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## **Exotics Invading, Natural Environment Losing**

By Francis Lawn, Director of Land Restoration at The Schuylkill Center for Environmental Education in Philadelphia

*"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it does otherwise." A. Leopold*

Invasive plants are increasingly contributing to the degradation, declining health, and economic value of our local environment. If we do not manage the current populations and monitor new plants for potential invasiveness, our ecosystem will become a monoculture of few plants, and we run the risk of permanently destroying the diversity of our forests, meadows, and wetlands.

For many centuries, plants from other countries have been brought to the United States. Such plants have been used for ornamental, medicinal, or culinary reasons. Most of these exotic plants are fairly harmless and stay put where they are planted; it is the ones who don't, who outgrow their natural boundaries that pose the greatest risk.

Over the last few decades, plants such as Oriental Bittersweet, Japanese Honeysuckle, Garlic Mustard and Japanese Stilt-Grass have become an ever-alarming sight in many forests in our region. Where native ephemerals and perennials once grew, they are now being replaced by these tenacious plants, producing at a high rate, and preventing any native plant from competing. Invasive plants have no natural predators to keep them in check. Few animal, insect, or pathogen will touch them; therefore they can spread very quickly.

The unfortunate aspect of this invasion is the decline in biodiversity in our forests. In fact most of these plants prevent the regeneration of native plant species, therefore putting our forests in stasis. There is even speculation that some of our forests are reverting from a healthy multi-layered system with large canopy and understory trees, and shrub and herbaceous layer into a tangled single-layered infestation of vines.

Researchers at Cornell University estimate that invasive species are costing Americans approximately \$137 billion every year (Pimentel et al. 2000).

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## **Exotics Invading**

Land disturbance tends to be the largest vehicle for this disruption. As a healthy forest becomes fragmented by development, the infestation becomes inevitable. Forests cannot deal with disturbance as in the past. Instead of evolving in a succinct successional process, they are invaded by exotics early on, preventing this natural process from occurring.

If we are to gain a foothold on many of these invasive plants, there needs to be better guidelines set in place, such as a weed management plan. Improved procedures need to be established to strictly monitor plants coming into this country for potential invasiveness. In addition, the leaders in the horticultural industry should take responsible action and stop producing and selling plants that are known to be invasive.

Despite the knowledge that invasive plants exist, many park systems in this area don't have the manpower or funds to manage their land properly; therefore more funding is needed for highly trained specialists who can manage invasive plants, restore degraded ecosystems, and conduct additional research to learn more about the potential hazards of these plants.

There is also a need to educate the public on these important issues. Many people don't realize their impact on the environment around them. In fact, many perpetuate the situation by inadvertently using nonnative invasive plants for landscaping, rights-of-way, erosion control, and habitat improvement, and unknowingly allow invasive plants to escape into surrounding natural areas. Individuals can do their part in preventing the spread of invasive plants by planting native species indigenous to their area, helping to preserve local biodiversity, which is essential for maintaining our quality of life. There are organizations, like The Schuylkill Center for Environmental Education that teach volunteers how to identify potential invasions and how to manage them.

Our forests and other ecosystems are at risk of failing if nothing is done to prevent and manage invasive plants. Public involvement and education are some critical tools needed to help protect our forests. The more involved we are, the better chance we have at winning this battle.

As a local environmental expert, The Schuylkill Center is currently taking a more sustainable approach to managing invasive exotic plants by fostering methods that encourage healthier plant communities that naturally resist invasion. To read more about these efforts visit [www.schuylkillcenter.org](http://www.schuylkillcenter.org) and click on "Land Restoration."

Don't miss your opportunity to purchase native plants for your garden at The Schuylkill Center's annual Native Plant Sale on Saturday April 29<sup>th</sup> and Sunday April 30<sup>th</sup>. Experts will be on hand to answer questions. For more information regarding invasive plants, contact the Restoration Department at 215.482.7300.

To learn more about invasive exotic plants visit the Mid-Atlantic Exotic Pest Plant Council at [www.ma-eppc.org](http://www.ma-eppc.org) . To learn more about biodiversity visit Pennsylvania Biodiversity Partnership at [www.pabiodiversity.org](http://www.pabiodiversity.org) .