



Volume 19 No. 2

February, 2015

President: Tom Borloglou Vice President - Lloyd Donnelly
Secretary - Wes McNeal Treasurer - Rick Mannarino

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Calendar of Events

- February 5- Regular monthly meeting. Yacht Club 7:00 pm
Program: Marshall Pierce "Living and Woodworking as a Blind Man"
(Spouses welcome!)
- February 21- Board meeting. Tanasi Grill 8:00 am (All members are welcome.)
- March 5- Regular monthly meeting. Yacht Club 7:00 pm.
Program: Dan Baker "Bird Carving"
Note: For those who would like to stay after the meeting, Tom Borloglou
will present an "African Travelogue" covering his recent trip.

Toys for Tots - Wrap up

The club recently received the following letter from the Office of Loudon County Sheriff Tim Guider.

TELLICO VILLAGE WOODWORKERS
Rick Mannarino
246 Ootsima Way
Loudon, TN 37774

Now that the hustle and bustle of the Toys for Tots distribution has passed (whew), it is time to stop and say thank you to those who helped make the 2014 Toys for Tots program a success. This year was an even tougher year than last year for the program, as we lost more gift sponsors due to company closures and government shutdowns. Our number of applicants was not down and many individuals from the

community stepped up to take our unsponsored names. We also were able to use our monetary donations to take care of the children whose names did not get taken by a sponsor. With the help of businesses, churches, community organizations, and many concerned individuals, we were able to help approximately 380 children in Loudon County have a brighter Christmas.

Organization and coordination becomes easier every year with the assistance of returning volunteers and the loyal support different groups. Our program was truly blessed this year and we extend our heartfelt thanks for your help. We could not have had such a successful program without your help and the help of your associates. And although Loudon County Toys for Tots

is a Sheriff's Office tradition, it is a community event.

Sincerely,

Tim W. Guider
SHERIFF

Debbie Hines
TOYS FOR TOTS
COORDINATOR

Board Meeting Highlights - 1/24/2015

The Board of Tellico Village Woodworkers Club met at Tanasi Grill on January 24. Twenty members were present.

Club Service Projects: There have been 11 new projects in 2015, following a total of 35 completed projects in 2014. (Ed. Note: see following related article in this newsletter).

Treasurer's Report: Present bank balance is \$2,673.04, of which \$2310.16 is an amortization fund for the kiln and kiln addition.

The Club will set up a table display at new Villagers' Club meetings this year for recruiting new members.

A committee has been established to investigate the purchase of a camera for use in projecting presenters' demonstrations for improved viewing during meetings.

A motion passed to purchase two shovels and a hand brush for use in wood cuttings and wood storage in the kiln.

An educational workshop on marquetry and inlays will be held at Arrowmont. Capacity is 20 students; class is full or nearly full. A wait list is being established.

The following Club tools are available for members' use: circular saw and pneumatic stapler (contact Dave Breen) and a Rotozip (contact Tom Borloglou).

Resource Book

Lloyd Donnelly

The updated Resource Book is available to you two ways. First in PDF format for referencing electronically and for printing, which was sent to you by email. Second, the updated Resource Book will soon be available for viewing on the club web site: www.tellicoclubs.com/woodworkers/

The Resource Book has been updated primarily to document many of the club's policies and practices that we have been following, but have never written down (this is in Part 2—General Information). It is now a much more complete reference for members and for people interested in the club. If you know of someone who has an interest in joining and they have questions that perhaps you cannot answer, refer them to the club's website, and specifically to this Book. If you know of a policy or practice that you cannot find in the Resource Book, please bring it to the attention of one of the board members.

The section of the Resource Book that is of most interest to club members is Part 3 – Source Information. It identifies club owned tools, both large and portable, and club owned furniture-making templates, and how you can get access to these tools and templates. It identifies tools that club members are willing to loan and how you can get access. It identifies certain techniques and skills that club members are willing to share with you. Finally, it identifies many places where you can find purveyors of woodworking equipment, supplies, and services. This section has been updated and expanded.

Community Service at Work

In January, eighteen club members responded to a call to provide bed frames for families unable to provide adequate sleeping accommodations especially for their children. Some bed frames have already been placed through the ministry of

a Knoxville church. Our club recently received the following letter from the church.

January 18, 2015

To: Tellico Village Woodworkers

From: Paul Sadler, Elder at West Towne Christian Church

Once a month I volunteer with a team of guys from our church to deliver furniture to those in need through the Furniture Ministry in Knoxville. It's my understanding that you guys took on the task of creating twin bed frames for a bunch of mattresses that were donated to the ministry without frames. In our lives we often do things to help people but never get the joy of seeing the end result. I wanted to share with you some details from those deliveries so that you get a glimpse of the impact of your work. Our deliveries on Saturday included three separate young ladies all with small children.

The first lady had a sweet young daughter that was 2 years old and a baby that was 6 months. We delivered 1 of your bed frames to her along with a crib for the baby. Her 2 year old was going to sleep on one of your bed frames.

The second lady had 3 young boys that were between the ages of 3 and 5 years old. Like the first family, they were sleeping on the hard floor but now have a nice mattress and frame they can call their own.

The final young mother had 4 boys between the ages of 2 and 6 years old, also sleeping on the hard floor. I was impressed with the control that this young mother had over these boys. We first brought in 5 chairs for a dining table and sat them along the wall. When we brought up the next items she had those 4 boys sitting in the chairs we brought up before and not budging. I was amazed! When we started bringing up the new beds they were very excited but they never moved off those chairs until their mother told them they could move.

In all we delivered 8 of your frames with mattresses on Saturday. They were very easy to stack in our box truck, sturdy enough to carry around without breaking yet light enough that a single person could carry one frame with the support boards removed.

Most of the people we deliver to on a given Saturday have nothing just as these three did today. The effort that you guys put into making those frames was much appreciated and made several young children (and their mothers) very happy. May God bless you richly for your service, both spiritually and physically.

Paul Sadler



Norm Schuessler and Tom Boroglou assemble a bed frame.



Completed bed frames ready for delivery.

18 Volunteers For Bed Frame Project

Tom Borloglou
Barry Brandt
Jim Borsh
Dave Breen
Dave Brunson
Ron Cirincione
Lloyd Donnelly
Bob Fagerlin
Howard Hickman

Dick Hoffmann
Jerry Jeffrey
Dave Jones
Rick Mannarino
Ned Miller
Hugh Moore
Tom Ringenbach
Norm Schuessler
Harry Westcott

January Meeting

Our educational program for this meeting was presented by member Dick Hoffmann. Dick provided a very solid foundation in the fundamentals of bending wood. (Note: Dick has a written summary of his presentation, which is included in this newsletter in the "Tools and Tips" section following). Dick reinforced his basic instruction with a live demonstration using the techniques discussed to successfully bend a piece of wood. This is clearly a very useful skill for many of our furniture projects. Thanks to Dick for sharing both his time (a lot of work went into preparation) and his knowledge.



Dick Hoffmann demonstrates the art of bending wood.

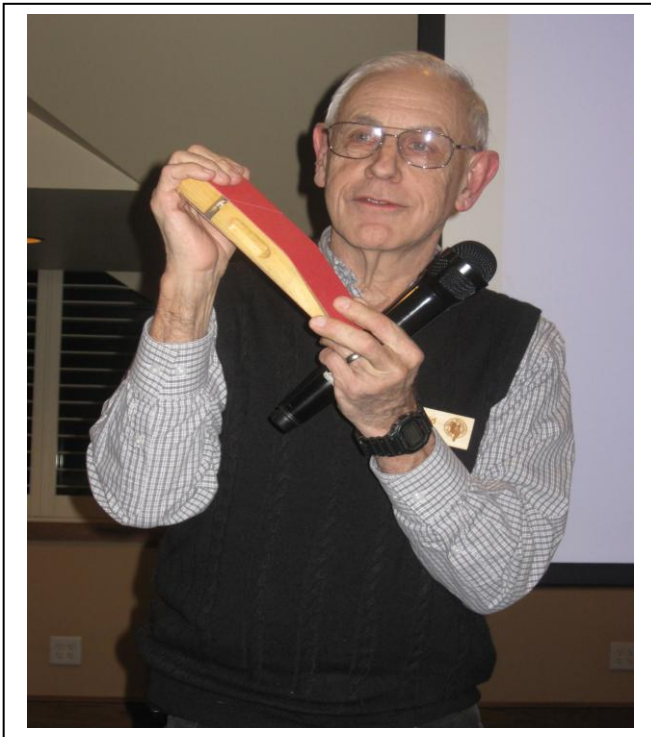
From our Members' Shops



Dave Brunson shows off the beautiful vase he turned from a piece of burl oak he found while looking for a golf ball that had inexplicably ended up in the woods. (No word on whether he found the golf ball.)



John Johnson shows President Tom Borlogou and the club his "mind-bending" puzzle he created.



Dave Breen discusses the many uses of this unusually-shaped sanding block, which uses a sand paper loop designed for a belt sander. Contact Dave for more info.

Dick Hinze also showed the club pictures of the computer desk he built for his home office.

Tools and Tips

BENDING WOOD

The following is some of the material presented in the January 8th Woodworkers meeting by Dick Hoffmann

7 WAYS TO BEND WOOD

1. Steam Bending
2. Microwave Bending
3. Laminate Bending
4. Hot Pipe Bending
5. Saw Kerf Bending
6. Wiggle Wood Bending
7. Compressed Wood Bending

1-STEAM BENDING

- **Steam Bending is used primarily for aesthetics.....** the grain follows the bend and there are no glue lines that could cause trouble when staining.
- Steam Bending should not be used for exotic woods which generally do not bend well, for thick wood over a couple of inches or very small radii.
 - Steam Time: Approximately 1 hour per inch of thickness regardless of width
 - Board Thickness: Generally under 2 inches
 - Smallest Bend Radii
 - Oak (red and white) 2"
 - Hickory 2"
 - Elm 2"
 - Walnut 3"
 - Ash 4.5"
 - Cherry 6" (difficult)
 - Maple 8" (very difficult)
 - Wood:
 - ***Air Dried (kiln drying locks lignin)***
 - Straight grain
 - Absolutely no knots
- **Building A Steam Box**
 - Size: Smaller works better than larger
 - Materials
 - PVC Pipe (Schedule 40 ...heat softens PVC)
 - Exterior Grade Plywood (water proof glue)
 - Add stand to keep box at a slight angle (2-3 degrees)
 - Place a drain hole for condensed water to escape at low end of the box
 - Add an optional hole to insert a cooking thermometer
 - Make several vent holes (that can be corked) at the high end of the box, to allow steam to escape
 - Never allow pressure to build within the box

- **Steam Sources:** Commercially sold steamers (Earlix- sold at Home Depot), drape/clothing steamer, any other source of steam
- **Make a Bending Form**
 - Allow for "Spring Back" ... it should not happen if fully dry - but practically...over bend by about 10%. Let the wood dry for at least a week to avoid spring back.
 - ***You must use a Tensioning Band !!!***
 - The Band is Critical
 - It keeps pressure on exterior of bend and avoids splitting
 - It can be any material
 - Metal is best but avoid staining by removing quickly
 - For Thick Wood....Extra Muscle Can Be Applied Using a Block and Tackle. Keep

2-MICROWAVE BENDING

This process is the same as Steam Bending but using a microwave to force steam into wood.

- Wrap wood with water soaked towel
- Heat in the microwave until towel is steaming
- (try 1 minute increments....do not overcook)
- Bend using same technique as steam bending.
- (Microwave limits size)
 - Tackle Perpendicular by Using Pegs on a "Backer Board".

3-LAMINATE BENDING

Laminate bending uses thin pieces of wood (easily bendable) glued together over a bending form to build up a thicker bent unit.

- **Board Thickness:** Ideally re-saw thickness is about 1/8"

- **Species:** No limitations ...kiln dried wood is OK
- **Grain Direction:** Always use straight grain with no knots
- **Minimum Bend Diameter:** 1-2"
- Can be used in combination with steaming
- Definitely use a tension band for outside grain support
- Laminate bending works well for stock over 1" or for complex forms.
- "Spring Back" is not an issue
- Laminate glue lines can be hidden with an end cap.

4-HOT PIPE BENDING

Thin pieces of wood are soaked in water and then bent on a very hot metal pipe. The pipe turns the water in the wood into steam which allows easy bending. The technique is quick and is done free form.

Process

- Select a pipe that is about the radii of the desired bend
- Soak thin stock in water for at least 30 minutes
- Heat the pipe so that water droplets boil off
- Bend the wet stock over the pipe, moving it so the wood does not burn. Keep the wood wet.
- Larger radii can be formed by rubbing the stock so the bend is extended over a larger area.
- **Pros**
 - Quick and Easy
 - Good for thinner stock
 - No steamer to buy
 - Great control for complex bends
- **Cons**
 - Limited to wood under 1/2" in thickness
 - If not careful wood can burn

5-SAW KERF BENDING

Kerf Bending" is simply cutting a series of kerfs (cuts) in a piece of wood in close proximity, so the wood can be curved.

- The wood needs to be cut to the point that the remaining fibers are free to bend.
- Once bent, the curve is locked in place by gluing veneer to the top, bottom and inside of the curve.
- Kerf bending only works for crosscutting- you cannot go with the grain
- Both solid or plywood can easily be kerf bent

6-WIGGLE WOOD

Called....Wacky Wood or Wiggle Wood, it's plywood with the grain in for all layers running in the same direction.

- Sold by lots of Companies
- Cost Example:\$35 for 1/8" 4'x8' sheet

7-COMPRESSED WOOD BENDING

Compressed Wood is clear straight grained hardwood subjected to carefully controlled, but intense, longitudinal thermo-mechanical compression. It the pressure puts accordion like folds in lengthwise in the wood. It is extremely flexible (as long as it is moist). Once bent and dry is stays in the bent shape.

- Source: PureTimber.com
- Cost Examples
 - Red Oak: Size: 99"x4"x1.25"- Cost: \$170
 - Walnut: Size: 45"x6" 1 5/8"- Cost :\$270