NOXIOUS WEED FACT SHEET

Rush Skeletonweed (*Chondrilla juncea*)

Description: Rush skeletonweed is a tap-rooted perennial plant native to central Asia. This weed germinates in the fall when the rains begin, and develops one or more rosettes from buds on established roots. Leaves are lance-shaped, one-half inch wide and up to two inches long, with a reddish color near the tips during winter. When daylight increases in spring, the plant is stimulated to develop a multi-branched upright stem from the root crown, growing up to 4 feet tall. The lower 4-6 inches of the stems are covered with coarse, downward pointing, reddish-brown hairs. Stems, leaves and roots produce a milky sap when broken.

Flower production begins when stems reach maximum length in midsummer and continues until ended by frost. Mature, healthy plants can produce 1,500 flower heads and up to 20,000 seeds. Rosette leaves die off during flowering, leaving a skeleton-like appearance to the plant. Flower buds, blooming flowers and mature seeds are often on the same stem at the same time. After flowers fall, new rosettes are again established, continuing the cycle.

The root system is slender and vertical, penetrating the soil to depths of eight feet or more. Roots develop laterally in the upper two feet of the soil profile. A research paper from Australia states that rush skeletonweed will sprout from root segments of any length.

Impacts: This species is a very adaptable, aggressive invader, especially in gravelly, well-drained soils. The plant's extensive root system enables it to compete effectively with crops. Agricultural yields may see up to a 70 percent decrease if skeletonweed is left uncontrolled. Harvesting some crops can be complicated by infestations of Rush Skeletonweed due to the sticky latex exuded by the plants when they are cut or otherwise damaged. Native plants can be displaced and forage for livestock and wildlife is reduced.


Photo by Utah State University Archive

Control Options: Thurston County's Integrated Pest Management emphasizes cultural, biological, and manual control methods to keep pests and vegetation problems low enough to prevent damage. The goal of Thurston County's pesticide use policy is to minimize the use of pesticides by utilizing and providing information about the most effective control options that are available and practical.

► Cultural / Habitat

Preventing the establishment of populations of Rush Skeletonweed is the most time and cost effective way of controlling this species. Vehicles, farm, outdoor recreation and construction equipment can transport seeds, and should be cleaned thoroughly before moving from infested areas to un-infested areas. Livestock can also transport seeds and root fragments. Revegetating areas where control work has been done can help reduce Rush Skeletonweed numbers in subsequent seasons.

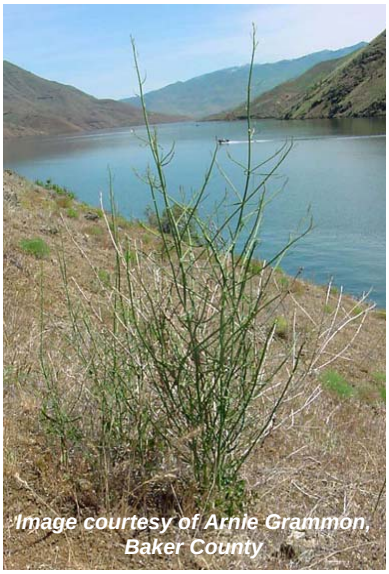
Image courtesy of Arnie Grammon, Baker County

► Manual / Mechanical

Digging and manual removal of plants is not effective because of the extensive root system and because any mechanical injury to the plant causes the roots to produce new shoots. Manual control can slow the spread to new areas, but will not control existing infestations. Clipping and careful bagging of plants with flowers or flower buds can help prevent seeds from being produced, but must then be followed up with an appropriate herbicide treatment.

► Biological

Several bio-control agents are used on Rush Skeletonweed in areas of the country where there are large, uncontrolled populations of this species. However, because it is limited to a few isolated areas, bio-controls would not effective or an appropriate control method in Thurston County.

► Chemical

Spot spraying with ***glyphosate*** (example: Roundup Pro®, Glyfos®, etc.) is effective in controlling Rush Skeletonweed. Glyphosate products can be used to treat individual plants or small patches. Currently, products containing the active ingredient glyphosate are the only herbicides for the control of Rush Skeletonweed considered "low in hazard" by Thurston County's pesticide review process for the potential for chemical mobility and persistence.

Thurston County has observed that most ready-to-use, pre-mixed products do not contain sufficient active ingredients to be as effective as concentrated products that are then mixed with water to create a specific finished concentration. The following instructions are for products containing 41% glyphosate which will be mixed down to a specified dilution rate. Be sure to read your label carefully, and make adjustments to rates accordingly.

Foliar applications of glyphosate (ROUNDUP PRO™):

- Spot applications with glyphosate products are effective. Spot application means the herbicide is applied only to the plants and not on the surrounding plants or soil. Spray each plant thoroughly on the stems and leaves enough to be wet but not dripping.
- Glyphosate is non-selective, and will injure any plants that it comes in contact with, including grass.
- Keep people and pets off treated areas until spray solution has dried.
- Remove livestock before application; wait 14 days after spot application before grazing livestock or harvesting.
- Do not enter or allow worker entry into treated areas during the restricted entry interval of 12 hours. Keep people and pets off treated areas until spray solution has dried.

Foliar applications of *aminopyralid* (Milestone®)

For selective control of Rush Skeletonweed in agricultural settings (pastures, hayfields, etc.): an herbicide containing the active ingredient aminopyralid (example: Milestone™, Milestone VM™, etc.) may be a preferred choice. Aminopyralid products will not harm grass and can be used around livestock (provided all label precautions are followed). ***Do not use plant material or hay from treated areas for mulch. Likewise, do not use manure from animals that have grazed or eaten hay from treated areas.*** Aminopyralid is currently sold in agricultural herbicides that are to be used only in areas listed on the label, and are available in farm supply stores. Aminopyralid is considered moderate in hazard by Thurston County's review process for the potential for chemical mobility and persistence.

Herbicide & Method	Product Rates	Mix
RoundUp Pro® Spot/Foliar	2%	To 1 gallon of water add 2.66 oz. RoundUp Pro™, apply to foliage at or beyond bud stage.
Milestone® Spot/Foliar	1 tsp per 1000 ft²	**To treat a 1,000 sq. ft. area:** Using a 2 to 4 gallon backpack or tank sprayer, add half of the water needed to cover all plants with one teaspoon Milestone™, agitate, then add water to reach desired amount (0.5 - 2.5 gallons total volume, depending on quantity and size of plants). Lightly spray all skeletonweed plants in 1,000 sq. ft. area, then continue lightly spraying the skeletonweed until the tank is empty and all plants have been thoroughly covered. The addition of a non-ionic surfactant (at least 80% active ingredient) is recommended to enhance herbicide activity.

Timing: Applications should be made in the spring, when plants are actively growing, and as the flowering stems elongate. Plants sprayed after buds develop have a high likelihood of producing viable seeds, despite damage to the plant. Applications of aminopyralid are also effective in the fall before a killing frost.

READ AND FOLLOW ALL LABEL DIRECTIONS AND RESTRICTIONS. Obey all label precautions and safety measures. Always use personal protective equipment that includes coveralls, waterproof gloves, shoes plus socks, and protective eyewear. Use of brand names does not connote endorsement and is for reference only; other formulations of the same herbicides may be available under other names. Information provided is current as of the date of the fact sheet. Pesticide product registration is renewed annually and product names and formulations may vary from year to year.

References

University of Idaho CIS Bulletin #585; University of Idaho MIS Bulletin #46; Biological Control Of Weeds In The West
Weed Technology Magazine, Vol. 7:954-959, 1993; Missoula County Weed District Bulletin, 2000
Written Findings of the Washington State Noxious Weed Control Board, http://www.nwcb.wa.gov/weed_info/written_findings/CLASS%20B%20PDFs/Chondrilla%20juncea%201998.pdf
Oregon State Department of Agriculture: http://www.oregon.gov/ODA/PLANT/WEEDS/profile_rushskeletonweed.shtml

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