

In the Northeast, forests with entirely native flora are not the norm

April 30 2013

Two-thirds of all forest inventory plots in the Northeast and Midwestern United States contain at least one non-native plant species, a new U.S. Forest Service study found. The study across two dozen states from North Dakota to Maine can help land managers pinpoint areas on the landscape where invasive plants might take root.

"We found two-thirds of more than 1,300 plots from our annual forest inventory had at least one introduced species, but this also means that one-third of the plots had no introduced species," said Beth Schulz, a research ecologist at the [Pacific Northwest Research Station](#) who led the study, which is published in the current issue of the journal *Environmental Monitoring and Assessment*. "By describing forest stands with few or no introduced species, we help managers focus on areas where early detection and rapid response can be most effective to slow the spread of introduced and potentially [invasive plant species](#)."

Nonnative, or introduced, plants are those species growing in areas where they are not normally found. Whether they were intentionally released or escaped cultivation, nonnative plants ultimately can become invasive, displacing native species, degrading habitat, and altering critical [ecosystem functions](#).

Schulz and her colleague Andrew Gray, a research forester at the station, analyzed data gathered by the Northern Research Station's Forest Inventory and Analysis (FIA) Program, which collects and reports statistics on the condition of forests in a 24-state region as part of its

regular surveys. The data set, collected from 2001 to 2008, includes a sample of all trees, shrubs, vines, herbs, grasses, fern and fern-like plants conducted on a subset of the region's FIA plots.

Among the study's findings:

- There are 305 introduced plant species growing in the region's forests, including some not currently found on regional monitoring lists;
- Multiflora rose (which was recorded on over one-quarter of all plots studied), [Japanese honeysuckle](#), and garlic mustard are among the most prevalent nonnative species;
- The presence of nonnative species increases as the level of forest fragmentation increases;
- Forests surveyed within the Eastern Broadleaf ecological province—which runs from the Atlantic coastal plains of Maine and New Hampshire to the southwest into Ohio and into the high hills and semi-mountainous areas of West Virginia—contain the greatest assortment of introduced plant species.

The study's results can help focus research on individual species more widely distributed than previously thought or with yet-unexplored potential to become problematic.

Provided by USDA Forest Service

Citation: In the Northeast, forests with entirely native flora are not the norm (2013, April 30) retrieved 2 May 2024 from <https://phys.org/news/2013-04-northeast-forests-native-flora-norm.html>

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