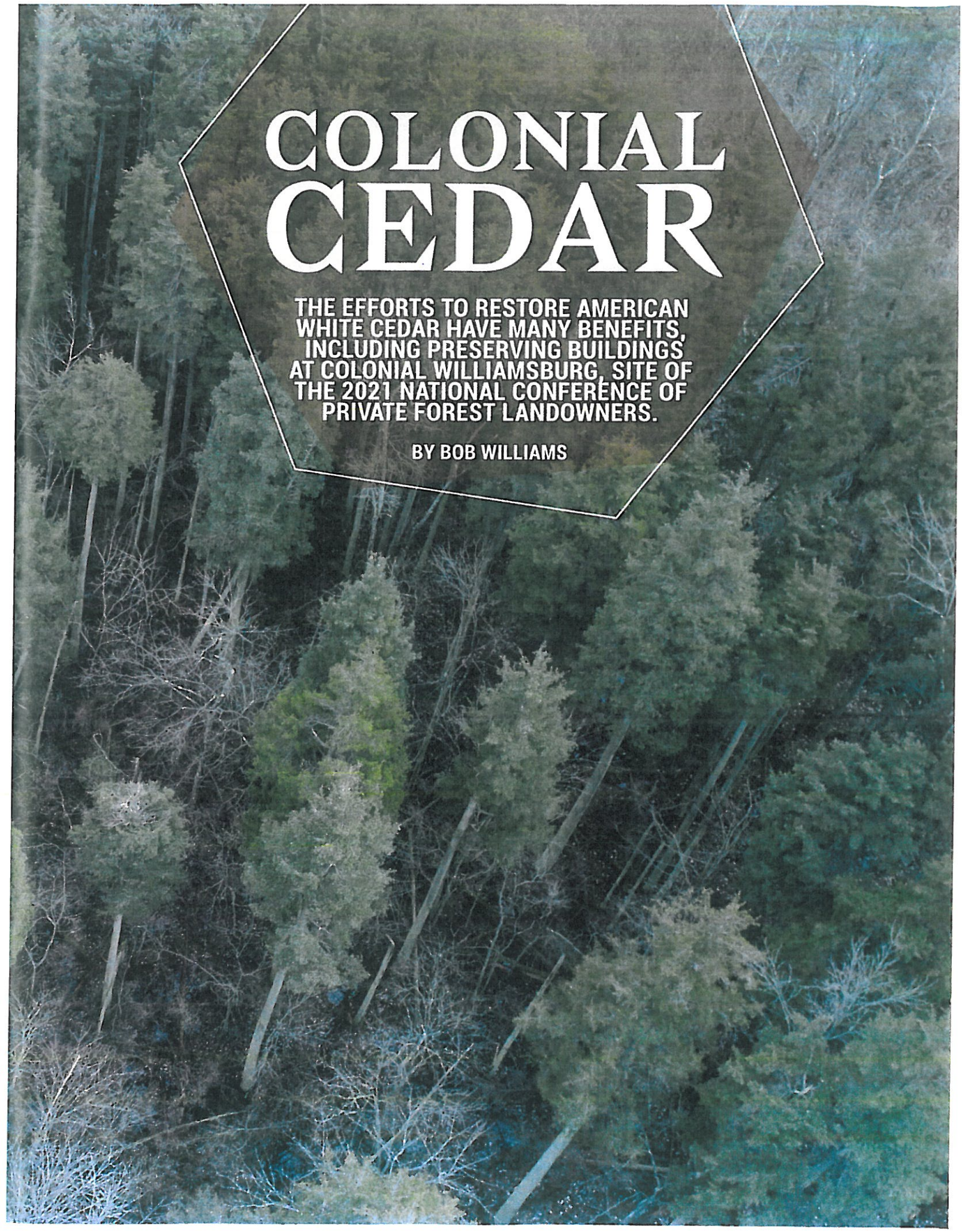
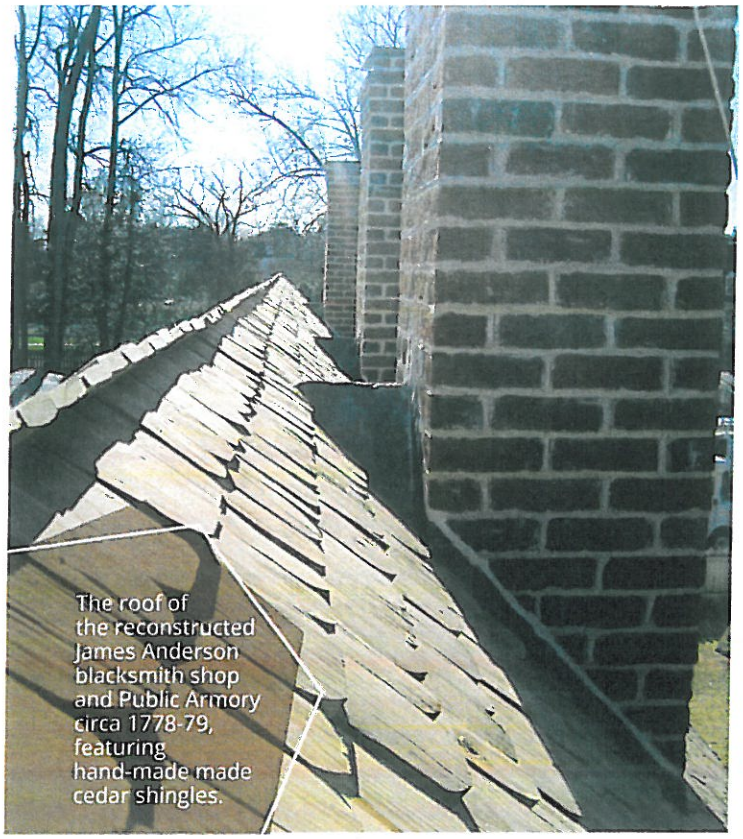


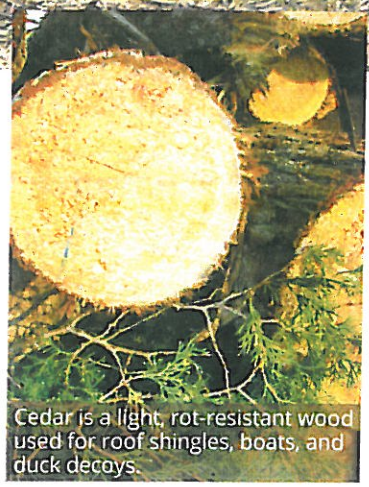
COLONIAL CEDAR

THE EFFORTS TO RESTORE AMERICAN WHITE CEDAR HAVE MANY BENEFITS, INCLUDING PRESERVING BUILDINGS AT COLONIAL WILLIAMSBURG, SITE OF THE 2021 NATIONAL CONFERENCE OF PRIVATE FOREST LANDOWNERS.

BY BOB WILLIAMS



The roof of the reconstructed James Anderson blacksmith shop and Public Armory circa 1778-79, featuring hand-made made cedar shingles.



Cedar is a light, rot-resistant wood used for roof shingles, boats, and duck decoys.

Virginia's Colonial Williamsburg preserves and reconstructs its historic buildings with wood from a wide range of forest resources. Garland Wood, the master carpenter at Williamsburg, builds houses, sheds, and barns the way colonists did from the ground up using the same tools used in the 18th century.

In the past, the aptly-named Mr. Wood had problems finding one of the key building materials: Atlantic white cedar, a light, long-lasting, rot-resistant wood that colonists often used for roof shingles. This problem was solved a few years ago when he was able to source quality Atlantic white cedar logs from forests in southern New Jersey. My southern New Jersey company, Pine Creek Forestry, for years has specialized in the restoration of Atlantic white cedar, a globally-threatened forest ecosystem.

Williamsburg will be the site of the National Conference of Private Forest Landowners from June 16-18, 2021 as FLA returns to the site of the 2011 conference. Williamsburg has more than 100 buildings, both big and small, and will continue to need cedar for their building and restoration effort.

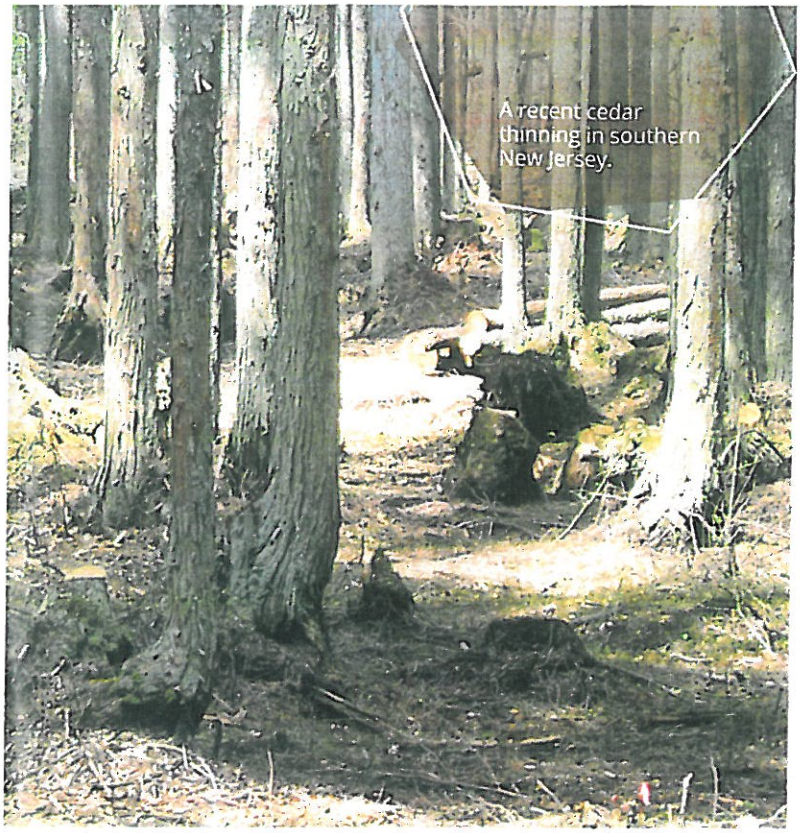
The first logs received by Wood and Williamsburg were used to build an authentic 18th-century style roof as part of a $1 million reconstruction of Market House in the center of town. Those logs came from a restoration effort from Double Trouble State Park in Berkeley, Ocean County, New Jersey. This cedar forest had been blown down by Hurricane Sandy in 2012. Those logs, as well as even more recent cedar logs delivered to Williamsburg, are harvested and processed by Colin McLoughlin of Advanced Forestry Solutions headquartered in Pittsgrove Township in Salem County, New Jersey.

Atlantic white cedar was widely used to build Colonial America. Benjamin Franklin expressed concern about the over cutting of white cedar in southern New Jersey near Philadelphia and the decline of cedar forests. Since all the buildings in Philadelphia had cedar shake roofs, Franklin believed that once the cedar was gone, the buildings would not support the weight of heavier woods that might need to be substituted.

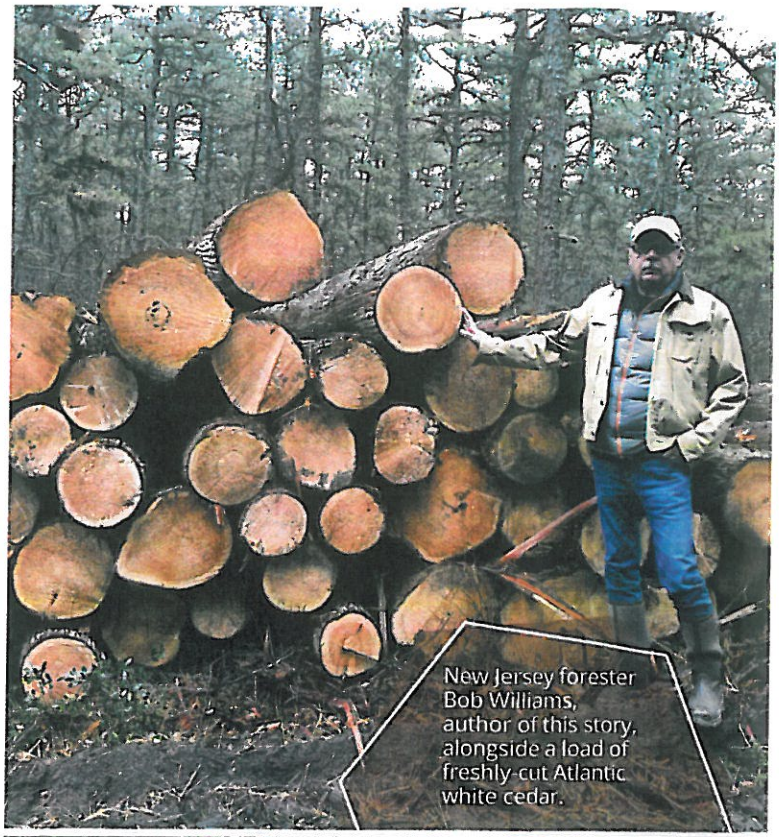
Atlantic white cedar, *Chamaecyparis thyoides*, (AWC) once covered more than 500,000 acres across the range from the coast of Maine southerly to the Gulf Coast. Cedar is a wetland species found in a narrow swath along the Atlantic from Maine to Georgia and Gulf Coast states from Florida to Mississippi. The species continues to decline due to changes to historic disturbance regimes, exploitation, and poor land management strategies. Over the last two centuries, the area occupied by Atlantic white cedar has declined dramatically with the state of New Jersey containing the bulk of these residual stands. It is estimated that less than ten percent of the original acreage of this forest ecosystem remains.

AWC is recognized by several environmental organizations, as well as state and federal agencies as "globally threatened" and "critically imperiled." AWC's decline continues from rising sea levels, hurricanes, tornadoes, beaver flooding, disease, and wildfire events. As AWC has declined since colonial times, it has lost its competitive edge with lowland pine and mixed lowland hardwoods that quickly occupy its site when disturbed. Alteration of the hydrology of large areas along with the changes in disturbance regimes, such as fire frequency and severity, all contribute to the decline.

Initially, over cutting had the greatest impact. Historic maps from 1828 detail the extensive mill infrastructure that had devel-



A recent cedar thinning in southern New Jersey.



New Jersey forester Bob Williams, author of this story, alongside a load of freshly-cut Atlantic white cedar.

Garland Wood demonstrates the making of a cedar shingle at Colonial Williamsburg.

oped to support local and export markets for white cedar. These days, restoration planning and efforts are needed to stop the decline and eventual extinction of this forest ecosystem across its natural range.

The good news is that it's possible to regenerate and restore stands of Atlantic white cedar with more than 80 years of research detailing the silviculture needed to regenerate these forests. Since cedar grows on wet sites, working on these sites is difficult and expensive. In most cases, the economic value of cedar allows for cedar restoration to be completed both economically and ecologically.

Being able to supply the master carpenter Wood in Williamsburg with the needed logs to restore 18th-century buildings brings together the various aspects of cedar restoration. This is one of the few tree species that, in addition to providing all of the usual benefits of trees, also helps restore and maintain an important U.S. historical and tourist site.

Besides its use for the restoration of buildings in Williamsburg, craftsmen use cedar to build and restore a variety of boats along the Atlantic coast, boats made as they have been for centuries. American white cedar also is the traditional and prized wood used by most of our best duck decoy carvers.

According to Wood, the Williamsburg carpenter: "Atlantic white cedar is one of our favorite woods to work with in producing shingles for our building projects. It is light, durable, easy to split and shape, and smells terrific. More importantly, we use the wood as a teaching tool to tell stories of early American life, history, and culture…We interpret the lives of the enslaved "shingle-getters" who lived in the Dismal Swamp and produced millions of shingles for use locally and for export."

Wood and his colleagues also explain to visitors the colonial timber trade between the Chesapeake and the British West Indies. They talk about their carpentry trade, and the construction of houses, outbuildings, shops and stores, taverns, and grand government structures that filled the city of Williamsburg. They chronicle the decline of white cedar in Virginia, the changing environment, and our need to reach far beyond the state borders to find quality wood for our building projects today in the modern era.

"There is a lot to teach and a lot to learn about something as simple as a juniper log (white cedar)," Wood said. "Getting the right material makes all the difference in the world to us."

To ensure the sustainability of this important forest ecosystem, efforts to restore this forest have been led by many private forest landowners. The best example is the Haines Family in southern New Jersey. To date, they have restored and regenerated more than 300 acres of declining and damaged cedar forests into healthy, young growing stands of Atlantic white cedar. With any luck, their efforts will catch on and help restore a tree whose roots extend to colonial times.

Bob Williams is a certified forester and owner of Pine Creek Forester, LLC, in Laurel Springs, New Jersey.