



Figure 1. Houndstongue is a biennial that overwinters as a rosette during the first year of growth (a). The plant has very pubescent leaves that feel like a dog's tongue, hence the common name (b).



Figure 2. Houndstongue bolts early in the summer during the second season of growth and produces small red to burgandy flowers (a). The flowers are inconspicuous and bloom in series for several weeks (b).



Houndstongue

(*Cynoglossum officinale* L.)

Identification and Control

STOP THE SPREAD

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Houndstongue is a biennial, poisonous herb that is native to Eurasia. The plant is a member of the Borage family, which includes more commonly known plants such as Virginia bluebells, forget-me-nots and the fiddlenecks. Houndstongue commonly is found in disturbed areas, including roadsides and trails, and in pasture and woodlands following soil disturbance or overgrazing.

How do I identify this plant? The leaves are oblong, very pubescent and rough, which resemble a hound's tongue (Figure 1). Plants bolt during early summer, the second year of growth, to a height of 1 to 4 feet, and flower in mid-June (Figure 2a). Flower clusters range in color from red to burgundy (Figure 2b). Each flower produces three to four nutlets (Figure 3a), which are flat and teardrop-shaped with a very hard seed coat and numerous barbs (Figure 3b).

What is houndstongue's growth cycle? Houndstongue forms a rosette the first year of growth (Figure 1a), and bolts

and flowers the second season. The plant reproduces only from seed, but can spread great distances because the barbs on the

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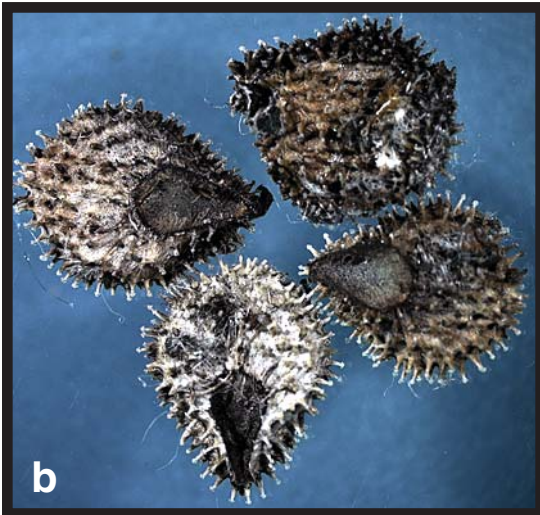


Figure 3. Three to four nutlets form from each houndstongue flower (a). The seeds have numerous barbs which can attach to people, animals, and equipment helping the plant spread to new areas (b).

nutlets cling to clothing, machinery and animals. Plants generally are found along trails and roadsides, on the edge of wooded areas and in disturbed habitats.

Why is this plant a concern? Houndstongue tends to be a nuisance weed rather than a noxious plant unless infestations grow to become large patches. The nutlets often become imbedded in the wool or hair of livestock, which can cause the wool to lose value and/or increase costs to remove the burrs. Eye damage can occur if burrs become embedded in the eye or eyelids. The burrs can be problematic for hikers, hunters and fishermen, and also to their pets.

Houndstongue contains alkaloids that are especially toxic to cattle and horses. The plant rarely is eaten in the green state; however, animals will eat the dried plant in hay. Sheep are more resistant to the pyrrolizidine alkaloids than other livestock, while horses, especially when confined to small areas infested with houndstongue, are more likely to ingest toxic levels. Fatal liver disease in horses has occurred following two weeks of feeding hay with as little as 6 percent houndstongue.

Where in the state is this plant found? The plant first was first collected in North Dakota near Valley City in 1911, and in 1950, O.A. Stevens of the North Dakota Agricultural College described it as being confined to "Ransom, Barnes and Steele counties only." In the late 1990s and early 2000s, houndstongue began to establish and rapidly spread in North Dakota, especially in the southwestern part of the state.

How do I control this plant? Prevention is the best method to keep houndstongue from invading North Dakota. Use only certified weed-free hay and eradicate new infestations before the plant can spread. Escort (metsulfuron) at 1 to 2 ounces per acre (oz/A) is very effective for controlling houndstongue and can be applied throughout the growing season. First-year houndstongue rosettes are controlled easily with 2,4-D at 2 pints/A applied from late May to mid-June. Second-year plants are much less susceptible to 2,4-D. Plateau applied at 8 to 12 oz/A will control houndstongue both pre- and post-emergence, but grass injury, especially to the cool-season species, is likely when Plateau is applied at the maximum rate.

A root weevil, *Mogulones cruciger*, has been released for control of houndstongue in Canada. The insect has become well-established in Alberta and has greatly reduced the houndstongue infestation in that province. However, this biological control agent has not been approved yet for release in the U.S. Several other insects, including a seed weevil (*M. borraginis*), stem weevil (*M. trisignatus*), root beetle (*Longitarsus quadriguttatus*) and root fly (*Cheilosia pasquorum*), are being evaluated for biological control of houndstongue; however, initial results are not nearly as promising as those of the root weevil.

**If you find this weed,
report it to your
local weed officer.**

**HELP STOP THE
SPREAD**

All photographs by Rodney G. Lym.

For more information on this and other topics, see: www.ag.ndsu.nodak.edu/invasiveweeds

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