



Ground Ivy *Glechoma hederacea* Rust



We are interested in the incidence of a new rust fungus that attacks the common weed, ground ivy (*Glechoma hederacea*). The fungus is a native of Europe and was first found in North America by M. Scholler in 2000. It occurs throughout the north-eastern states and appears to be spreading--its distribution has been established by Scholler & Boellmann through herbarium studies. The fungus is potentially interesting as a biocontrol of this invasive weed. We could use your help to determine how frequently this pathogen occurs in the US, and how much control it exerts over groundivy in yards and turf in your neighborhood.

Introduction

Ground ivy or creeping Charlie (*Glechoma hederacea* L., shown below) is a creeping perennial in the Labiaceae or Mint Family that forms dense prostrate patches in turfgrass, damp shady meadows, and disturbed sites (UVA et al., 1997). This plant can also colonize areas exposed to full sunlight. Reproduction is primarily by creeping stems (i.e., stolons) that root at the node and less commonly via seed and rhizomes. Ground ivy is native to Eurasia but has been introduced and become widespread in North America. The control of ground ivy using chemical and mechanical methods has largely been unsuccessful in turfgrass where it is considered a major weed (Mitich, 1994; Turgeon, 1994; Lamboy et al., 2000). Effective and environmentally sound approaches are needed for the control of ground ivy in turfgrass.

The rust is called *Puccinia glechomatis*. It forms very small tan dots on the undersides of ground ivy leaves and stems. A severe infection can cause death of a whole leaf segment or an entire stolon and all its leaves. The fungus spreads via spores (shown in the background of this page) and appears to be highly specific to ground ivy. Its ability to infect related plants needs further testing.

Very few other diseases of ground ivy are known in North America. Large galls of the leaves and stem, caused by a parasitic wasp, are fairly common. The galls do not appreciably diminish plant growth, so the wasp is not a good candidate for biological control. Although we are not interested in receiving galls or other damage done by feeding insects, we will gratefully accept other diseases of ground ivy for identification.

How to help

If you think you have found this rust, we would be grateful to receive documented samples for confirmation. Please follow these mailing instructions.

How to send us plants

- Harvest leaves with their attached stems and a short piece of the stolon
- Press the plants in a phone book or plant press for a day or more

Helping You Put Knowledge to Work

- Enclose the pressed plants in a legal-sized envelope. Fold them if necessary. Do not enclose in plastic, which promotes mold growth
- Include a scrap of paper with the **date** and **location** (state, county, town and site) where you collected the plants. Tell us what kind of habitat they came from (e.g. lawn or edge of woods)
- Include your observations on the extent of disease in your area, if possible
- Include your mailing or email address (optional)
- Mail by standard US mail to the following address:

Dr. Toni DiTommaso

Dept. of Crop and Soil Sciences

903 Bradfield Hall

Cornell University

Ithaca, NY 14853

email: ad97@cornell.edu



- DO NOT mix plants from different locations
- DO NOT send damp plants
- DO NOT mail plants from outside the continental USA
- DO NOT send plants that were recently sprayed with pesticide

How can this weed be controlled? When is the best time?

Hand pulling or digging is not a practical control method because it is impossible to get every little piece. The stems grow on top of the grass and root at nodes where they come in contact with the soil.

In the lawn you may use 2,4-D + dichlorprop (Weedone DP)-Apply in fall or early spring

When using Herbicides, read the entire label first, Follow manufacturers instructions and be careful

For more information visit:

<http://www.css.cornell.edu/WeedEco/creepingcharlie.htm>

<http://www.css.cornell.edu/WeedEco/main2.html>

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