

NOXIOUS WEED QUARTERLY

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Plant can prove poisonous to horses

Houndstongue spreading in North Dakota

BY RODNEY G. LYM, PH.D.

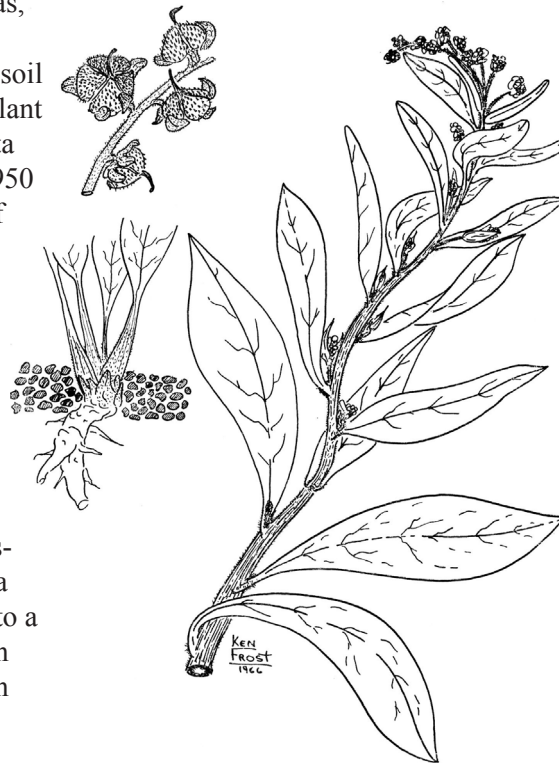
Houndstongue (*Cynoglossum officinale* L.) is a biennial poisonous herb, native to Eurasia. The plant is a member of the Borage family which includes better known plants such as Virginia bluebells, forget-me-nots, and the fiddlenecks. Houndstongue is commonly found in disturbed areas, including roadsides, trails, and in pasture and woodlands following soil disturbance or overgrazing. The plant was first collected in North Dakota near Valley City in 1911 and in 1950 was described by O. A. Stevens of the North Dakota Agricultural College as confined to Ransom, Barnes, and Steele counties. In the late-1990's and early 2000's, houndstongue began rapidly spreading in North Dakota, especially in the southwestern part of the state.

The leaves are oblong, very pubescent, and rough which resembles a hound's tongue. The plant grows to a height of 1 to 4 feet and flowers in mid-June. Flower clusters range in color from red to burgundy. Each flower produces 3 to 4 flat, tear-shaped nutlets with a very hard seed coat and numerous barbs. The barbs have three to four sharp spines on the end that resemble a grappling hook.

Houndstongue forms a rosette the first year of growth and bolts and

flowers the second season. The plant only reproduces from seed, but can spread great distances because the barbs cling to clothing, machinery and animals.

Weed Profile



Houndstongue tends to be a nuisance weed rather than a noxious plant, unless the infestations grow from a few plants to large patches. The nutlets often become imbedded in the wool or hair of livestock, reducing the

value of the wool and/or increasing costs to remove the burrs. Eye damage can occur if burrs become embedded in the eye or eyelids. The burrs can be a nuisance for hikers, hunters and fishermen, as well as their pets.

Houndstongue is toxic. The plant is rarely eaten in the green state, but animals will eat the dried plant in hay. Sheep are more resistant to the pyrrolizidine alkaloids found in the plant 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 occurred after two weeks of feeding herbage which contained as little as 6 percent houndstongue.

Prevention is the best method to keep houndstongue from spreading in 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 is very effective for controlling houndstongue and can be applied throughout the growing season. First-year houndstongue rosettes are easily controlled with 2,4-D at 2 pints per acre applied from late-May to mid-June. Second-year plants are much less susceptible to 2,4-D. Plateau® at 8 to 12 ounces per acre will control houndstongue both

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Deadline extended for weed grants

The deadline for Cooperative Weed Management Grant applications through the North Dakota Department of Agriculture has been extended to Tuesday, Jan. 10, 2006, the date of the Commissioner's Weed Forum in Dickinson. Applications will be taken by mail to that date or given to Ken Eraas in person at the forum.

The application is available online at www.agdepartment.com/Forms/CoopWeedMgtGrantApp.doc. You can also go to the Ag Department web page at www.agdepartment.com; select "Forms" from the left hand menu, and then scroll down and click on "Cooperative Weed Management Grant Application."

The easiest and preferred method of application is filling out the form directly on screen, printing it and mailing it. Since the information is not saved electronically, applicants should print a second copy for their own records.

For more information or assistance, please contact Ken Eraas at (701) 328-2980 or keraas@state.nd.us.

Dedicated weed control funds cannot go to other purposes

County weed boards receive funding from a mill levy and under Section 63-01.1-06(1)(e) of the North Dakota Century Code, the money raised is deposited into noxious weed control funds. The North Dakota Department of Agriculture has received questions about the use of these funds.

A 2003 North Dakota attorney general's opinion states that "tax levies can only be used for the purposes stated in the law imposing the taxes" (N.D. Atty. Gen. Op. 2003-L-54). The opinion relied on a provision in North Dakota's Constitution that limits the use of taxes to the specific purpose for which they are levied.

This limitation, the North Dakota Supreme Court stated in *State v. Hopton*, 265 N.W.2d 395, 401-02 (1936), prevents officials from "levying a tax ostensibly for one purpose and expending it for another" and "inhibits executive and administrative officers from expending moneys resulting from a tax imposed by the Legislature for a purpose other than that stated in the law imposing the tax."

The 2003 attorney general's opinion, however, did state that when there is a surplus in a special or dedicated fund, then the excess could be diverted to other purposes.

Some weed boards also receive money from the federal government in return for controlling weeds on federal land. Another section of the Century Code, 63-01.1-04.1(6), imposes limitation on the use of these funds.

Questions about the proper use of weed control funds will be discussed in detail at the North Dakota Agriculture Commissioner's Annual Weed Forum, Jan. 10, at the Grand Dakota Lodge Days Inn in Dickinson.

States near agreement on weed pact

The agriculture commissioners of North Dakota, South Dakota, Montana, Nebraska and Wyoming will soon sign a memorandum of agreement (MOA), committing the five states to a coordinated effort of managing invasive plant species, including prevention, eradication and controlling the spread of infestations through integrated management. The states are members of the Missouri River Watershed Coalition.

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Weed Profile

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pre- and post-emergence, but grass injury, especially to cool season species is likely when Plateau® is applied at the maximum rate.

The 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. This biological control agent has not yet been approved for release in the U.S. There are several other insects currently being evaluated for biological control of houndstongue

including a seed weevil (*M. borraginis*), a stem weevil (*M. trisignatus*), a root beetle (*Longitarsus quadriguttatus*) and a root fly (*Cheilosia pasquorum*). Unfortunately, the initial results are not nearly as promising as those of the root weevil.

The author is professor of plant sciences at North Dakota State University, Fargo.

Image credit: SOUTH DAKOTA WEEDS: 2002 EDITION, South Dakota Department of Agriculture, South Dakota State Weed and Pest Control Commission and South Dakota State University



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Weed control calendar

Jan 10 – North Dakota Agriculture Commissioner’s Annual Weed Forum, Grand Dakota Lodge Days Inn, Dickinson. Contact John Leppert at (701) 328-2379 or jleppert@state.nd.us.

Jan 10-12 – North Dakota Weed Control Association Annual Meeting/Conference, Grand Dakota Lodge Days Inn, Dickinson. Contact Randy Mehlhoff at (701) 256-5491 and for details see www.ndweeds.homestead.com/.

Jan 10-12 – Montana Weed Control Association Annual Meeting, Heritage Inn, Great Falls, MT. For details see www.mtweed.org or contact MWCA office at (406) 684-5590.

Feb-May - Pesticide certification and recertification trainings throughout North Dakota. Contact Andrew Thostenson at (701) 231-7180 or visit www.ag.ndsu.nodak.edu/aginfo/pesticid/subpages/recert_training.htm)

Feb 12-17 – Society of Range Management Annual Meeting, Vancouver, BC. For details, see www.rangelands.org/vancouver2006/.

Feb 13-16 – Weed Science Society of America Annual Meeting, Marriott Marquis Hotel, New York, NY. Contact WSSA at (785) 843-1235 and for details see www.wssa.net/.

Feb 16-17 – South Dakota Weed and Pest Conference, Ramkota Hotel, Rapid City, SD. Contact Gary Pribyl at (605) 883-4922.

Feb 26-Mar 3 – National Invasive Weed Awareness Week, Four Points Hotel Sheraton, Washington, D.C. (For details see www.nawma.org/niwaw/niwaw_index.htm).

Mar 14-16 – Western Society of Weed Science Annual Meeting, John Ascuaga Nugget Hotel, Sparks, NV. For details see www.wsweedscience.org/meeting/meeting.asp.

Apr 4-6 – National IPM Symposium, Adams Mark Hotel, St. Louis, MO. For details, see www.ipmcenters.org/ipmsymposiumv/.

April 24-27 – Noxious Weed Management Short Course for Land Managers, Chico Hot Springs Resort, Pray, MT. For details see <http://weedcenter.org/calendar/>.

Weed agreement

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The MOA will provide the coalition with common goals and objectives and may be helpful in obtaining future funding. The coalition is currently working to gather land management and natural resource information, as well as current GPS mapping and budget data from each state for future planning.

Aquatic weeds to get more attention

Thanks to recent legislation and new infestations, weed control authorities can expect a deluge of educational information, questions and new state regulations relating to aquatic nuisance species (ANS) in 2006.

ANS are species that are nonnative, obligate aquatic plants or animals that threaten economic stability, human health, native or desirable species, or the ecological health of bodies of water. Some ANS species now found in North Dakota are Eurasian watermilfoil, curly pondweed and common carp.

ANS can choke out native species, ruin fisheries, clog waterways and intake pipes and disrupt or eliminate water-based recreation. Management is expensive and difficult and, in most cases, falls within the jurisdiction of the local water resource boards in conjunction with the North Dakota Game and Fish Department.

A measure passed by the 2005 Legislature (North Dakota Century Code 20.1-17) requires the director of the North Dakota Game and Fish Department to:

- Prepare a statewide ANS management plan
- Organize an ANS committee
- Develop and adopt a list of ANS species after consulting with the ANS committee
- Provide for a permitting system to import ANS or move ANS within the state
- Conduct ANS education and prevention efforts
- Provide for partnerships to fund ANS prevention efforts

Lynn Schlueter, North Dakota Game and Fish Department special projects biologist, has been named ANS committee chair. He can be contacted at (701) 662-3617. Rachel Seifert-Spilde will represent the North Dakota Department of Agriculture on the ANS committee.

More information on ANS, as well as the North Dakota ANS Management Plan, can be accessed at the North Dakota Game and Fish Department website: www.state.nd.us/gnf/fishing/ans.html.

