



# Hound's Tongue

(*Cynoglossum officinale*)

**Provincial Designation:** Noxious

## Overview:

This biennial plant produces a rosette in the first year of growth and a flowering bolt in the second year. It produces a woody taproot and reproduces by seed only. Fresh and dried plant matter contains toxic alkaloids that cause irreversible liver damage. Native to Eurasia, hound's tongue arrived as a contaminant of crop seed. All parts of the plant are covered with bristly hairs. The plant's name comes from the resemblance of the leaf's shape and roughness to a dog's tongue.

Non-flowering plants can be confused with stickseed (*Lappula* genus) – stickseeds have spines on seeds rather than hooked burs. Two native plant diseases will cause brown spots or mildew but not enough to kill the plants.

## Habitat:

Prefers drier, well-drained sites, but is tolerant of alkaline soils. Hound's tongue can grow under both deciduous and coniferous forest canopy.



PHOTO: www.flickr.com

## Identification:

**Stems:** Stems are erect and usually branched in the upper portion, growing to 1.5 m tall. There may be one or several stems per plant.

**Leaves:** Leaves have distinct veins, smooth margins, pointed tips, and can be up to 30 cm long. Basal and rosette leaves are broader and have stems.

Leaves become smaller, lance-shaped, and alternate on bolting plants and clasp the stem.

**Flowers:** Flowers are reddish-purple, have 5 petals and hang in small clusters from panicles that originate in the leaf axils. Flowers are self pollinating.

**Seeds:** Each flower produces 4 barbed nutlets, each about 7 mm long. Seeds usually remain on the plant until disturbed. Seeds are viable up to 3 years on the plant and about one year if buried.

## Prevention:

Hound's tongue is a weak competitor and requires disturbance to become established – cattle loafing areas and wallows are common starting points for an infestation. Healthy rangeland will be resistant to invasion. The heavily barbed seeds of Hound's tongue cling readily to clothing and animal hair/fur - wherever the seed carrier goes, so does the weed. Therefore, preventing flowering and removing seed is the number one way to prevent this plant's spread.

## Control:

**Grazing:** While the growing plant is unpalatable to grazers, hound's tongue in cured hay is readily consumed and poisonous to cattle and horses: sheep seem to be less affected. The toxic alkaloids stop liver cells from



PHOTO: Jeffrey S. Pippin, Duke University (www.duke.edu)



PHOTO: Alberta Sustainable Resource Development

reproducing and animals may live for 6 months or more after consuming a lethal dose. There is no medical recourse. Heavily burred cattle and sheep suffer physical stress and are de-valued at market. Hound's tongue infested rangeland is a self-reinforcing spiral that destroys forage resources for both wildlife and livestock.

**Cultivation:** Repeated cultivation is effective in cropland situations.

**Mechanical:** Mowing before flowering will prevent seed production. Hand-pulling is very effective but in harder soils the root will break off, resulting in re-sprouting. Instead, the root can be severed below ground level with a knife or shovel and re-sprouting should not occur. Any seed should be disposed of in landfill-bound garbage or thoroughly burned.

**Chemical:**<sup>1</sup> Picloram, dicamba, and metsulfuron have proven effective. It's important to note that some viable seed can still develop from a flowering plant sprayed with herbicide. Herbicide treatment should be restricted to rosettes and bolting plants be pulled and disposed of. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

**Biological:** Two biological control insects (*Mogulones cruciger*, *Longitarsus quadriguttatus*) have been successfully established on test plots in BC and Alberta, but one (*L. quadriguttatus*) has moved off the target plants and is no longer recommended.

<sup>1</sup> Always follow the product labels. The use of pesticides in any manner not published on the label or registered under the *Minor Use of Pesticides* regulation constitutes an offence under both the *Federal Pest Control Products Act* and *Alberta's Environmental Protection and Enhancement Act*.