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Dealing with Alien Invasives: Know the Enemy

by Maryann Whitman

Eradicating invasive plants (native and non-native) can be a frustrating and time-consuming process. Relax, take your time, and remember that the invasion(s) took a long time to become established. You cannot expect to cure the problem in a day. But your efforts are worthwhile! Getting to know the enemy is the first step in winning the war, or at least the battle.

Become familiar with the invasive plants of your area so you can recognize them on sight. The list of undesirables varies from state to state and even from area to area within a large state. In Montana, spotted knapweed (*Centaurea maculosa*) grows so densely on grazing land that in places nothing else can grow. In Michigan, knapweed is not as profuse and can be managed with prescribed burns and competition; garlic mustard and buckthorn are far greater problems.

This east-west phenomenon depends largely on where the infestation started. Knapweed came into the San Juan Islands of Washington State in 1893. Garlic mustard, on the other hand, is spreading across the continent from Long Island, New York (1868) on the east coast.

To select the best approach for dealing with a specific invasive plant, we suggest you learn as much as possible about it.

Most invasive plant websites will include the following about each plant: native range, origin, distribution, description, ecological threat, the plant's ecology, successful control or elimination methods, and finally, failed or ineffective practices. You might wonder why one might need all this information, but the more you know, the easier it will be to get rid of your particular plant problem.

A few of the information categories and their importance, are described here.

Native range, origin: Apart from historical curiosity, this information permits us to surmise where in this country the plant might grow. Its history of spread will also give you some idea of what you are up against.

Description, similar species: Being able to recognize a target without hesitation is critically important, after all you are about to try to kill it. Knowing what looks like your target plant helps you avoid killing the good with the bad.

You will have to learn to identify seedlings from experience, especially because the invaders are easiest to eradicate in their earliest stages of life. Unfortunately, most photos and drawings show these plants only at maturity.

This may look like a leafy, woody glade. It's not. The only plant with leaves in this photo is honeysuckle, an invasive which is taking over Kentucky's parks and woodlands.



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Ecological threat, effect upon natural areas: Specific invasives can offer specific threats and reasons for removal. Knowing of the phytotoxic effect of spotted knapweed, for instance, (it exudes chemicals through its roots which interfere with some aspects of the life processes of other plants), would help to explain why other plants have trouble moving into an area that had been occupied by a dense stand of knapweed, even though it has been eliminated.

Plant's ecology: Along with the plant's description, this information can help you make logical, common sense decisions about how to appraise and approach any specific infestation.

You can learn the plant's life cycle, methods of reproduction and dispersal, response to seasonal changes, and amount of seed production, as well as the longevity of the seed in a seed bank. This is all very useful information when one is on the warpath. For instance, if you learn that the plant is clonal (like Tree of Heaven), then you must treat every specimen in the area within a short time frame in order to avoid sprouting of the roots.

Successful control/elimination methods, failed or ineffective practices: This information will save you time, money, and frustration.

Resources

Two of the best places to start your search for information are your County Cooperative Extension Service and your state's natural resources department. In addition, your local park department may have knowledgeable staff. And remember to ask other Wild Ones members!

The list of useful websites is extensive; here are a few to help you get started.

- Plant Conservation Alliance's Alien Plant Working Group, <http://www.nps.gov/plants/alien>. Very user-friendly site if you want the facts and nothing but the facts. Good photos of adult forms. Many links to other helpful sites.
- Vegetation Management Manual, <http://www.inhs.uiuc.edu/edu/VMG/VMG.html>. Developed by the Illinois Nature Preserves Commission to provide volunteer groups, laypersons, natural area owners, wildland owners, and others, with easy-to-understand methods for controlling undesirable vegetation in natural areas.
- The Nature Conservancy, <http://tncweeds.ucdavis.edu/>. As might be expected, this site includes easy access to information about any state in the union. More technical than the first two sites; includes photos of seedlings and young plants. Many links to other helpful sites.
- The Natural Resources Conservation Service, <http://plants.usda.gov/>. This data base has information about plants in any part of the country. Many references to printed material.

Many states have invasive plant societies which have printed material and/or websites. In addition, the agricultural sections of many state university websites will include information about controlling invasive species.

Other resources include *Weeds of the Northeast* by Richard Uva. Cornell University Press; 1997. ISBN 0-8014-8334-4. Excellent general book about "weeds" (299 listings), but be careful because many natives (which you may or many not consider to be weeds) are listed. Each listing has at least four photos of the plant in question, at various life stages. 🌱

Suggestions for controlling invasive species. . .

. . .from Ken Solis, vice-president of The Park People of Milwaukee, WI and chairperson of Milwaukee's Weed-Out program.

Removing or killing an invasive plant often greatly depends on the particular species. Some general rules for dealing with invasive weeds are:

1) Eradicate them early before they become established. Most invasive weeds produce a prodigious number of seeds or spread by extensive rhizomes. Usually you will have to spend many years fighting seedlings after you have removed the mature plants.

2) Work from the least infested area(s) toward the worst infested area(s). You've already lost the battle or will spend many hours for many years dealing with badly infested areas; keep the less infested areas from reaching that point.

3) Consider the overall botanical quality of the area. In Milwaukee, we've had to give up in many parks because we were essentially pulling garlic mustard to benefit other weeds such as buckthorn, creeping Charlie, or burdock. We try to concentrate on areas that have a lot of good native plants already established.

4) Know thy enemy. There are a number of educational resources to help you learn the best way to fight an invasive weed. The wrong approach may cause even more work. For example, cutting down a black locust tree will induce it to send up many shoots from its root system.

On the other hand, a particular feature of a weed species may work to your advantage. Buckthorn leaves stay green later than most natives and garlic mustard (first year growth) stays green through the winter. Therefore, if you decide to spray the appropriate herbicide in the late fall, you will do little harm to native species.

5) Environmentally-minded people are rightfully concerned about the use of herbicides. However, as with nearly any similar issue, it is a matter of weighing the risks against the benefits. If it appears that your favorite natural area is going to "die" due to an overwhelming infection of invasive weeds, you might decide that the benefits of the herbicide as an antibiotic outweigh the risks.

For more information about Milwaukee's Weed-Out program and some of the upper Midwest's invasive weeds, see the website at www.weedout.org.

Ken is a member of the Milwaukee-Wehr (WI) Chapter of Wild Ones.

And for even more help in dealing with invasive plants, check out the lengthy list of helpful North American websites compiled by Kelly Kearns of the Wisconsin Department of Natural Resources. It's posted on the Wild Ones site, for-wild.org.

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