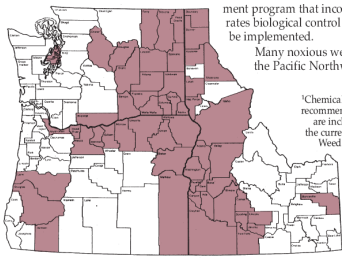
# RUSH SKELETONWEED: Options for control

Rush Skeletonweed (*Chondrilla juncea*), a deep-rooted, perennial forb in the sunflower family, is a highly-competitive and aggressive noxious weed. Rush Skeletonweed is found in most of Franklin County, including Pasco, Connell, Kahlotus, Mesa, Eltopia and Basin City. It is rampant in the Palouse River area and the east end of the county. This noxious weed can be a serious threat to wheat farming since it will spread from undeveloped areas into crop fields. The weed can foul up harvesting machinery and contaminate the wheat crop. This weed will also reduce crop yields on farmland by aggressively out-competing for nutrients and soil moisture.




In Australia, competition from Rush Skeletonweed reduced wheat yields by as much as 80 percent, resulting in estimated losses of more than $35 million.

Many landowners become increasingly frustrated in attempting to control this noxious weed. Herbicides seem to have little impact on the weed after it bolts, but that is often when it is first found. The best control strategy is preventing an invasion before it takes hold, and then eradicating small patches as soon as they appear. *Do not till or cultivate* patches of Rush Skeletonweed since root fragments will develop into new plants and spread the infestation. Follow an Integrated Approach of planting competitive legumes, such as alfalfa, spraying herbicides early before or when the plant bolts, spray rosettes again in the Fall after the first frost, use a good MSO surfactant with your spray, release bio-control insects on parcels larger than one acre, and redistribute bio-controls as needed. The best time to apply herbicides is in the fall when the weather has cooled and the plant is moving nutrients down to its roots to survive winter. Persistence and vigilance are the keys to preventing infestation.

Rush skeletonweed before bloom.

Rush Skeletonweed late in season.

## Key identifying traits

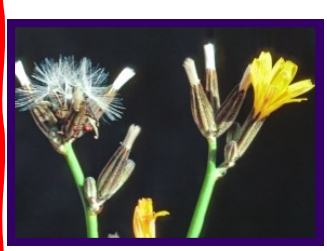
- **Stem** bases have coarse, downward pointing brown hairs and are hairless toward the tips. Stems are highly branched and have few leaves.
- **Basal leaves** are lobed with lobes pointing back towards the leaf base. Leaves on branching stems are few, narrow and may have entire (smooth) edges.
- **Leaves** are coarsely lobed, fine dense hair on both sides, with sharp spines on margin.
- **Flowers** are yellow, 1/2 inch in diameter, single or in clusters.
- Its long slender taproot can grow up to 7 foot deep.
- Plants will exude a latex sap when injured.

Rush Skeletonweed can grow into a colony of plants.

The stiff, down-turned hairs on the lower part of the stem identify this weed.

## Biology and ecology

- **Perennial** that grows 1–5 feet tall.
- **Seeds are small (3mm) with ribbed surfaces and white bristles (pappu) on one end that aid in wind dispersal.**
- Each plant may produce from 1,500 to 20,000 seeds.
- **Reproduces** by **seed** and from root fragments in the soil.
- **Not palatable to livestock**.



Rush Skeletonweed seeds fly on the wind like dandelion.

Rush Skeletonweed's rosette looks like dandelion.

Franklin County Noxious Weed Control Board 509-545-3847

# CONTROL MEASURES:

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**Prevention:**

- **Detect and eradicate new plants early.** Perform systematic surveys to locate new infestations. An eradication plan should include spraying, re-vegetation and follow-up monitoring.

**Biological:**

- Four biological control agents have been released for control of Rush Skeletonweed in North America: a mite, a midge, and a rust.
- Bio-agents will not eradicate Rush skeletonweed but they will reduce seed production.

**Cultural:**

- Healthy competitive vegetation helps reduce open spaces which lessens the chance for invasion.
- For very small infestations, diligent hand pulling two or three times a year, for six to 10 years, can be helpful.

**Mechanical:**

- Due to its deep roots, mowing is not effective control.
- **Do not till or cultivate.** Cultivation spreads root fragments and may actually increase the infestation.

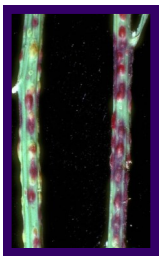
**Chemical:**

- In the spring, spray when the plant is still a rosette.
- Spray again later in the fall, after the first frost.
- The weed has a waxy plant surface, with few leaves to absorb the herbicide. The use of an MSO surfactant will improve herbicide effectiveness. Always use an effective surfactant like Dyne-Amic, an MSO-silicone blend.
- Milestone and 2,4-D have been very effective. These products can be used to the edge of a creek. A state applicator's license is not needed for their use.
- Any of the following herbicides can be used during the rosette stage or for fall regrowth: Milestone (Aminopyralid) can be used up to the water's edge, Chaparral (Aminopyralid and Metsulfuron ), Escort (Metsulfuron), Telar (Chlorsulfuron), Redeem R & P (clopyralid + triclopyr), Tordon (Picloram) a restricted use product.
- **Broadcast applications** yield the best results.
- **Always** use a **surfactant** due to the waxy leaf surface.
- **Read** the **label** instructions before applying.

The Gall Mite is the most effective biological control agent against Rush Skeletonweed in the Pacific Northwest. Larvae of the Gall Mite eat plant parts causing cauliflower-looking galls.

Damage by Gall Mites, the most potent biocontrol for Rush Skeletonweed in our area. The Gall Mites cause the growths.
One plant may be covered by as many as 4,000 galls during a summer season.

Galls on the leaves and stems provide a safe place for maturing Midge Gall larvae.



Bio-agents will not eradicate Rush Skeletonweed, but they will reduce seed production and stunt the weed, impairing its competitive ability and allow native plants and grasses to grow.

Releasing bio-agents should be part of a total integrated vegetation management effort that includes the use of herbicides, fertilizers, competitive plants and grazing management techniques.

Rush skeletonweed is best controlled with the use of herbicides. Herbicides are most effective when applied to plants that are infected with biological control agents. Continue to spray herbicides if few midge galls are seen, but efforts should be made to preserve and redistribute mite galls.

While the Rust Fungus has caused significant damage in California, its presence has not often been seen in Franklin County, perhaps due to lack of dew and humidity. Rust fungus on a Rush Skeletonweed leaf.

Photos and references courtesy of: Photos: James Parks; Rich Old, XID Services Inc., Bugwood.org; Wikipedia; NWCB written findings. A BIG Thank you to Lincoln County NWCB for the use of their brochure.

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