

The Table Story

Grove White Oak



Henderson Lawn Sycamore



The Wood Enterprise Institute
Virginia Tech
May 2016

Students Give New Life to Grove White Oak

This table comes from the wood from a white oak tree that lived on the front lawn of the Grove at Virginia Tech. The tree died of natural causes in 2014 and was dated to be 314 years old. This puts the birth of the tree sometime before 1700!

The Drapers Meadow settlement (now Blacksburg, VA) was established in 1749 along one of the earliest and best routes over the

mountainous ridge. Before that time, the area where the Grove tree grew was primarily forested hunting ground for the Cherokees and Shawnees. Many such oaks, even older ones, still thrive at the Grove.

To push the envelope of entrepreneurial risk, this year the Wood Enterprise Institute (WEI) team has found a way that allows the tree and its historical significance to live on as a

custom hand-crafted table. This table highlights the natural character of the wood with a live-edge table top with a solid, attractive and functional base. The unsound wood near the pith of the tree has been replaced with sycamore wood that comes from the Henderson Lawn Sycamore tree --- another well-known historical tree from Virginia Tech's past!

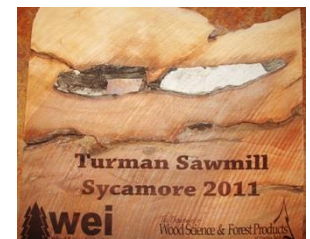
The Henderson Lawn Sycamore

In July, 2010, the infamous sycamore tree on the lawn of Henderson Hall was cut down. The sycamore tree, over 140 years old, was a prominent tree that tied the town of Blacksburg and Virginia Tech together. It was also a source of personal connection for many as it served as a site to meet, sit and relax.

After some hard work navigating the university system, students from the 2010-11 WEI team acquired the butt log from

the sycamore tree and led an effort to saw the tree (measuring over 4 feet in diameter!) and then dry the lumber.

The students experienced many challenges with the sycamore from log transport, finding a sawmill to cut such a large log, to multiple kiln dryer breakdowns. The biggest surprise was ruining the sawmill's sawblade when cutting into concrete grout that was used to repair a tree wound that happened many years ago!



Plaque made commemorating grout struck while sawing sycamore

Today, a clone of the sycamore grows at the site of the original tree to commemorate such a special part of Blacksburg and Virginia Tech history.

The Table Comes to Life



The wood from this table comes from the northeastern facing side of the butt log. The slab was close to the pith to capture the maximum span of history. Being so close to the pith resulted in a large unsound crack, necessitating removal. To preserve the original width, the defective wood removed was replaced with the Henderson Lawn sycamore.



Selecting the Slab



Center Cutout



Slab Cutting



Sycamore Insert

The slab used to make this table comes from the 11th slab cut out of the butt log.

Processing the Table Top



Leveling Slab Top Face



Inserting Bow Tie



Attaching Sycamore



Preserving Live Edge

The main goal in processing the table top was to preserve as much thickness and length of the slab as possible. Achieving this goal was a challenge due to the presence of warp and twist in the slab. The maximum thickness was preserved by removing the center section and creating two smaller pieces that could be independently processed. Thickness was also preserved by leveling only one surface, the table top.

To utilize as much of the slab length as possible, one bow tie spline crafted out of sycamore was used in the table top to stabilize a rather large end split. The bow tie spline stops further splitting while adding unique aesthetic value to the table top.



Crafting Bow Ties



Lots and Lots of Sanding

Teamwork Builds “One of a Kind” Table

Nearly 250 hours of combined student hours went into the creation of this unique table. This time included the design, testing, instruction, jig creation, promotion, marketing, and job coordination as well as the processing, assembly and finishing.

While students learned about the fine craft of woodworking, a much higher order learning was practiced involving leadership and problem solving together as a team. These are skills that will last a lifetime!



Creation of Special Jigs



Detail Work



Precision CNC Machining



Special Joinery



Hand Crafting



WEI Grove Oak Table



“The ability to adapt and change is a very important ability in business.” --- Tyler Robey

Preserving History

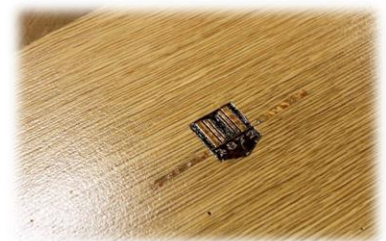
This table is unique in that we know where the oak slab comes from in the tree trunk. What makes it even more unique and special is that we have identified the exact growth ring in the table for the year that Virginia Tech was established --- 1872!

A laser engraved sycamore inlay was used to mark the special spot. Dendrochronology on a tree disk from the butt log was used to help determine the white oak

tree’s age and denote various key historic events. The disk was used to date the tree to 314 years old. But we will never know the precise age of the tree because white oaks can take many years to reach the height were the disk was obtained.

The student team has crafted only 4 of these tables, each of which have the 1872 logo. However, each table is very unique due to varying character and

natural features, making this Grove Oak table truly a “one-of-a-kind” memento that gives the tree a new life.



The ‘1872 pylons’ logo marks the growth year when Virginia Tech was established.

Problem Child

This was the first table made by the student team. There was a steep learning curve in that many standard operating procedures had to be developed as the table was being built. Just as the team was confident that all the problems were contained, the table top began to severely twist.

After much thought and consultation, students successfully developed a countermeasure to this problem. As such, this table earned the nickname “problem child” because of the many challenging problems it presented. In the end, this problem child finally grew up to be a beautiful table!



“Problem Child” fitted with stabilizing cross members to remove warp.

“Through this experience, students learn how to organize, manage, and improve a business in the most sustainable manner.”



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The Wood Enterprise Institute at Virginia Tech

The Wood Enterprise Institute (WEI) is a student-run, faculty-supported organization at Virginia Tech, in Blacksburg, Virginia. WEI was created in 2007 and has since grown in recognition as a premier learning venue for creativity, innovation, entrepreneurship, and

business leadership. Each year students plan their own entrepreneurial venture through a project that helps support Virginia Tech’s learning mission. Through this experience, students learn how to organize, manage, and improve a business in the most sustainable manner.

This year’s group of 19 students had the brilliant idea of using the Grove White Oak tree in a special way. Proceeds from the sales will give back to the Virginia Tech community towards the urban/campus forest sustainability program.



2015-16 WEI Team: Jalen Hill, Trey Good, Justin Sidebottom, Ian Lundstrom, Skip Strickler, Anthony Holliman, Will Stewart, Dayna Reynolds, Cody Wykle, Wendell Foster, Tyler Robey, Paige Guse, Garrett Bading, Bridget Acland, Ethan Blye, Carly Harding. Not pictured: Gloria Alvarez, Alex Keith, Steven Morrisette.

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'Wei' would like to say
Thank You
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We would like to acknowledge the following who donated their time and support to make this project possible

Dr. Eric Wiseman FREC	Organizing urban timber harvesting and utilization project for the white oak tree
David Richert Whole Forest Solutions, LLC	Delivery of tree logs to the Brooks Forest Products Center
Eric Carbaugh FREC	Portable sawmill processing of logs into slabs
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Dr. Brian Bond SBIO	Kiln drying of white oak slab lumber
Peter Sforza Center for Geospatial Information Technology	Creation of a virtual digital standing tree to reference the location of crafted products
Danny Hazelwood SBIO	Design and craftsmanship experience to create the prototype table

