tilling can spread and multiply the plant.

Deep taproots extend 8ft (some sources say as deep as 10ft) into the soil, making it nearly impossible to remove the entire root. The plant will resprout from any root fragments left in the soil, often producing more rosettes than before. Roots can also spread by lateral roots and create new plants and eventually an entire colony.

Spreads in 2 ways: wind carried seed and laterally spreading roots.

Seed can be spread by vehicles, farm equipment, people, pets, etc - use boot brushes and clean farm equipment.

-Property values can go down due to RSW!

-Fire danger could increase with RSW!

-RSW can damage and foul farm equipment and reduce/limit crop production!

-RSW outcompetes native plants and reduces forage for wildlife and livestock!

-RSW threatens area wildflower meadows we all love (such as Memaloose) that bring visitors to the area who support local businesses.

Rush skeletonweed (*Chondrilla juncea*) identification:

***Proper identification is important as there are a few plants that could be confused with RSW.*

See web links listed below for more information about RSW identification and photos of the plant.

Branching, green stems have few to no leaves. Stems can photosynthesize. Plants look naked/skeleton-like (thus the common name). Stems stay green throughout summer into fall and stand out against dry vegetation. If you see a green plant in a field in late summer, it is probably skeletonweed

**Note that narrow-leaf milkweed (*Asclepias fascicularis*), which is a PNW native plant, stays green throughout dry seasons as well, and can be present in dry meadows. Narrowleaf milkweed is distinctive in its leafy stems, purple flowers, and long seed pods at the end of its stems that have cottony seeds. Tall buckwheat (*Eriogonum elatum*) is also present and blooming in late summer fall and has tall, naked stems, but clusters of white to pink flowers that become rusty when in seed and larger basal leaves that do not look like dandelion leaves.*

****Hairs (coarse and typically reddish-brown) on stems at base of plant point downward- best way to positively identify RSW!!** Plants are hairless at the top.

RSW can grow 1-5' tall, stems emerge around May, rosettes can pop up almost all year round.

Milky latex sap in stems.

Yellow flowers bloom summer into fall. Flowers persist for a long time on the plant before producing seed. Plants often produce flowers and seed at the same time. Flowers sometimes close in the afternoon. Flowers are attached directly to stem.

Basal, dandelion-like rosette of leaves with leaf lobes pointing back towards base of plant. Basal leaves have fine dense hairs and spines on margins. *(There are some native plants with similar looking basal leaves).* Basal leaves usually disappear when plants are flowering.

Leaves on flowering stems are few, narrow, and may have smooth edges; *not lobed or dandelion-like*.

Dandelion-like seeds.

HOW TO CONTROL:

****Limit ground disturbance!** RSW loves disturbed soils! Monitor disturbed areas for new RSW starts.

****A site-specific, multi-faceted, seasonal approach can be best.** *Hand pulling is feasible for small populations, otherwise use herbicidal sprays in spring and fall, and cut and bag seeding plants in summer to reduce seed spread while taking steps to relocate biocontrols. Can also try to hand-pull plants in winter when soils are wet and workable. Keep an eye out for new seedlings and pull young plants before they form a deep taproot.*

**** Early detection and removal before a colony establishes is the most effective control.**

Biocontrols - Gall mite, gall midge, rust, & a root-boring moth. *See photos of biocontrols and more information about them on web resources listed below.*

In this area we see the gall mite, gall midge, and rust.

These biocontrols do not affect other plant species and are specific either to rush skeletonweed or plants in the genus *Chondrilla*.

Gall mites appear as round, rough galls clustered around flowering parts of stems (can be few or many). This reduces the plant's ability to flower and produce seed, but does not kill the root, so it does not kill the plant. The actual insect is microscopic, and hundreds of mites can be feeding in each gall. They have several generations each year, with females overwintering in the plant's rosettes. Sources say the mite can develop quickly, taking somewhere around 10 days.

Gall midges can be mistaken for rust. The gall midge is a small fly that lays eggs on RSW which cause dark, bumpy spots (galls) to form on the stems and leaves. Gall midges have 4-5 generations a year. They reduce the RSW plant's ability to flower and produce seed. Some sources say that high infestations can cause plants to die.

Rust is a fungus seen on leaves. Some sources say that rust infection of RSW rosette in spring and fall can potentially kill plants.

****Relocate biocontrols from plants that are pulled or cut!** But DO NOT transport plant material from one state to another. Natural pathogens exist in some places that can reduce effectiveness of rust and could be transported with plants to new areas. When relocating biocontrols only relocate them to local areas. ****Be sure to cut off any flowering/seeding parts and roots (!!)** then place plant parts with biocontrols on them in contact with RSW plants you want them to spread to. Mites will crawl up stems and infect new plants. Midge adults will hatch and lay new eggs on nearby RSW plants. Rust releases spores (usually in fall during cooler, wet weather), that infect new plants.

In July, biocontrols from plants pulled in areas along I84 near Mosier by Native Plant Society of Oregon volunteers were relocated to a new population of RSW in Mosier and evidence of the mites spreading was noticeable quickly.

We love biocontrols! And they can really help!! However, biocontrols alone will not eradicate RSW.

Hand-pulling - works best with new plants that have not yet developed their long taproot.

Early detection is vital! Look for new rosettes of plants, especially near where cars are parked, since cars often transport seeds to new areas. **Seeds typically germinate in the fall but can also germinate within 24 hrs of being planted or coming into contact with soil if conditions are right.*

Use a tool to dig the root, or it will resprout with multiple stems and more flowers.

Repeated pulling over many, many, years can eventually exhaust plants and potentially cause them to die.

If plants are at all flowering or budded, they may still be able to produce seed after being pulled (many weeds with strong taproots can do this including non-native thistles and knapweed).

***Make sure to properly dispose of plant material!* Do not leave plants on the ground after pulling as they may still produce seed and spread (especially in the windy Gorge!). Make sure to knock any soil off the roots. Bag plant material and then later burn plant material. Black contractor bags in the sun can act like little ovens to help cook plants until able to burn them. Do NOT put plant material in yard debris piles!

***RSW is highly flammable!* Not only will it burn well in a fire pit, but it could also increase the risk of wildfire, in part because it creates woody material in areas like meadows where there typically is not woody material to burn.

Cutting/ bagging/ mowing - cutting and bagging plants during summer when flowering can keep new seeds from being released. Cutting back plants will stimulate the plants to increase, so this is best accompanied with herbicidal treatments in spring and fall.

Mowing causes lateral roots to spread, and plants to increase.

Herbicides - can be safe and effective. Most of the ones used for RSW have low to moderately acute toxicity to animals. Chronic health effects are unknown for most. Wearing protective gear is important and should not be ignored! Limit exposure. Mindful applications minimize risk. Gloves are especially important.

Herbicide Safety:

Hat, glasses, long sleeve shirt, chem resistant gloves, pants, boots.

Wash & dry clothing afterwards.

Follow all labels and directions on the product you are using.

Spot spraying - spraying just the plant is ineffective since plants have lateral roots that extend beyond plant. Spray plant and 2 ft radius around plant to kill both plant and lateral roots.

***Spring and Fall are best time for application!*

When you get soil moisture is when you want to start spraying. Some sources suggest spraying in fall when plants begin to go dormant, so it draws the herbicide into the roots, which is the part you really want to kill.

**This plant does attract pollinators, do not to spray plants when in bloom so as not to harm pollinators.*

Group 4 herbicides are most effective.

Clopyralid (Transline and other brands) - narrow band herbicide, good for application in the spring. Can impact plants in the pea family, buckwheat family, and aster family.

Aminopyralid (Milestone and other brands)- good for broadcast application in the fall. Effective for about a year.

Do not expect to spray once and be done. A repeated routine of spraying in spring and fall for 3-5 years will be needed. Do it every year, do not skip a season.

1/4 oz/ gal of Milestone is what one panel member uses.

1/2 oz /gal of Milestone, in spring or fall, used by one person in audience.

The speakers are not licensed to give directions on exact herbicide solutions, follow product directions.

Use a non-ionic surfactant

Audience question - where should landowners get products to use?... Farm and Ranch store, Coastal, Hood River Supply, N Central Ag in Dufur, online sellers carry Milestone

Be prepared to do some restoration.

For restoration- plants that are good at surviving herbicidal controls are: trees and shrubs. Also, grand collomia (*Collomia grandiflora*), turkey mullein, and Nevada lotus (native to the PNW) seem to resist residual effects of sprays.

If you can, take steps to safely relocate biocontrols from plants being treated (see notes under **Biocontrols** for tips on relocating).

Additional things noted during the Panel Discussion:

Wasco County Soil & Water Conservation District (SWCD) is now the County Weed Master.

***Wasco SWCD can make visits to id weeds and provide guidance!!*

www.wascoswcd.org

Humble Roots Nursery can also help with plant identification.

www.humblerootsnursery.com

iNaturalist or the 'Seek' app can be a helpful tool for identification.

www.inaturalist.org

www.inaturalist.org/pages/seek_app

On her property/farm, Ann Maslen was spraying 3-6 times per year. She also hand-pulled plants for 6-10 years. Her property is "manageable" now after about 5 years. She has been working on several locations along I84 near Mosier as well as the Mosier exit ramps. She has led crews of Native Plant Society of Oregon volunteers that come out from Portland to pull RSW around Mosier, and other local volunteers at Rock Creek. She has pulled RSW on her neighbor's property and takes care to make sure RSW doesn't spread from her property onto neighbors' properties. She thinks it is possible to convince your neighbors that this is important to do!

Sarah Skelly leads volunteer crews on Mosier Plateau to pull targeted weeds and in recent years RSW has been showing up. Patches of RSW are all located adjacent to the trail, illustrating how the seeds travel on our shoes, pants, dogs, etc. Volunteers have hand pulled for 2-3 years to prevent flowers and seeds from forming yet the infestation continues to return and expand of course in those areas and generally on the property in other areas. They will switch to herbicide treatments this year. The mite biocontrol galls have been observed in various RSW patches on site.

Drew Merritt shared observation of watching RSW take over a large island in the Columbia over the past 20 years. It spread from west to east with the wind. Now the island is RSW from one side to the other, choking out native vegetation. In the area where RSW first started, plants have desiccated the soil nutrients and moisture enough that the plant almost seems to be killing itself off and plants seem stunted. A few signs of foraging on RSW are seen now on the island, as RSW pushes out deer forage making deer more desperate.

After Rowena Fire, where skeleton weed was present native species responded well, especially after the suppressive thatch RSW creates was burned off. However, the fire may not have killed RSW.

Hood River has an infestation and doesn't have enough staff to deal with it. The budget to deal with invasive species is minimal in many places.

Audience question/comment - Tom McCall Point is abutting Forest Service (FS) land with an infestation that re-infests Tom McCall preserve. Can the Forest Service suppress/eradicate that population? -*Scenic Area Botanist is aware of infestation and overwhelmed by the spread of RSW. Forest Service has also been going through a lot of upheaval and cutbacks, which may impede their ability to address that specific population.*

Scott Susi helps FS to treat RSW spots, without hurting natives as much as possible. Wasco SWCD recently got a FIP grant after Rowena fire. They will be starting work on that next year, collaborating with The Nature Conservancy (Tom McCall) and others. A Focused Investment Partnership (FIP) grant is a funding program through the Oregon Watershed Enhancement Board (OWEB) that addresses critical ecological priorities.

Many people wonder about how invasive species of plants will react to fire and prescribed burning...will they increase or decrease?

RSW has been noted as moving along the train tracks and local railways are spreading it.

RSW spread quickly through Sherman County due to farm equipment moving from field to field without being cleaned. *Be sure to tell farmers to clean equipment!*

Be sure to use boot brushes and clean boots after going on trails and brush your pets too!! Spread the word to other people on the trail to do the same!

If we each do a little, it equals a lot!

Recommended websites and online information on RSW:

<https://columbiagorgecwma.org/weed-listing/best-management-practices/rush-skeletonweed/>

<https://kingcounty.gov/en/dept/dnrp/nature-recreation/environment-ecology-conservation/noxious-weeds/identification-control/rush-skeletonweed>

<https://www.nwcb.wa.gov/weeds/rush-skeletonweed>

<https://invasivespecies.wa.gov/priorityspecies/rush-skeletonweed/>

<https://www.lincolncountywa.com/DocumentCenter/View/500/Rush-Skeletonweed-PDF>

<https://www.oregon.gov/oda/Documents/Publications/Weeds/RushSkeletonweedProfile.pdf>

https://plants.sc.egov.usda.gov/DocumentLibrary/plantguide/pdf/pg_chju.pdf

https://www.columbiagorgenews.com/news/weed-of-the-month-rush-skeletonweed/article_b4059042-25fb-11ec-a248-7f8e791a8a0a.html

Information about biocontrols:

<https://www.kcgov.us/DocumentCenter/View/4046/Biorush-Skeleton-Weed-PDF>

<https://weedcut.ipm.ucanr.edu/biological-control/rush-skeletonweed/#gsc.tab=0>