



Michigan Invasive Plant Council Newsletter

P.O. Box 27036, Lansing, Michigan 48909-7036

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Invasive Plant Species Control and Management*

**This article is the first in a series that will discuss available management options for various invasive plant species*

Purple Loosestrife (*Lythrum salicaria*)

Background

Purple loosestrife (*Lythrum salicaria*) is a perennial forb introduced to North America from Eurasia in the 1800's for its aesthetic appeal. While primarily inhabiting the eastern United States, it is quickly expanding its range westward. Purple loosestrife typically inhabits wetlands and damp areas, although it is not unusual to find it growing in dry areas adjacent to large populations.

Purple loosestrife typically grows 4'-6' high, has a square stem, and is easily recognized by its bright pink/purple flower when it blooms from June-September. It spreads prolifically through seeding: one plant may produce 2-3 million seeds in one growing season. In addition, purple loosestrife reproduces vegetatively via underground rhizomes, allowing it to form large monocultures that crowd out native species, greatly reducing the biodiversity of wetlands across the eastern United States. Regulations in many states now ban the growth, sale, or transport of purple loosestrife due to its highly invasive nature; nevertheless, it continues to inhabit and degrade wetlands.

Management options are typically categorized into Biological, Mechanical, and Chemical. Most often, the ideal treatment strategy utilizes more than one of these techniques in an IVM, or Integrated Vegetation Management approach.

Heidi

*I thought I had a pix on file, but
could not find it.*

*I noticed it's in bloom now
so I could try to get a new one
unless you have something?*

*I will try to clean up the logo but,
could use a better pix to start with*

inserted page is a separate file

Biological Control

Biological controls have proven to be effective in controlling the spread of purple loosestrife. A root weevil (*Hylobius transversovittatus*) and leaf-eating beetles (*Galerucella* spp.) have been introduced throughout the eastern United States with great success over long term periods (5 years or greater). The *Galerucella* spp. beetles have been more commonly used than the weevil, and are therefore easier to obtain. In Michigan, beetles may be located through the following website:

http://www.miseagrant.umich.edu/pp/get_started.html

Mechanical Control

Mechanical control of purple loosestrife can be very time consuming and is only effective if the entire plant is removed. Small, localized plant populations

Continued on page 2

Purple Loosestrife continued

can be hand-pulled, but larger populations should be treated with alternative methods. Mowing of purple loosestrife is effective in minimizing seed production; however, mowing can be very difficult or impossible because it typically grows in wet and saturated areas. Controlled burning may be effective in removing dead thatch to enhance effectiveness of herbicide treatments, but will not reduce purple loosestrife as an independent measure.

Chemical Control

Chemical control of purple loosestrife has proven to be effective when multiple treatments per growing season are applied. Herbicides should be approved for wetland use, which limits the available chemicals. Glyphosate (Glypro, Rodeo, Aquaneat) can be applied in a 1.5-2% solution via foliar treatment, but should be completed during the period of inflorescence. Because Glyphosate is a broad-spectrum herbicide, however, care must be taken to avoid off-target damage. Because purple loosestrife has an extended flowering period (June-September), multiple treatments should be applied per growing season. Triclopyr (Garlon 3A) has also proven to be effective when applied in a 2% solution, and can often effectively kill plants prior to inflorescence. Triclopyr has the added advantage of being a broadleaf-specific herbicide, thus limiting damage to adjacent grasses and sedges.

Whenever using pesticides, make sure to follow label directions and obtain all necessary state or local approvals prior to treatment.

Aquatic Invasive Species (AIS) Awareness Week

Governor Jennifer M. Granholm proclaimed May 22-28, 2007 as Aquatic Invasive Species (AIS) Awareness Week to raise awareness about the need for citizens to take action to help prevent new introductions and control the spread of these invaders. The importance of individual actions continues to heighten due to the potential arrival of new invaders. In 2006, hydrilla, an invasive aquatic plant, was found in Lake Manitou in Indiana only 50 miles from the Michigan border. This plant can create dense thick mats impenetrable to boaters and swimmers and is extremely costly and difficult to control. A new non-native fish virus called viral hemorrhagic septicemia virus (VHS) is also threatening Great Lakes fisheries. While the VHS poses no human health threat, this deadly fish virus is causing massive fish die-off in Lakes Huron, Erie, St. Clair, and Ontario affecting more than a dozen fish species over the past two years.

Recreational users should demonstrate caution while enjoying Michigan's vast water resources this summer, and a few simple preventative measures can help protect Michigan's pristine waters. Watercrafts and recreational equipment should be inspected before leaving a lake, any vegetation should be removed, all live wells drained, areas that may contain water cleaned, and unused bait should be disposed in the trash.

The AIS week is sponsored by the Department of Environmental Quality's Office of the Great Lakes. For more information visit www.michigan.gov/deqaquaticinvasives.

Volunteer Opportunities for State Park Stewardship

Want to help restore unique natural areas in southern Michigan State Parks and Recreation Areas? Then join the DNR, Parks and Recreation Division, Stewardship Unit for volunteer stewardship workdays this summer and early fall.

This summer, activities will include cutting non-native, invasive shrubs like glossy buckthorn, autumn olive and honeysuckle and making brush piles. In the fall, volunteers will collect seed from native prairie grasses and wildflowers to re-establish and restore tallgrass prairie, lakeplain prairie, and oak savanna ecosystems.

For workday details, to get directions, and to register, please visit www.michigan.gov/dnrvolunteers; and click on "Calendar of Volunteer Stewardship Workdays" under "Current Volunteer Opportunities". Hope you can join us!

Contact Laurel Malvitz at 248-359-9057 or malvitzl@michigan.gov for additional information.

A Noxious Weed is Here!

Approximately 10 years ago I first saw Poison Hemlock (*Conium maculatum*) showing up in a small isolated stand in Berrien County along Old US 31, south of Berrien Springs near the corner before the now closed Range Line Grocery. It has now spread 1/4 mile north and south of the site. A two hour drive around Berrien, Cass

and Van Buren counties revealed scattered populations along many roads (e.g. all roads leading into/out of Cassopolis, Shawnee Road, Dutch Settlement, M-40, 60, 62). Two years ago two plants showed up on the road I live on and I pulled them up--but not after they had flowered. Last year there were six plants and this year almost 300. This is one very noxious, poisonous, tenacious, invasive weed that will take over all moist waste areas, roadside ditches, streamsides, or wetlands in very short order. It must be pulled up or killed before the thousands of flowers on each plant produce seed. In my opinion it is much **worse** than Garlic Mustard (*Allaria petiolata*) invading our woodlots and Purple Loosestrife (*Lythrium salicaria*) our wetlands because of the adult size (see attached photograph), its poisonous nature, and the difficulty of removing it from wetlands when established. Now is the time to remove it and its large biennial taproot as it is only now flowering and no seeds have been set. If one waits until the end of June to remove it, it may be too late to remove without some seed being dispersed. **It is best to pull up or cut both young seedlings and tall adult plants, crush the stems and burn them.** They can also be sprayed with a strong herbicide but should be removed and burned before the seeds mature.

If you see this plant on your property, or near by, do all you can to eradicate it. It may take several years if one plant is allowed to produce many hundreds of seeds. I have seen stream banks in the Pacific Northwest void of any other plant life after this plant arrived and spread forming dense thickets. I suggest using gloves in pulling up individual plants (some people may be allergic to the sap) and then washing your hands and gloves when finished. The juice is very poisonous, even when tissues are dry. Socrates is the best known victim but children have become poisoned by using the hollow stem internodes as "pea shooters." All parts of the plant contain poisonous alkaloids, that cause respiratory and cardiac



One noxious weed, Poison Hemlock.

failure. Only 50 mg of the alkaloid is sufficient to kill an average sized adult and it is reported to be one of the most poisonous species of plants know.

At first glance, this white flowering plant looks like giant Queen Anne's Lace or Wild Carrot (*Daucus carota*) with similar lacy, multi-divided leaves. Queen Anne's Lace has pointed "bracts" around the base of the umbel flower clusters, while Poison Hemlock does not, and Queen Anne's Lace is much smaller than hemlock at maturity. You can also tell the Poison Hemlock by its **reddish-purple blotches on the stem** even without flowers and a strong parsley aroma when the tissues are crushed. Let's not allow this alien to take over our wetlands and waste areas and eradicate it now!

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To List or De-List?

Stakeholders Debate AIS Criteria

Michigan's Invasive Species Advisory Council (ISAC) was created in 2005 and is comprised of the directors of Michigan's departments of natural resources, environmental quality and agriculture. ISAC staff members felt it was important to obtain input from stakeholders in developing a process for changes to the list of prohibited and restricted organisms that were created under the legislation, so the Council collaborated with Michigan Sea Grant to sponsor a stakeholders workshop in September, 2006.

Workshop participants included approximately 45 representatives of government agencies, nongovernmental organizations, business interests and researchers, as well as out-of-state speakers with expertise in such processes. During this meeting, stakeholders identified priorities by providing responses to the following questions:

1. What elements should the Invasive Species Advisory Council use in its process to make sure that its process is scientifically sound?
2. What elements should the ISAC use in its process to make sure that it is "risk-based" and species are not listed arbitrarily?
3. What elements should the ISAC use in its process to make sure that it is consistent?
4. What elements should the ISAC use in its process to make sure that it is fair?
5. What elements should the ISAC use in its process to make sure that it protects Michigan's environment and economy?

Michigan Sea Grant summarized the comments from workshop participants, and ISAC used them in drafting a process for listing, delisting, or reclassifying invasive species under Part 413. In April 2007, Michigan Sea Grant sponsored a public meeting at which all the September workshop participants and others were invited to provide comments on the draft process. Presentations and subsequent comments on the draft process are summarized as follows:

Important points stressed:

- Using a risk/benefit assessment such as the Michigan Invasive Plant Council's Risk Assessment that considers biological and ecological impacts in Michigan, distribution in Michigan, economics and practicality of eradication/suppression, control methods and efforts, and benefits to other aspects of the environment, economics and society
- Prompt disclosure of species being nominated for listing or delisting
- Expert participation in technical review committees
- Identifying a variety of stakeholders to participate in the review process that represent a variety of perspectives
- Notifying stakeholders of legislative action as it is proceeding and after it occurs
- Providing opportunities for public input other than in person (e.g. written input)
- The need for an emergency listing process

Comments on the information guide:

- Scientific identification of species and their geographical distribution
- The treatment of species subsets such as variety, subspecies, cultivars, forma, intergeneric hybrids, line, strain, race, and genetic variants
- Consequences of and likelihood of introduction/spread
- Identifying applicable federal regulations in addition to state and local
- Include projected costs associated with control measures, as well as indirect economic impacts

On May 2, Governor Jennifer Granholm issued an Executive Order abolishing the Invasive Species Advisory Council and transferring all of its responsibilities to the Department of Natural Resources as of July 15, 2007. The DNR is currently considering how it will proceed with implementation of these responsibilities, including the process for making recommendations to the legislature for listing additional species as prohibited or restricted or for removing species from the existing lists.

Michigan Invasive Plant Council

Mission

To protect Michigan from the threat of invasive plants.

Objectives

- Develop, maintain, and publish a council-reviewed invasive plant species list
- Raise public awareness about the spread and impact of invasive plants
- Facilitate the exchange of information concerning management, control, inventory, and monitoring of invasive plants.
- Provide a forum for all interested parties to discuss issues relating to invasive plants.
- Serve as an educational, advisory, and technical support council for all aspects of invasive plants and related issues.
- Prevent future introductions of new invasive plants.
- Adopt guiding principles set forth in the management plan by the National Invasive Species Council Executive Order 13112 February 3, 1999.

Look for MIPC's new website to be up and running soon! www.invasiveplantsmi.org

Michigan Invasive Plant Council

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MIPC Membership Form

The Michigan Invasive Plant Council welcomes those people interested in working on invasive plant concerns in the state of Michigan. Please make your check payable to 'Michigan Invasive Plant Council' and send it along with this form to:

MIPC - Membership
P. O. Box 27036
Lansing, MI 48909-7036

Type Membership

Individual Membership Categories

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New	_____	General \$25 _____ Contributing \$50 _____	General \$100 _____ Contributing \$500 _____
Renewal	_____	Donor \$100-\$500 _____ Patron \$1,000 _____	Donor \$1,000-\$10,000 _____ Patron \$10,000 or more _____

Amount enclosed: _____

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