

NGRREC Scientists Continue Japanese Hops Control and Management Project

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The National Great Rivers Research and Education Center's terrestrial ecology team, led by Lyle Guyon, is continuing a project initiated earlier last year that studies control methods

for Japanese hops (*Humulus japonicus*), an invasive vine species that appears to be spreading throughout the Upper Mississippi River System (UMRS).

NGRREC is working with the Great Rivers Cooperative Ecosystem Studies Unit (CESU) and the U.S. Army Corps of Engineers (USACE) on this control and management project.

Japanese hops is a highly invasive vine species that covers the ground and suppresses the survival and growth of native species, including trees and shrubs.

“This project will help identify costeffective strategies to reduce hops coverage and restore native vegetation to natural floodplain habitats where it has become established,” Guyon said.



However, options are somewhat limited. No biological control agents are currently available, and prescribed burning is actually listed as a “failed or ineffective practice” by the Illinois Nature Preserves Commission. Manual or mechanical removal can be effective on small areas, but are not very useful for large populations on remote island locations in the UMRS. Therefore the project is focusing on a combination of chemical and cultural control methods for their effectiveness over the long term.

At selected study sites in the UMRS floodplain, experimental field plots are being used to evaluate

several types of herbicide treatments. Initial results suggest that relatively low concentrations of glyphosate applied mid- to late summer, just before the plants flower and set seed, can be effective in killing Japanese hops.



These UMRS study sites are also being planted with fast growing tree species as a cultural control method. Starting earlier this fall, the first round of plantings included a combination of RPM® containerized American sycamore and eastern cottonwood trees. Early next spring, this will be followed by a secondary planting of bare root seedlings. The tree plantings will serve the dual purpose of suppressing Japanese hops and restoring forest cover in areas that have been taken over by the invasive plant.

“Japanese hops requires open sunny conditions, so quickly reestablishing closed canopy forest cover should provide enough shade to make these floodplain forest understory environments unsuitable for its growth and survival,” Guyon said.

Japanese hops are identified by their leaves, which are rough-textured, jagged and have five to nine leaflets radiating from the center. Stems are also rough-textured and are covered with sharp, downward pointing prickles that can cause skin irritation.

The Great Rivers CESU is a cooperative network of universities, non-governmental organizations, and federal agencies in the upper and middle Mississippi Valley. More information about the Great Rivers CESU can be found at the following website: <http://greatriverscesu.missouri.edu/>.

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