USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Guide

TAPERTIP HAWKSBEARD

Crepis acuminata Nutt.

Plant Symbol = CRAC2

Contributed by: USDA NRCS Plant Materials Center, Aberdeen, Idaho and USDA FS Rocky Mountain Research Station, Provo, Utah

Tapertip hawksbeard. Photo by Clint Shock. Oregon State University. Malheur Experiment Station.

Alternate Names
Longleaf hawksbeard, mountain hawksbeard

Uses
Wildlife: Tapertip hawksbeard leaves are consumed by pre-laying sage grouse hens and make up a large portion of their diet (Barnett and Crawford, 1994). Sage grouse chicks also feed on tapertip hawksbeard leaves in addition to the insects attracted by the flowers (Drut and others, 1994; Klebenow and Gray, 1968).

Although pollinators are not required for tapertip hawksbeard to set seed, hawksbeard species attract both generalist bees as well as those that specialize on the composite family. Bee genera observed foraging on tapertip hawksbeard include *Agapostemon, Andrena, Bombus, Colletes, Dialictus, Eucera, Evylaeus, Halictus, Lasioglossum, Megachile, Osmia* and *Psithyrus* (Cane, 2012).

Tapertip hawksbeard provides fair to very good forage for sheep and cattle (Hermann, 1966). Ogle and Brazee (2009) rate tapertip hawksbeard as preferred spring and summer forage for sheep and desirable spring and summer forage for cattle, horses, elk, deer and antelope. The leaves contain approximately 30% crude protein, 0.78% calcium and 0.5% phosphorus (Barnett and Crawford, 1994).

Ethnobotany: The Karok Indian Tribe in California pealed and ate raw stems of tapertip hawksbeard (Moerman, 1998).

Status
Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Description
General: Sunflower family (Asteraceae). Tapertip hawksbeard is a native perennial forb with one to several stems arising from a persistent woody base. Mature plants average 25 to 85 cm (10 to 33 in) tall. The basal and lower stem leaves are 10 to 40 cm (4 to 16 in) long with an elliptic to oblanceolate, pinnatifid to runcinate-pinnatifid (dandelion shaped) blade. The plants bear numerous cylindrical flower heads, each with 5 to 10 flowers. The flowers bear a 10 to 18 mm (0.4 to 0.7 in) long yellow corolla. Tapertip hawksbeard is in the cichorieae tribe of the sunflower or composite family. Members of this tribe all contain milky juice and bear only ray-like flowers with no central disk in the flower head. Tapertip hawksbeard is primarily apomictic, producing seed asexually (Babcock and Stebbins, 1938).

The fruit is a yellow-tan to dark brown achene, 7 to 9 mm (0.28 to 0.35 in) long and 1 to 2 mm (0.04 to 0.08 in) wide. Seed counts in the literature vary widely. Barner (2007) reported 363,000 seeds/kg (165,000 seeds/lb), while the PLANTS database reported 1,760,000 seeds/kg (800,000 seeds/lb) (USDA-NRCS, 2011). Seed counts on more than 20 accessions conducted by the authors ranged from 220,000 to 575,000 seeds/kg (100,000 to 261,000 seeds/lb).

Tapertip hawksbeard achenes. Photo by Steve Hurst, USDA-NRCS PLANTS Database

Distribution: Tapertip hawksbeard occurs in all western states from California, Oregon and Washington east to Montana, Wyoming, Colorado and New Mexico (USDA-NRCS, 2011). For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: This species can be found in dry, open places in the foothills and lower elevations in the mountains. It is commonly found in basin big sagebrush and mountain big sagebrush plant communities, but is also known from mountain brush, aspen-fir and spruce-fir communities.

Adaptation
Tapertip hawksbeard grows in medium to coarse soils with a pH range of 6.0 to 7.8 (Rawlins and others, 2009; USDA-NRCS, 2011). It occupies open sites in areas receiving 20 to 50 cm (8 to 20 in) annual precipitation at elevations from 1,400 to 2,900 m (4,500 to 9,500 ft) (Welsh and others, 2003).

Establishment
The full seed rate for 25 to 30 pure live seeds (PLS)/ft at 12 inch row spacing is 7 PLS lb/ac. When planted in a mixture, the seeding rate should be adjusted according to the desired proportion of the mix. Rangeland seeding should take place in the fall to allow the seed to overwinter. Seed should be planted to a depth of 0.65 to 1.3 cm (0.25 to 0.50 in).

Management
Tapertip hawksbeard should be used as a minor component of seed mixtures. Management should be based on the key species in the established plant community. Grazing should be deferred on seeded lands for at least two growing seasons to allow for full stand establishment. Blaisdell and Mueggler (1956) found that 2,4-D had little negative effect on tapertip hawksbeard in sprayed rangelands.

Pests and Potential Problems
Tapertip hawksbeard achenes are frequently found containing insect larvae. Insect damage can significantly reduce seed yields.

Environmental Concerns
Tapertip hawksbeard is native to western North America. It is a natural component of the native flora and poses no environmental concerns.

Seeds and Plant Production
Wildland stands of tapertip hawksbeard ripen from mid-June to mid-July. The presence of the fluffy white pappus appears to be a good indication of seed ripeness. Harvesting seed prior to pappus expression dramatically increases the amount of non-viable seed. Seed can be harvested by hand-stripping and with racquets and hoppers (Jensen, 2004).

Small seed collections can be cleaned by removing the pappus from the achenes using a brush machine with the gate closed. Following brushing the seed is cleaned using a multi-deck air screen cleaner with a 4 mm hole screen on top and a 1.4 mm slot screen on bottom with light air. Viability of wildland harvested seed is highly variable.

Seed requires a substantial cold stratification for high germination rates. Non-stratified seed yielded 0 to 11percent germination in trials conducted by the Aberdeen Plant Materials Center (St. John, 2001). In an unpublished study, highest germination rates (approximately 75 %) were obtained from 8 months of cold stratification at 1° C in moist peat moss. Seed can be sown into greenhouse flats at 0.65 to 1.3 cm (0.25 to 0.50 in) deep (Rawlins and others, 2009). Transplant success with both bareroot and container stock is variable. The plants produce a long delicate tap root which is easily damaged during transplanting. Years to seed production from container stock is unknown.

Tapertip hawksbeard poses numerous problems which prevent it from being commercially pursued by the native seed industry. Field establishment is difficult. It takes several years for established plants to produce seed and the species is prone to substantial seed damage from insects. Furthermore, tapertip hawksbeard flowers and ripens indeterminately, requiring multiple harvests for maximum seed yield.

Cultivars, Improved, and Selected Materials (and area of origin)
There are currently no commercial releases of tapertip hawksbeard. Wildland collections are typically not available from commercial sources. Contract collection for small quantities is possible with costs exceeding $100 per pound.

References

Babcock, E.B., and G.L. Stebbins. 1938. The American species of *Crepis*: their interrelationships and distribution as affected by polyploidy (Carnegie Institution Publication no. 504). Washington DC: Carnegie Institution.

Barner, Jim 2007. Propagation protocol for production of *Crepis acuminata* Nutt. seeds; USDA FS - R6 Bend Seed Extractory, Bend, Oregon. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 20 December 2011). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

Barnett, J.K. and J.A. Crawford. 1994. Pre-laying nutrition of sage grouse hens in Oregon. Journal of Range Management. 47: 114-118.

Blaisdell, J.P. and W.F. Mueggler. 1956. Effect of 2,4-D on forbs and shrubs associated with big sagebrush. Journal of Range Management. 9(1): 38-40.

Cane, J. 2012. Personal communication. Logan, UT: USDA-ARS Pollinating Insect Research Center.

Drut, M.S., Pyle, W.H. and J.A. Crawford. 1994. Technical Note: Diets and food selection of sage grouse chicks in Oregon. Journal of Range Management. 47: 90-93.

Hermann, F.J. 1966. Notes on western range forbs: cruciferae through compositae. U.S.D.A. Forest Service. Agriculture Handbook No. 293. 365p.

Jensen, S. 2004. Racquets, Hoppers, and Felt Boards--Low-Tech Devices for Processing Seeds. Native Plants Journal. 5(1): 50-51.

Klebenow, D.A. and G.M. Gray. 1968. Food habits of juvenile sage grouse. Journal of Range Management. 12: 80-83.

Moerman, D.E. 1998. Native American Ethnobotany. Timber Press. 927 p.

Ogle, D. and B. Brazee. 2009. Estimating initial stocking rates. USDA-NRCS Technical Note No. 3. Boise, Idaho. 39p.

Rawlins, J.K., Anderson, V.J., Johnson, R. and T. Krebs. 2009. Optimal seeding depth of five forb species from the Great Basin. Native Plants Journal. 10: 32-42.

St. John, L. 2001. Idaho Army National Guard Vegetative Rehabilitation Project – 2000 Progress Report. USDA-NRCS, Aberdeen Plant Materials Center. Aberdeen, ID. 19p.

[USDA NRCS] USDA Natural Resources Conservation Service. 2011. The PLANTS Database. URL: http://plants.usda.gov (accessed Dec. 20, 2011). Baton Rouge (LA): National Plant Data Center.

Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins. 2003. A Utah Flora. Third Edition, revised. Brigham Young University, Provo, UT.

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