

ShopTalk

Greenville Woodworkers Guild



May 2019



**We welcome Ken Rizza as the presenter for our May meeting.
Ken is a Woodworker and Turner and is the Executive Director of
KJR Distributing DBA Woodturners Wonders.
Ken will discuss Carbon Boron Nitride (CBN) grinding wheels.**

Ken Rizza

Hello – My name is Ken Rizza and I am woodturner. Like a lot of woodturners, we didn't start out that way. Most of us start out doing flat work and if we're lucky enough we discover woodturning. I've also been a home mortgage loan consultant for the last 22 years.

In order to survive in that industry service, results, and integrity are a must. It's that philosophy that I carry into what I'm doing here with WoodTurners Wonders. I know how to take care of my customers and know you will like doing business with me.

I have always been creative and a frustrated inventor. My neighbors call me MacGyver. For those of you not old enough to know who that is, it was a television program that ran from 1985 to 1992 about a resourceful guy who was able to solve complex problems with everyday materials. I recently turned a hoisting pulley for the top of a mast on my neighbor's catamaran using his wife's polypropylene cutting board. She wasn't really happy until she realized I saved her husband \$160 for new one from the dealer. I've been published a couple of times in the AAW magazine with Tips, one was an article using a CPAP machine on a mask for protection and dust control. Another article I did was a neat jig I came up with for making perfectly round bowl blanks on your bandsaw. You can read these articles by going to Woodturners Wonders web pages.

Every business needs a focus. It's

called a mission statement. It defines who you are and what you are all about. My mission for WoodTurners Wonders is: To enhance the WoodTurners experience by providing Innovative and competitively priced CBN grinding wheels, bright magnetic lamps, sanding supplies and unique tools."

Much of what you will see on this website was born out of frustration. It takes a woodturner to understand what a woodturner needs. I got real tired of putting new light bulbs in a lamp that had a short neck and poor magnet that kept falling off the lathe. Every time it did, the bulb element would break and I needed another bulb. That spawned the idea for our "Beacon" model lamp with switchable magnet, 30-inch neck and a 50,000 hour bulb. We have sold hundreds of them to people all over the world who can now see a whole lot better and enjoy the turning experience more.

The Beacon led to the "Aurora" model and the rest as they say - is history. Every product you see here has evolved because of a need that was realized or because it can be brought to you at a better value, otherwise we simple don't carry it. Our quest is to continue to bring you items which will widen your horizons and enhance your turning experience. Feel free to call me for special club pricing on multiple unit purchases.

Happy Turning,
Ken Rizza

What Woodturners Need to Know about CBN (Cubic Boron Nitride)

NOTE - The article below is information downloaded from the internet.

What is CBN?

CBN (Cubic boron nitride) is a synthetic chemical compound made up of boron and nitrogen atoms in a one-to-one ratio. It has a cubic crystal lattice, with its atoms arranged in a symmetrical, cube-shaped structure, very much like the crystalline structure of diamond. Its material properties include extreme hardness, stability under heat, and superior chemical resistance.

Cubic boron nitride is the second-hardest known material after diamond. For woodturners, it is the best grinding-wheel abrasive known to man.

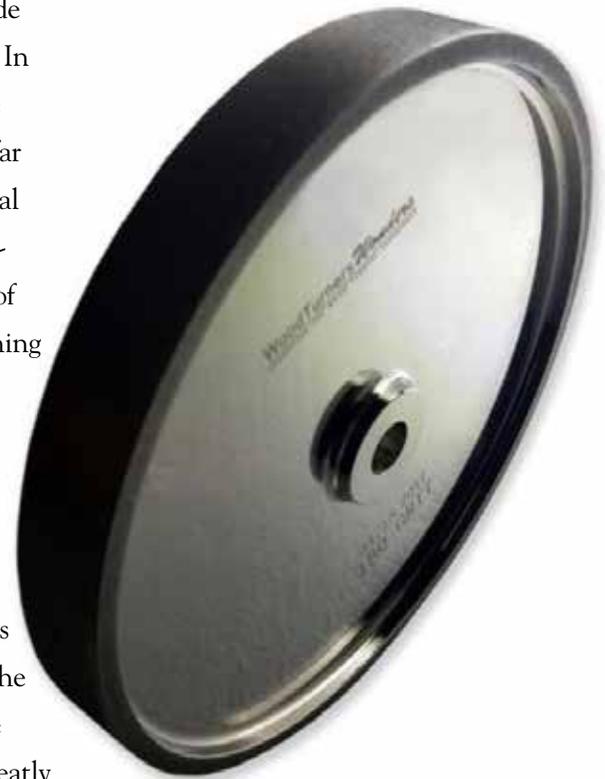
The biggest advantage of CBN over diamond is its chemical stability in the presence of nickel, iron, and related metals at elevated temperature. Diamond is soluble in these metals at elevated temperatures, meaning that it reacts with them chemically and dissolves. This makes it useless as a tool for high speed grinding of iron or steel. CBN, on the other hand, does not react and can therefore be used to cut these materials. (Note: Diamond hones work great on steel because the speed of honing is so slow; if you raised the speed to where sparks were flying, you'd be into the chemically reactive temperatures.)

The heat resistance of CBN is quite high. Diamond begins to decom-

pose to carbon dioxide in air at around 1,470°F, whereas cubic boron nitride is stable in air up to about 2,550°F. In metal-grinding applications where intense heat is generated, CBN is far superior to diamond. (above material excerpted and expanded from wise-geek.com) What Other Properties of CBN Make it Superior for Sharpening Woodturning Tools?

One of the objectives of metallurgists as they are developing better HSS (high-speed steels) is to get a more uniform distribution of fine microcrystalline carbides throughout the HSS. This makes the steel far more wear resistant, so the time between tool sharpening is greatly extended. But it is not without its attendant difficulties, namely the sharpening of the carbide grains distributed throughout the HSS.

Most woodturners prefer aluminum-oxide sharpening wheels, which wear away faster than silicon carbide wheels, but don't heat the steel as badly. But, when the aluminum-oxide wheel encounters the microcrystalline grains of carbide in the HSS, the carbide isn't sharpened per se, it is worn down slightly, but definitely not sharpened. At some point, the micrograin of carbide is sticking out of the steel matrix enough that the grinding wheel simply tears it out of the steel matrix. So, one can say that an aluminum-oxide wheel exposes new carbide grains, dulls them, and then tears them out! Perhaps an oversimplification, but close enough for everyone to under-



stand. And it isn't optimal sharpening of HSS.

If you have ever ground a pure carbide cutter on a green wheel (silicon carbide) you will think CBN is the best thing since sliced bread. CBN wheels are far harder than carbide, and readily sharpen carbide. So, unlike with aluminum-oxide or silicon carbide grinding wheels, when grinding a HSS woodturning tool with a CBN wheel, as the microcrystalline carbide grains are exposed they don't get worn down, they get sharpened to the shape of the edge, and they don't get torn out of the matrix so much. Because CBN actually sharpens carbide microcrystals, on HSS the CBN wheel is a far superior abrasive than aluminum oxide or silicon carbide.

What Woodturners Need to Know about CBN (Cubic Boron Nitride).

CBN wheels will even sharpen pure carbide bits and tools, although the life of the wheel will be compromised enough to probably not make it economically worthwhile. A wet CBN cutoff wheel will slice through carbide at the same speed as a diamond wheel, it just wears faster. Diamond is still the best abrasive for cutting pure carbide. If you are a fan of the newer powdered-metal woodturning tools (I know I am!) a CBN wheel is a must. My first Crown Bowl Gouge of powdered-metal design seemed scarcely worth \$5.00 extra UNTIL I bought my first CBN wheel! Wow, those sharpened micro-crystalline carbides really do perform better than did the dulled or removed ones when the tool was sharpened on an aluminum-oxide wheel.

Everyone talks about having to buy a slow speed grinder to successfully use CBN wheels. I say it just ain't so; that is, if you're willing to be less aggressive with your grinding. I read up on industrial abrasives for cutting metal, and CBN is superior to all others at very high speeds, and also at higher temperatures, so speed (and attendant heat) is not deleterious to these wheels. I contacted Cindy Drozda, who sells fine CBN wheels, and she says she uses her wheels on high-speed grinders. I also contacted some other vendors and got the same report. The big issue seems to be that the CBN wheels CUT SO MUCH FASTER at the higher speeds; so for neophyte sharpeners it has been recommended to go with slow-speed grinders in order to extend

their tool life. Well, if you can slow down your aggressions, and grind a bit more gently, you can save yourself the price of a slow-speed grinder. I've had no problems with CBN wheels at 3600 rpm. They cut beautifully, and the grind is superb.

You shouldn't throw away your old aluminum-oxide or silicon-carbide wheels. You'll still need them if you do any grinding of mild steel. CBN is for HSS only, not for mild steel. Don't forget this, lest you have to buy yourself a new CBN wheel. I keep one CBN wheel on one arbor of my grinder and an aluminum-oxide wheel on the other arbor of the same grinder, and it works out fine for me.

- Marvin Fretwell

Arizona Woodturners Association

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Rob Barhorst *President*



T H E P R E S I D E N T S C O R N E R

It's May already – where has this year gone! Tax season has passed and now we are taking our lawn mowers and other equipment out of storage and getting them ready for this year. Maybe it's time also to clean up your shop or storage bin. I know mine could use a little “spring” cleaning and organization.

May also marks the time when we elect our Board of Directors for our next fiscal year 9/2019-8/2020.

I would like to thank Bernie Rauh and the Nominating Committee for all their work.

We lost two members this month - Tom Shearer and Roger Thelander. Our condolences go out to their families.

Around The Shop

You may have noticed that Mac has been upgrading the router stations we have in the shop. New tops are being installed, new router lifts, the fences are being replaced and upgrades are being made to dust collection within the router cabinet. Every effort is being made to have consistency among the router stations. Good job Mac!!

It's also getting to be cooling season in the shop. Please close the outside doors and especially the door between the shop and the wood room. Lots of cool air flows out those doors.

Enjoy the shop – be safe!!

2020 Board Members Nominees are:

President

Rob Barhorst

Vice President

Robert Tepper

Secretary

Chuck Graham

Treasurer

Bill Fuller

VP Education

Doyle Hogsed

VP Communications

David Dewease

VP Charitable Projects

Jay Leonard

VP Fund Raising

Van Mathews

Members at Large

John Arnold

Al Socha

Allison Yanover

Save the Date, Saturday morning April 27th for our Tool Sale. 8 a.m. _ 11 a.m.

Each time we have a tool sale/auction I am amazed by the willingness of our members to embark on an exhibition to clear out a shop, load the goods, some of which is very heavy, and using their own vehicles and trailers deliver the goods to the shop. Next is pricing each item, input it to our computer system, then start advertising and execute the sale. It is a noble undertaking that not only helps the Guild's finances but more importantly takes an enormous burden from those needing to dispose of the tools.

This sale has a tremendous number of tools, most belonging to our dedicated member, the late Karl Kelly, plus tools from several other shops. This outstanding assortment will be on sale at the Guild on Saturday, April 27 from eight until eleven AM. This is your chance to start a new shop or replenish your old one. Please reserve the date, support our Guild and take advantage of the huge bargains that will be available.

If you or a family member use Facebook, please Like and Follow the Guild. Then share the post about the Auction. That will advertise the sale to all the friends of Guild members and their families. We might reach another 10,000 people that way.

- Aubrey Rogers

Christopher Schwarz's Blog Post

This is certainly worth a few minutes read. Enjoy:

Christopher's Blog Post Christopher Schwarz, nationally renowned woodworker and writer, recently conducted two seminars and was the presenter for our April general meeting. Christopher writes a blog about Woodworking where he described his trip to Greenville

-David Dewease

Sawmill Picnic

By popular demand the Guild has decided to continue the annual Sawmill Picnic. It will be on Monday June 3 rd.

More details to come.

2019 Programs and events Calendar



Ken Rizza May 6 - Meeting Woodturners Wonders

Ken is a Woodworker and Turner and is the Executive Director of KJR Distributing DBA Woodturners Wonders.

He will discuss Carbon Boron Nitride (CBN) grinding wheels.

Annual Sawmill Picnic June 3 - Meeting

Details to come.

It is with great sadness that we announce the passing of two Guild members.

The Guild has established a donation category on our web site for members to donate in remembrance of recently deceased members



Thomas Edwin Shearer

Tom passed away Monday, April 8, 2019. Thomas was born in Painesville Ohio, October 3, 1956. Tom was the son of the late Richard T. Shearer and Geraldine Ann Shearer of Painesville Ohio.

Tom was a United States Army veteran. He was employed by Republic Locomotive as a locomotive mechanic and later employed by Hitachi in Greenville SC as a maintenance mechanic.

He was a woodworking craftsman, making many gifts that his family will always cherish. He loved to camp, most recently returning from a trip to the western United States. Tom was a member of Grace Baptist Church in Greenville South Carolina. He is survived by his wife Margie Shearer.



Roger Thelander

Roger passed away on April 21 st. in Greenville Roger was born on January 17, 1945.

No other details are available at this time.

Operational Organization Chart

Effective: October 11, 2018

Revision: 23

Last update: October 15, 2018

Resolution: 2018-

Directors	
President*	Rob Barhorst
Executive Vice President*	Robert Tepper
Membership Chairman	Buzz Sprinkle
Historian	David Aman
Secretary*	Chuck Graham
Treasurer*	Bill Fuller
Guild Accountant*	Aubrey Rogers
Vice President, Educational Activities*	Doyle Hogsed
Program Chairman	Don Clark
Audio/Visual Chairman	Russ Clarke
Youth Programs Director	Richard Mackintosh
Mentoring Chairman	Doyle Hogsed
Vice President, Communications*	David Dewease
Newsletter Editor	Jim Sinclair
Website Manager	Chris Peters
Community Relations Manager	open
Vice President, Charitable Projects*	Jay Leonard
Vice President, Fund Raising*	Van Matthews
Board Members, At Large*	David Aman John Arnold Al Socha
Education Center Superintendent*	Dick Best
Librarian	Billie Aman
Events Manager	Susan Ingram
Information Technology Manager	David Dewease
Wood Resources Manager	George Leonard
Woodworking Shop Manager	Mac Bowman
Facility Building Manager	Paul Pimentel
Facility Grounds Manager	Doyle Hogsed
Tool Sales/Auction Manager	Aubrey Rogers

* = Board Member

G W G A C T I V I T Y R E P O R T

CHARITABLE PROJECTS / February 1 to February 28 , 2019

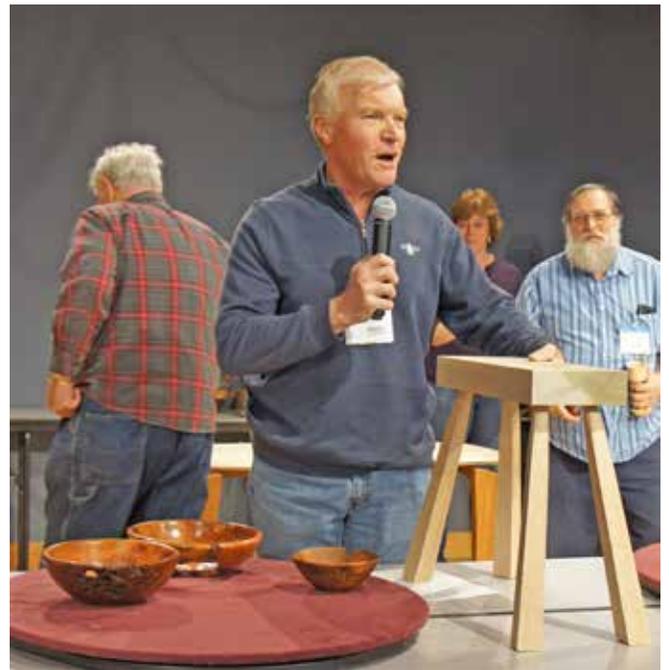
	Hours
South Carolina Veterans (Cremation Urns).....	30
Toy Workshop.....	1
Children's Theatre.....	322
Miscellaneous Projects.....	1
Total.....	364

MENTORING CLASSES / February 1 to February 28 , 2019

	Hours
Combined total hours for adult classes.....	670
Youth Classes	195
Total.....	865

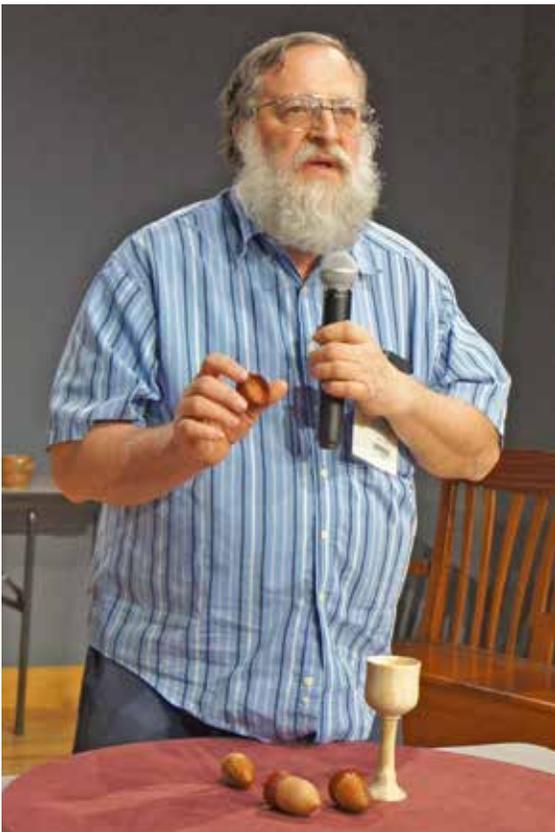


Bench by George Wells



Turned Bowls and Shop Bench by John Stiehler

Goblet and Acorn Turnings by Thomas Newton

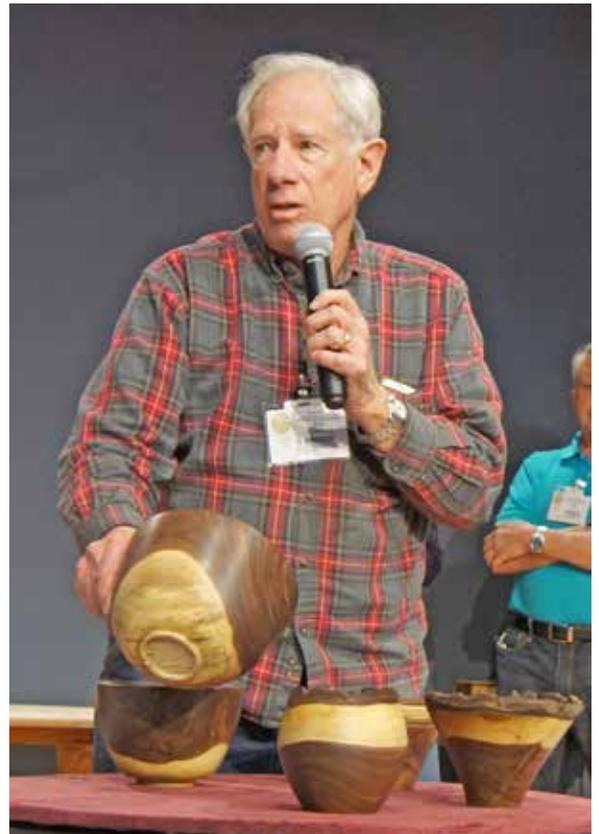


Cradle by Charlie Kindig





Coffee Grinder, Pepper Mill and Cutting Boards by Charles Silver

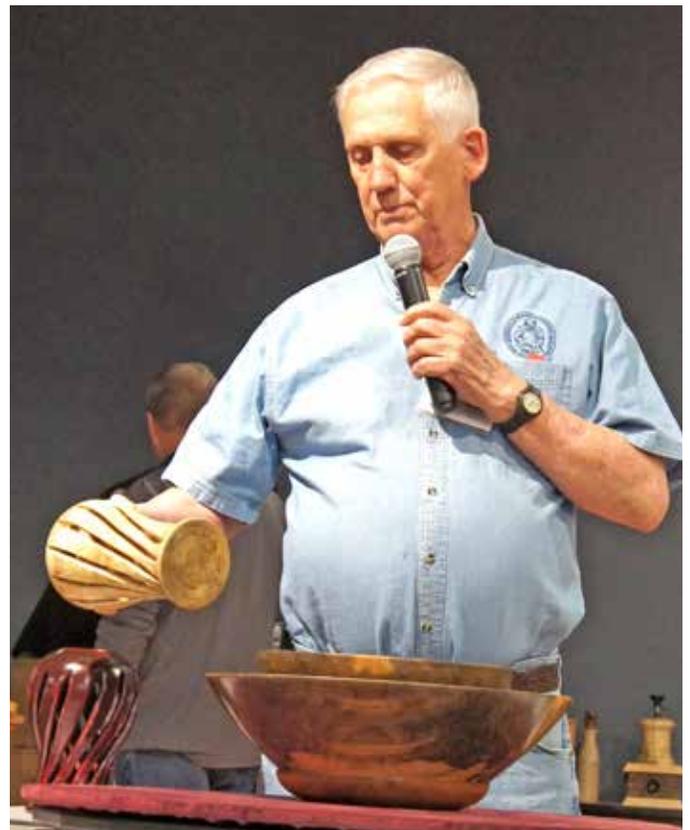


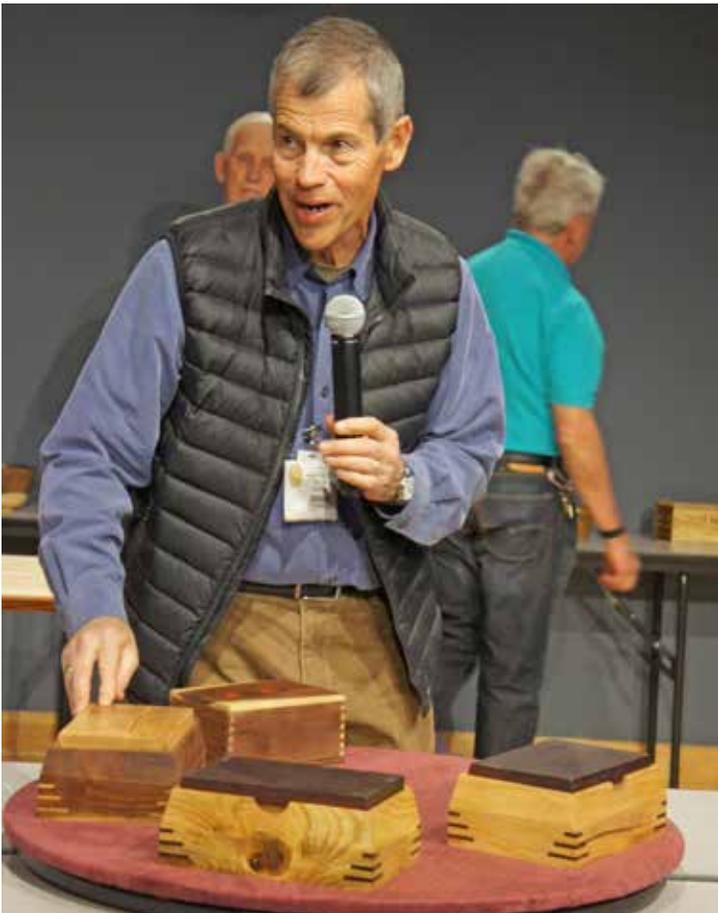
Turned Bowls by Bill Lancaster

Side Table by John Arnold



Turned Vases and Bowls by Jim Kilton





Boxes by Keith Stevenson

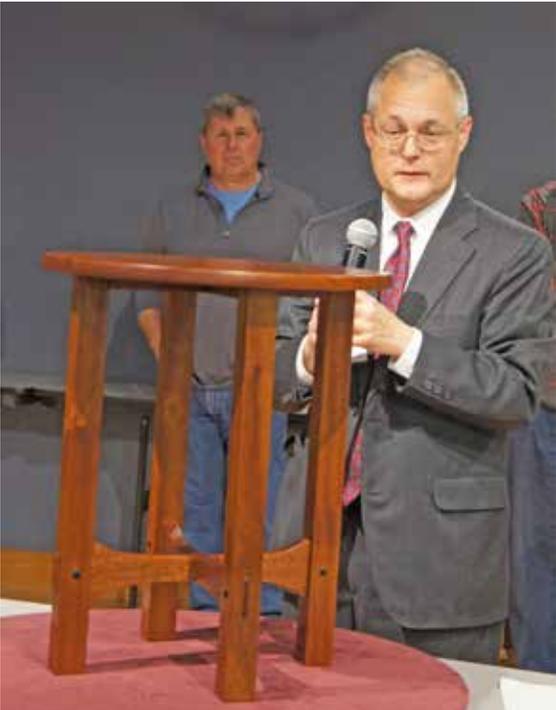


Baby Rattle and Turned Bowl by Karen Sheldon

Table by Steve Estabrooks



Taboret Table by Charlie LeGrand



NEXT GUILD MEETING - MONDAY, MAY 6, 2019 - 6:30 p.m.
Social time begins 6:00 p.m.

Greenville Woodworkers Guild

Education Center

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For more information

www.greenvillewoodworkers.com



Woodworkers Guild
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