## Penn State Forest Experts Fight Weeds

UNIVERSITY PARK (Centre Co.) — Two researchers in Penn State's School of Forest Resources are studying weeds and other plant problems at two national historic sites in order to make the past seem clearer to visitors.

Larry McCormick, professor of forest resources, and Todd Bowersox, professor of silviculture, are working with the National Park Service to eliminate an exotic weed that is blocking access to the Staple Bend Railroad Tunnel, the first rail tunnel built in the United States. The 1830s-era tunnel was part of the Allegheny Portage Railroad, which used a series of inclined planes and steam engines to pull canal boats from the Pennsylvania Main Line Canal system up and over the Allegheny Mountains.

McCormick and Bowersox are working to eliminate a large plant called Japanese knotweed, also known as Japanese bamboo or Japanese fleeceflower. The weed has overgrown the original rail-way trace, making it difficult for visitors to reach the site, as well as obscuring the path of the original tracks.

"Knotweed was probably brought to the United States as an ornamental," McCormick said. "But it can establish itself and outcompete native plants. It's all over Pennsylvania, and the park service has problems with it in other parks."

The plant, which grows well over six feet and has huge, drooping leaves, has proven to be a worthy opponent, according to McCormick, "The plant is a perennial and emerges from a large underground root structure, called a rhizome, that has proven to be pretty resistant to herbicides," he said. "There's so much

mass underground that it's hard to kill it."

The Penn State scientists currently are evaluating means of controlling the Japanese knotweed. The next phase of the project will be to recommend a management plan for reestablishing native vegetation on the Staple Bend site, located near Mineral Point in Cambria County.

"For the park service, the most important factor is that the plants do not fit in with the historic scene," said Brian Eick, natural resource management specialist at the Allegheny Portage Railroad National Historic Site. "Visitors should be able to see what the site looked like at the time."

McCormick and Bowersox also are involved in another National Park Service project designed to make a historic scene a bit clearer at the Johnstown Flood National Memorial. The site overlooks the

abutments of the earthen dam that gave way in 1889 during a torrential rainstorm, releasing tons of water on surrounding communities and the city of Johnstown, causing more than 2,000 deaths.

The dam, located near St. Michael in Cambria County, was used to form a huge lake that served the members of the South Fork Hunting and Fishing Club, an exclusive group that included such industrial magnates as Andrew Carnegie. To give visitors an idea of the size of the original lake, the Park Service cut away a section of trees and other vegetation near the dam mirroring a section of the lake's original shoreline.

"Once you remove vegetation, the landscape doesn't remain in a static state," McCormick said. "Trees and woody plants will grow back unless you put a management plan into effect to prevent that."

McCormick and Bower recommended establishing grass and other plants that will grow to heights that will still reveal the outlines of the lake. The plan also recommends a variety of native plant species for the site to comply with a National Park Service policy to preserve historic sites as accurately as possible.

"In his case, we can't exactly re-create the original site, because most of that was under water," Eick said. "Penn State has designed a management plan that meets our educational goals and also reduces maintenance."

"This research is exciting for us because it's a chance to use professional expertise and knowledge to help tell the story of an area of national interest," McCormick said.







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