



COLORADO STATE PARKS
BEST MANAGEMENT PRACTICES
WEED PROFILE



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Parks Affected: Many

Houndstongue

Cynoglossum officinale



Family: *Boraginaceae* (Borage)

Other Names: hound's tongue, dog bur, gypsy flower

USDA Code: CYOF

Legal Status: Colorado Noxious List A (general weeds)

Identification

Growth form: Biennial or short-lived perennial forb.

Flower: Flowers are reddish-purple, with five petals, arranged in panicles in the upper leaf axils.

Seeds/Fruit: The fruit is composed of four prickly nutlets each about 1/3 inch long (Whitson et al. 1996).

Leaves: Leaves are alternate, 1-12 inches long, 1-3 inches wide, rough, hairy, and lacking teeth or lobes (Whitson et al. 1996). Leaves often appear dusty and insect-ridden. Basal leaves are elliptical to oblanceolate and tapered at the base.

Stems: Houndstongue produces a single flowering stem. The stem is erect, stout, heavy, 1.5 to 3 feet high and usually branched above.

Roots: Houndstongue has a thick, black, woody taproot.

Seedling: Houndstongue forms a rosette the first year of its life cycle.

Similar Species

Exotics: Rosettes may resemble burdock.

Natives: If not flowering, could be mistaken for members of the *Hackelia* or *Lappula* genus (stickseeds).

Impacts

Agricultural: Houndstongue contains toxic alkaloids that stop liver cells from reproducing. Therefore, houndstongue reduces livestock and wildlife forage and grazing animals should be kept away from houndstongue infested areas. Animals may live six or more months after eating a lethal dose of houndstongue.

Sheep are more resistant to houndstongue poisoning than cattle or horses. The burs may reduce the value of wool.

Ecological: Houndstongue is an early successional species on recently disturbed sites.

Human: Due to its toxicity to grazing animals, houndstongue should not be eaten by humans.

Keys to Identification:

- Five-petaled reddish-purple flowers in panicles.
- Prickly nutlets are distinctive.



← nutlets

Habitat and Distribution

General requirements: Houndstongue prefers areas with more than 10% bare ground (Butterfield et al. 1996), and is common on gravelly, alkaline soils (Stubbendieck et al. 1995).

Distribution: Houndstongue is found over much of North America. It grows on rangeland, pastures, abandoned cropland, roadsides, and waste places (Butterfield et al. 1996). Houndstongue is found on rangeland, pastures, and roadsides throughout Colorado up to about 9000 feet.

Historical: Houndstongue is a native of Eurasia that was introduced to North America as a contaminant in agricultural seed.

Biology/Ecology

Life cycle: Houndstongue is a biennial that produces a rosette the first year. During the second year a flowering stem bolts and produces fruit.

Mode of reproduction: Reproduces solely by seed.

Seed production: Mature plants can produce up to 2,000 seeds (Butterfield et al. 1996).

Seed bank: Seeds remaining on the parent plant may remain viable for 2-3 years. Buried seed rarely survive more than one year (Butterfield et al. 1996).

Dispersal: Seeds stick to clothing and animals and have the ability to be spread great distances.

Hybridization: No information available.

Control

Biocontrol: None known.

Mechanical: Mowing second year plants during flowering but before seed maturation reduces seed production and may kill the plant.

Fire: No information available.

Herbicides: Picloram at 0.25-0.5 lb., 2,4-D, or dicamba at 1.0 lb., or metsulfuron at 0.6 oz. ai/acre applied in spring provides control of houndstongue. Spring treatments with picloram, dicamba, or metsulfuron are more effective than fall treatments (Sebastian and Beck 1995). Chlorsulfuron applied 0.5 lb. ai/ac gave complete control when applied any time beginning with the rosette stage until the bolted plant had attained 10 inches in height (Butterfield et al. 1996).

Cultural/Preventive: Maintaining a healthy population of native perennials the best way to prevent the establishment and spread of houndstongue.

Keys to Control:

- Eliminate seed production.
- Re-seed controlled areas with desirable species.

Integrated Management Summary

Houndstongue is poor competitor with native perennials and requires disturbed or bare areas to establish. Once established, houndstongue quickly forms dense monocultures. Treat first year plants with herbicides. Mow bolted plants to eliminate seed production. Repeat this process for several years to exhaust the seed bank. It is imperative to establish a healthy population of native perennials on treated areas to prevent the re-establishment of houndstongue or other noxious weeds.

References

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