

Kentucky's **Alien** Invasion

by Joyce Bender

To most people, the phrase “alien invasion” conjures up images of a science fiction movie. The horrors of space invaders are the figments of a screenwriter’s imagination run wild, but the devastation from alien plants is only too real. The United States has been, and continues to be, invaded by aliens – plants that are not native to this country. Introduced from Europe or Asia, these non-native species have invaded our natural areas and upset the delicate ecological balances that were in place. With no natural enemies to control their numbers, invasive non-native plants multiply at the expense of our native species. They eliminate the beauty of our spring woodlands and displace wildlife by out-competing native species for space, light, and nutrients. Invasive non-native plants are considered to be one of the leading threats to biodiversity, second only to habitat destruction.

In addition to the ecological costs, invasive plants take a heavy toll on our economy. It is estimated that invasive plants cost the United States more than

garlic mustard

Alliaria petiolata

Photo by Victoria Nuzzo, Natural Area Consultants

garlic mustard in bloom



Image by Leslie J. Mehrhoff, University of Connecticut,
www.forestryimages.org



oriental bittersweet

Celastrus orbiculatus

Photo by James R. Allison, Georgia Department of Natural Resources



bush honeysuckle

Lonicera maackii

Photo by Chuck Barger, The University of Georgia, www.forestryimages.org

Bush honeysuckle (*Lonicera maackii*) was introduced from Asia as an ornamental shrub. It forms dense thickets that shade out tree seedlings and other native plant species to the point where nothing grows beneath this shrub. This plant has overtaken the midstory of most forests in the Inner Bluegrass region.

\$34 billion each year in lost productivity, lower quality, weed control and containment on croplands, rangelands, forests and aquatic resources

Invasives are plants out of place; they are found beyond the limits of their natural distribution. There are a number of ways for a plant population to spread naturally. For example, some species can grow from fragments of roots or runners that break free of the parent plant; some species

have seed coats with hooks that catch on animal fur; some seeds have hairs that enable them to float on the breeze. None of these methods alone are likely to account for the presence of the invasive plants that plague our country. With assistance from humans, either by accident or on purpose, these plants have moved beyond the continent of their origin and crossed an ocean to take up residence here in the United States. Early colonists brought some of these species to our shores as seeds mixed in the rock and soil of ship ballast. Some invasive species got their start when they were planted as a contaminant among the seeds of a valued food crop. Other plants have been introduced intentionally and promoted for erosion control, forage, and landscaping with disastrous results.

Many Kentuckians may not know garlic mustard and oriental bittersweet, but most have encountered kudzu. These species and the others listed here have been identified in Kentucky and many surrounding states as serious threats to the region's biologically diverse forest ecosystems. Please consult the Southeast Exotic Pest Plant Council Web site <http://se-eppc.org/> for more information and useful links for identification and control methods.

Asian bittersweet (*Celastrus orbiculatus*) was introduced from Asia as an ornamental. The aggressive vines wrap around trees and their weight can break limbs. Their dense growth habit shades out tree seedlings and chokes out native ground cover. It has been documented as hybridizing with our native bittersweet vine, and this could lead to the extinction of the native species.

Bush honeysuckle (*Lonicera maackii*) was introduced from Asia as an ornamental shrub. It forms dense thickets that shade out tree seedlings and other native plant species to the point where nothing grows beneath this shrub. The abundant fruits are rich in carbohydrates but

What can you do to help with this serious threat?

- Ask questions at the nursery about the invasive tendencies of any ornamentals you are considering for purchase.
- Work on eradicating invasive plants from your property.
- Use native plants or species proven to be non-invasive when landscaping your home. There are numerous native species that will provide the color, interest, and values for wildlife you are looking for.
- Urge your legislators to improve statutory requirements for listing and control of invasive plants.
- Volunteer with your local park or state nature preserve to control invasive plants.

Chinese privet (*Ligustrum sinense*) was introduced from China as an ornamental. A prolific fruit producer, its seeds are spread by birds. It sprouts well from the roots, making it more difficult to control.

winter creeper

Euonymus fortunei

Photo by James H. Miller, USDA Forest Service



Chinese privet

Ligustrum sinense

Photo by Ted Bodner, Southern Weed Science Society

do not offer migrating birds the high-fat, nutrient-rich food sources needed for long flights. This plant has overtaken the midstory of most forests in the Inner Bluegrass region.

Chinese privet (*Ligustrum sinense*) was introduced from China as an ornamental. This shrub also grows in dense stands that eliminate native species underneath, especially in moist areas. A prolific fruit producer, its seeds are spread by birds. It sprouts well from the roots, making it more difficult to control.

Garlic mustard (*Alliaria petiolata*) arrived from northern Europe. This herbaceous plant forms a dense ground cover that excludes native plants in rich forests. It is harmful to wildlife because it eliminates native plants that serve as food sources for small mammals and turkey. Each plant produces numerous seeds that spread easily. It is very difficult to control once it is established.

Winter creeper (*Euonymus fortunei*) was introduced from China as an ornamental ground cover. It forms a very dense ground cover that

eliminates native species from the understory. This thick carpet of leafy vines impedes recruitment of trees as well. The vines will climb up trees and can overtop small trees causing decreased vigor or death.

These species and many others are changing the face of Kentucky's landscape. The ecological health of forests that wildlife and humans have come to depend on is declining as is our ability to use them sustainably. We must find ways to stop the explosive growth of invasives and protect Kentucky's natural heritage.

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