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GAME NEWS

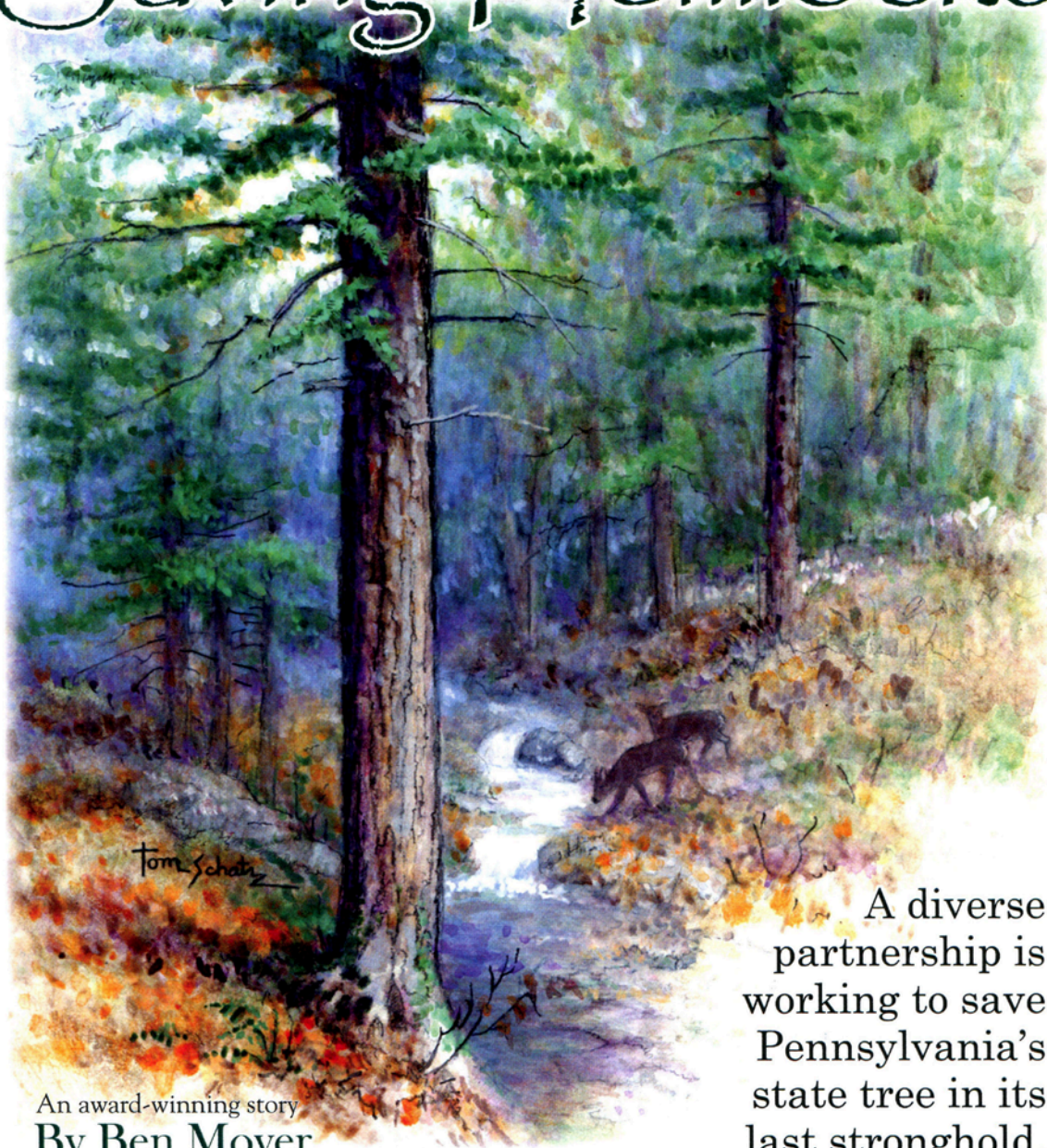
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Saving Hemlocks



An award-winning story

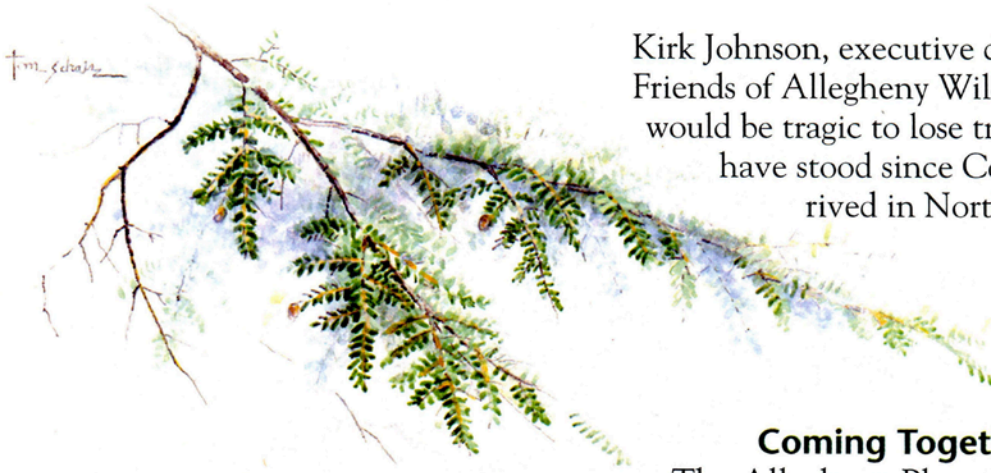
By Ben Moyer

A diverse partnership is working to save Pennsylvania's state tree in its last stronghold.

BUGS don't respect borders. If those bugs are exotic invaders that feed on native trees they'll chew, suck or bore their way across whole landscapes. That's why more than 50 federal, state and local agencies, organizations and businesses are working together to stem the spread of hemlock woolly adelgid (HWA) across Pennsylvania's Al-

legheny Plateau, including the Allegheny National Forest and popular state parks.

Hemlock woolly adelgid is an aphid-like insect native to Asia where it fed on trees related to North America's hemlocks. It arrived in Virginia on nursery stock or packing material in the 1920s and initially spread slowly. But recent mild win-



Kirk Johnson, executive director of Friends of Allegheny Wilderness. "It would be tragic to lose trees that have stood since Columbus arrived in North America."

ters, scientists believe, have fueled the invasion rapidly north and west.

HWA has wreaked destruction on hemlocks in the southern Appalachians.

Some trees killed in Great Smoky Mountains National Park were 800 years old and hemlock mortality has reached 95 percent in Shenandoah National Park.

HWA punctures hemlock needles and sucks out fluid. Infested trees turn gray and sickly. Without treatment to diminish the pest, most die within five years.

Hemlock stands in eastern Pennsylvania have already suffered major loss. HWA was detected at Ohiopyle State Park three years ago and now has been confirmed at scattered sites within and near the Allegheny National Forest, home to Pennsylvania's most revered stands of its official state tree.

Groups signing on to the effort, known as The High Allegheny Collaborative Hemlock Conservation Strategy, won't give up their hemlock without a fight.

"Some of the hemlocks at Hearts Content and Tionesta on the national forest are 500 years old," said

Coming Together

The Allegheny Plateau sprawls in an arc across northwestern Pennsylvania. Its vast forests are veined with shady stands of eastern hemlock, mostly along streams. With a half-million acres inside its boundaries, the Allegheny National Forest dominates the plateau but juxtaposed around the federal lands are state forests, state game lands, state parks and large tracts owned by commercial forest products companies. Hemlock grows on all of it, much to the liking of HWA.

But forest managers reasoned that if the plateau was inviting to HWA, it also offered a plus in resisting the pest.

"There's a unique situation on the plateau because of the land ownership pattern. Nowhere else in the eastern United States can you address so much forest by talking with so few landowners," said Sarah Johnson, Conservation GIS Analyst with The Nature Conservancy (TNC) and coordinator of the joint effort.

That opportunity prompted the idea of forming a cooperative response to HWA.

"The U.S. Forest Service (USFS) invited participation by TNC because it knows of TNC's ability to

bring together partners and its success working with businesses and public agencies on conservation issues,” Sarah Johnson said.

USFS and TNC organized meetings and employed the latest electronic communications to pull the partnership together. Sarah Johnson was reluctant to cite members because so many are involved, all, she said, vital partners.

But a partial list includes, in addition to USFS and TNC, the Game Commission; the state Department of Conservation and Natural Resources; the New York State Office of Parks, Recreation and Historic Preservation; Elk, Forest and McKean counties; U.S. Army Corps of Engineers; Seneca Nation of Indians; Pennsylvania Sustainable Forest Initiative; Friends of Allegheny Wilderness; National Wild Turkey Federation; Adirondack Mountain Club; Western Pennsylvania Conservancy; Forest Investment Associates; Generations Forestry Inc.; Hancock Forest Management; Kane Hardwoods; Collins Pine Co.; and the Pennsylvania Association of Consulting Foresters.

“Everybody has been so incredible in their cooperation,” Sarah Johnson said. “None of these people need



This story earned author Ben Moyer the Pennsylvania Outdoor Writers Association's Wildlife Conservation Partnership Award, sponsored by the Pennsylvania Game Commission. This article appears in *Game News* courtesy of the *Pittsburgh Post-Gazette*.

to give time to this. They all have other obligations. But they care about protecting this important part of Penn's Woods.”

Hard Hemlock Choices

Their first challenge was to identify key hemlock stands for protection. “We pulled together a committee that developed a list of reasons people value hemlock,” Sarah Johnson said. “The list was impressive, ranging from water quality to aesthetics, wildlife habitat, shading of trout streams, rare communities, recreation sites and scientific research.”

“We welcomed the chance to think about why hemlock is important,” said Ken Kane, president of Generations Forestry Inc. “Hemlock is our state tree. It's extremely valuable ecologically and to people's sense of place here. The value of

hemlock is not necessarily measurable in the lumber output of the tree.”

Later meetings identified places where hemlock provides irreplaceable values.

“Folks hovering over maps emphasized this first year’s effort,” Sarah Johnson said. “All of their knowledge of places, their familiarity with this landscape gave us a plan for moving forward. I could sit at a computer and use a GIS to find hemlock, but that would never be as complete as the combined field knowledge of these collaborators.”

Top priority hemlock areas identified for combating HWA are: Cook Forest State Park, Hearts Content (Allegheny National Forest), Allegheny State Park (New York); Minster Creek (ANF), Tionesta Area

(ANF), Chapman Dam State Park, Oil Creek State Park, Clear Creek State Park, Kane Experimental Forest (ANF), and Sugar Run (ANF).

Next Steps

Prioritizing must happen because funding for HWA treatment is limited and all methods are expensive and labor-intensive. Insecticide must be injected in soil around roots or painted onto the bark of individual trees.

“The cost per acre of chemical treatment depends on several variables,” said Don Eggen, Forest Pest Management division chief in DCNR’s Bureau of Forestry. “One is the size of the trees. Bigger trees require more insecticide than smaller ones and there’s a limit to how much chemical you can use per acre.”



Roger Derr, of Millersburg, got this trophy buck in Northumberland County on the second day of the 2014 firearms season. Roger mentioned that during the previous three seasons he passed up on eight small legal bucks waiting for the big one. It finally paid off.

Biological control using release of predatory beetles can be effective but the beetles are in limited supply and their use is an ecological balancing act.

"We have winter on our side here," Eggen said. "Cold is tough on HWA, but if it's cold enough to knock back HWA it also knocks back our predator populations."

Eggen's division is researching more cold tolerant predatory beetles, some of which are native to the northwestern United States.

Plans of the collaborative effort include a formal High Allegheny Cooperative Management Area. Signed-on landowners within its perimeter—public or private—would be eligible for whatever treatment funds are available.

"We've put a lot of work into identifying priority areas. That will go to waste if we are not able to attract funding to protect those sites," Sarah Johnson said.

"That's the way to go; form a cooperative with multiple landowners acting as one entity," Eggen said.

Johnson sees other values in the concept. Personnel from any agency or landowner would be authorized to work on other lands within the management area, maximizing efficiency. "It will take man-hours to monitor infestation, apply treatments and assess results," she said.

The collaboration's work could pay off in other places yet to be stricken by HWA.

"We're creating a model for how regions farther west and north might respond as HWA continues its advance," Kirk Johnson said.

Professionals who know the plateau forests best believe the joint approach may be the only way to save some representation of Pennsylvania's state tree in the region's woodlands.

"Being able to work across boundaries with partners having the same concern regarding HWA is critical," said Erin Connelly, Allegheny National Forest supervisor. "After all, HWA doesn't recognize whether it's impacting trees on state, federal, tribal or private lands."

COVER PAINTING BY LINDA M. HILGERT

THIS MONTH'S COVER, "Ground Rules," is the 2015 Working Together for Wildlife fine-art print. As in past years, 600 limited-edition prints are available. The illustration is 15 by 22½ inches and printed on acid-free paper. Prints sell for \$125, plus \$10.95 shipping and handling for all mail orders. For framing, add \$110, plus \$15 shipping and handling. Embroidered 4-inch Working Together for Wildlife patches depicting groundhogs also are available for \$5.66, plus shipping and handling. Pennsylvania residents must add 6 percent state sales tax on all purchases. All sales of Working Together for Wildlife materials benefit the state's nongame management and research. Order online at The Outdoor Shop, www.pgc.state.pa.us or call 1-888-888-3459.

