



# BROOKLYN BOTANIC GARDEN

[Home](#) » [Gardening Information](#) » [Essays and Opinions](#)

## Invasive Initiatives—States Are Beginning to Take Action Against Horticultural Pest Plants

*Plants & Gardens News* | Volume 22, Number 1 | Spring 2007

by [Colleen Fitzpatrick](#)

Any gardener not enamored of burning bush (*Euonymus alatus*) is a hard-hearted gardener indeed. The elliptical green leaves of this northeast Asian shrub turn a brilliant red in autumn, outshining the competition even in New England's color-packed fall landscape. Yet burning bush is "planta non grata" in many states because of its propensity to crash the ecological party and trounce its native hosts. (Burning bush is displacing native shrubs in woodland habitats throughout the eastern U.S.)

Massachusetts is one state that lists burning bush as invasive and is on the offensive against it. After January 1, 2009, nurseries in the Bay State will no longer be permitted to grow, sell, or distribute the offending plant. This regulation follows on the heels of an earlier one, from July 2005, banning growers and nurseries from bringing new burning bush plants into Massachusetts. The grace period between the importation and sale bans is to give folks in the trade time to sell their stock and find alternatives. (BBG's handbook *Native Alternatives to Invasive Plants* recommends fragrant sumac, *Rhus aromatica*, as one worthy substitute.)

Burning bush has plenty of company on the state's "bad plant" list. Autumn olive (*Elaeagnus umbellata*) and purple loosestrife (*Lythrum salicaria*) were banned from Massachusetts nursery yards as of January 1, 2006. Starting this year, yellow iris (*Iris pseudacorus*) and plume grass (*Miscanthus sacchariflorus*) will be off-limits for sale. Come 2009, Norway maple (*Acer platanoides*), Japanese barberry (*Berberis thunbergii*), and five kinds of honeysuckle (*Lonicera* species and cultivars) will be unavailable.

All in all, about 140 other plants have been targeted for bans by the Massachusetts Invasive Plant Advisory Group. The Massachusetts Department of Agricultural Resources, which licenses and inspects nurseries, enforces the regulations. In addition, on land with nasty invasions of banned plants, regulators can order property owners to weed out the culprits. If the owners refuse, the state may do the job and send them a bill.

Massachusetts is just one of a number of states that have begun to tackle the problem of invasive horticultural plants head on in the absence of any meaningful action at the federal level. Neighboring Connecticut, for instance, has enacted several laws that involve identifying and banning invasive



Purple loosestrife (*Lythrum salicaria*) was banned from Massachusetts nursery yards as of January 1, 2006. (Photo courtesy of Gary A. Monroe at USDA-NRCS PLANTS Database.)

plants. The laws call for fines of up to \$100 per plant for anyone caught importing, selling, or buying any of the 81 plants on the state's invasive plant list. However, officials concede they haven't adequately addressed the matter of enforcement.

## Who's in Charge Here?

Federal regulations that address "noxious weeds," defined as plants that pose a threat to agriculture, have been on the books for decades. But only in the last 15 years or so has the general discussion expanded to include the problem of nonnative plants that invade and disrupt aquatic environments and terrestrial wildlands (such as forests, prairies, and conservation areas).

Concern about invasive species got a small boost in 1999, when former President Clinton signed Executive Order 13112, requiring federal agencies to coordinate with each other and devise an invasive species management plan. Then, in late 2001, a landmark gathering at the Missouri Botanical Garden, in St. Louis, resulted in the publication of voluntary codes of conduct for botanic gardens and arboreta, nursery professionals, landscape architects, government agencies, and ordinary gardeners.

But responsibility and authority for addressing the problem is fragmented, cutting across regions and myriad agencies within all levels of government. The issue is also fraught with complex (or at least contentious) scientific and economic questions: How do you define an invasive plant, especially when plants behave differently in different climates? If a plant species is deemed invasive, are all cultivars of the species invasive too? What do you do with a plant that is invasive but is also an economic mainstay?

As academic researchers, government officials, the horticultural industry, and environmental groups struggle to come to a consensus, the plant bullies march on. Kudzu (*Pueraria montana*) claims a conservation area in Marblehead, Massachusetts. Giant hogweed (*Heracleum mantegazzianum*) establishes residency in all but one of Connecticut's counties. And horticultural beauties such as Oriental bittersweet (*Celastrus orbiculatus*), porcelainberry (*Ampelopsis brevipedunculata*), and English ivy (*Hedera helix*) run rampant in many parts of the country.

## A Three-Pronged Assault

Concerned states seem to be adopting one or more of three approaches to the invasive plant problem: 1) blacklisting known pest species, 2) investing in public education campaigns that encourage the use of benign alternatives, and 3) developing early-detection programs, which attempt to identify potential exotic invasives before they become a problem.

Clearly Massachusetts and Connecticut, with their outright bans, are among the more legislatively active states.

"We need the plans in place to keep the invasives from getting here and to stop other invasives once they are here. And they are here," Gina McCarthy, commissioner of the Connecticut Department of Environmental Protection, said last fall at an invasive-species conference in Wallingford, Connecticut. "We are in a battle with an insidious enemy, and it is a common enemy. We need to do more, and we need to do it faster."

Delaware is taking a different tack, relying not on rules and regulations but on raising public awareness. In some nurseries, for example, plants on the state's invasive list carry a warning tag, and horticultural displays offer information on alternatives that are ecologically wiser. In addition, the state's invasive plant council has published three booklets as part of the "Plants for a Livable

Delaware" campaign, encouraging people to think of landscaping not simply as ornamental but as functional, in terms of preserving native ecosystems and providing habitat and food for birds and other wildlife.

While invasion biologists welcome these efforts to combat pest plants, some say they're not enough. With limited resources for enforcement, control, eradication, and habitat restoration, they argue, it may be as—or even more—important and efficient for states to focus attention on detecting the presence of would-be pest plants and taking swift action.

This is what's happening in Wisconsin, where the U.S. Environmental Protection Agency is helping fund a program to identify and map the location of plants in the state as part of an early-detection system. "Volunteers do most of the groundwork," says Kelly Kearns, plant conservation program manager with the Wisconsin Department of Natural Resources. The volunteers collect and photograph specimens and post their findings on the Wisconsin State Herbarium website. Money is also available from the U.S. Department of Agriculture's Forest Service for weed-suppression work, says Kearns.

In a few states, including Hawaii, California, Florida, and Iowa, academic researchers and experts are pushing the early-detection envelope even further by trying to understand the causes of invasion—what will make a plant misbehave in an environment—and develop policies that aim to minimize the risk.

In doing so, they are taking their cue from Australia and New Zealand, both of which use precautionary tools called weed risk assessments to predict the potential invasiveness of exotic plants that have not yet reached their shores. A plant is assessed using a set list of criteria, such as reproductive biology and history of invasion, to determine how it might act in the landscape. If the plant is deemed a potential pest, it can't be imported or cultivated; if it passes the test, it's put on a "white list" of acceptable low-risk species.

There are no flawless predictors yet in the U.S., according to Peter White, a biology professor and director of the North Carolina Botanical Garden, in Chapel Hill. But researchers are making strides in some states. In Florida, for example, scientists have been testing a protocol adapted from Australia's weed risk assessment tool, running 124 plant species through a set of 49 questions. They were still analyzing the results as of press time but expressed optimism that the tool is reliable and nationally applicable.

"I personally feel quite confident it could be adapted to the entire United States," says Alison Fox, associate professor with the University of Florida's Agronomy Department and chair of the Florida Exotic Pest Plant Council. Whether the tool is used as a basis for new laws or for voluntary initiatives—or gets shunted aside—only time will tell, she says.

## Think Global, Weed Local

Experts and officials continue to argue about the best way to solve the invasive plant problem, but in the end, most of them agree that there is room on deck for all hands and approaches. Most also say that success will ultimately come down to attitudes and action taken at the level of individuals, and that public education therefore is key.

"No gardener wakes up and says, 'Now, how can I cause harm to the world?'" says Terri Kempton, project manager of the California Horticultural Invasives Prevention partnership.

Yet some gardeners, landscapers, and growers are doing just that by failing to recognize that

horticulture is an important pathway for disseminating harmful plants and that their plant-growing decisions can affect the environment for years to come.

In that sense, Kempton says, and as corny as it sounds, combating invasive plant species truly is a global problem with local solutions.

---

**Colleen Fitzpatrick** is a freelance journalist based in Simsbury, Connecticut.

---

1000 Washington Avenue, Brooklyn NY 11225 · 718-623-7200 | Copyright © 2007 BBG  
[Contact BBG](#) · [Directions](#) · [Conditions of Use](#) · [Privacy Policy](#) · [Accessibility Statement](#) · [Site Map](#)