

WYOMING WEED/PEST ALERT – RUSH SKELETONWEED

Information was provided by Jeffrey W. Brasher, Stephen F. Enloe, Adrienne Peterson, and Andy Currah (November 2007); locality information was updated by Travis Ziehl (July 2011). This Pest Alert is presented in cooperation with the Wyoming Pest Detection Program, the Wyoming State Weed Team and the University of Wyoming Cooperative Extension Service.

WEED: Rush skeletonweed *Chondrilla juncea* L.

FAMILY: *Asteraceae* (Sunflower family)

IMAGES: Courtesy of A. Peterson, A.G. Currah, J.W. Brasher, S.A. Dewey, and T. Ziehl



Figure 1. Plant in the budding stage, not yet flowering.
Voucher by Travis Ziehl, 22 July 2011. Photo – T. Ziehl



Figure 2. Close-up of heads in flower and fruit showing involucre bracts.
Photo – Steve Dewey, Utah State University, Bugwood.org.



Figure 3. Whole plant in fruit.
Voucher by Adrienne Peterson, 28 August 2006. Photo – A. Peterson



Figure 4. Close-up of inflorescences in fruit.
Voucher by Adrienne Peterson, 28 August 2006. Photo – A. Peterson



Figure 5. Close-up of stem base showing reflexed reddish hairs.
Voucher by Adrienne Peterson, 28 August 2006. Photo – A. Peterson.



Figure 6. Fruits. Photo – Steve Hurst, USDA-NRCS Plants Database



Figure 7. Seedling grown in UW greenhouse. Voucher by Adrienne Peterson, 28 August 2006. Photo – J.W. Brasher

Brief Plant Description: (Paraphrased from references 2 and 8).

Roots: The plant is a deep-rooted perennial, mostly 0.4 – 1.5 m tall, appearing somewhat rush-like.

Stems: The lowermost part of the branching stem bears distinctive large, spreading to slightly descending, reddish hairs. The upper stem is hairless. Cut surfaces of stems and leaves release milky sap.

Leaves: The early-deciduous basal leaves are well-developed, runcinate-pinnatifid, five 13 x 3.5 cm, and strongly resemble dandelion leaves. The stem leaves are linear, 2 – 10 cm long and 1-8 mm wide, and often also deciduous, the upper often reduced to scale-like bracts.

Flowers: The flower heads are scattered along the branches, commonly with 9-12 yellow, strap-shaped flowers per head. The involucre of bracts is 9 – 12 mm high and thinly clothed with white, curly, intertangled hairs.

Fruit: The body of each, pale-brown to almost black fruit is 3 – 3.5 mm long, with five broadly rounded longitudinal ribs separated by grooves. The tip of the fruit body bears small pointed bumps, then 5 small scales at the base of a long, slender beak, which bear that pappus of hair-like bristles.

Flowering in Wyoming is expected from July – September.

Current Wyoming Distribution:

Teton County: South side of the Junction of South Park Loop Road and South Highway 89, west side of road. N 43°41.434' W 110°77.320'. Travis Ziehl, 22 July 2011. This is the second known documented occurrence in Wyoming

Sublette County: North side of Highway 191 between Pinedale and Jackson just past Granite Hot Springs turnoff; N 43°17.149' W 110°32.200', elevation 6357 ft.; Roadside about 2ft from road below a cut bank in a mixed sagebrush, aspen, conifer community. Nearly bare ground apparently recently disturbed from work on a telephone-electrical box. Adrienne Peterson, 28 August 2006. This is the first known documented occurrence in Wyoming.

*****We have heard of six other undocumented reports of this species being found in Wyoming: four in Teton County around 2006; two (1) in other Wyoming Counties: Medicine Lodge Creek, near Hyattville, Big Horn County around 1998, and near Alpine Junction, Lincoln County around 2005.*****

How did it get to Sublette County? Seeds or root fragments may have arrived in Sublette County on energy trucks. Seeds also could have dispersed by wind from undiscovered new populations or the nearest documented occurrence in Fremont County, Idaho, which may be as little as 80 miles away.

Origin: Mediterranean region

Global Distribution: Europe, Mediterranean region, Australia, Canada (3,4), sixteen US States including Montana and Idaho (5,6).

Reasons for Concern: Rush skeletonweed is an aggressive wind dispersed colonizer that also spreads by creeping roots. It has been documented to invade cheatgrass dominated areas in Idaho and sagebrush communities without disturbance. Rush skeletonweed invades dry rangelands and will potentially displace native species while minimizing forage for livestock and wildlife.

Legislative Status: *Chondrilla juncea* is currently listed as a noxious weed in Arizona, California, Colorado, Idaho, Montana, Nevada, Oregon, South Dakota, and Washington (6). This weed is not on the Wyoming designated noxious weed list, but it has been preemptively declared in four Wyoming Counties: Big Horn, Converse, Teton, and Washakie (8).

Control Methods: Given its current limited distribution in Wyoming, eradication is very feasible and should be given top priority. Elimination of all shoots and roots to prevent both seed production and asexual spread from creeping roots is the goal. Strategies to accomplish this include digging, hand pulling, and herbicides. Digging and hand pulling should attempt to remove the primary root crowns and as much of the lateral roots as possible. Rush skeletonweed roots respond to topgrowth removal by releasing new shoots from adventitious root buds. Immediate follow-up (within a few weeks) will be required to remove new plants sprouting from missed roots.

There are several effective herbicides including picloram, clopyralid, aminopyralid, and metsulfuron for Rush skeletonweed control. Timing of application should be in the summer before flowering to prevent seed production. Follow-up will be required later in the fall and the following year to retreat plants from surviving rootstocks. If infestations are detected after seed production, fall herbicide treatments to newly emerged rosettes are also effective. Persistence will be required for several years given the persistence of Rush skeletonweed roots in the soil.

While there are some biological control agents available, they are not suited for eradication of rush skeletonweed and should be used only after eradication no longer is feasible.

Additional Notes:

There are three forms of Rush skeletonweed in the US, each differing in the morphology of their inflorescence and their susceptibility to control measures (4,5). It is not yet clear which of the three forms was collected in Teton and Sublette Counties.

Rush skeletonweed is sometimes confused (4) with (rush-) skeletonplant, *Lygodesmia juncea*, which has pink (occasionally white) flowers and grows in Wyoming and the surrounding region.

Most monospecific stands are in abandoned agricultural fields. Ann Hild (personal communication) has seen populations “marching” into sagebrush stands. This species follows fire. Per seed rates of seed germination are low, but seeds can be 10,000/plant and blow in the wind.

References:

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