The Newsletter of the Minnesota Woodworkers Guild

NORTHERN WOODS

Volume 131 **February-March 2011**

December Meeting: Northern Lights Timber Framing, Clark Bremer

Wood chips were flying as Clark Bremer of Northern Lights Timber Framing showed Guild members how to make large scale mortises at the December meeting.

Full Story...

January Meeting: Ebonizing Wood, Richard Tendick

Richard Tendick is a man of many talents. You've probably seen the Cryptex containers built by him at the Northern Woods show. You might not know that Richard is also the driving force behind making that show happen. In addition to all of that he has a great deal of expertise in the process of ebonizing wood. He shared his knowledge on that topic at the January Guild meeting.

Full Story...

What's on Your Bench?

Mike Siemsen is in the process of restoring a beautiful treadle powered lathe, estimated to be 150 years old. He's been fabricating parts and learning how to turn while balanced on one foot.

Full Story...

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December Meeting: Northern Lights Timber Framing with Clark Bremer

Story by Jerry Beutel
Photos by Paul Schalekamp

"Build something that's too special to tear down." That's the motto for Northern Lights Timber Framing. Guild members were treated to a demonstration of how Northern Lights goes about fulfilling that motto when we met at their shop/offices in Minneapolis. The company's founder/owner Clark Bremer gave us a great overview of timber framing, starting with photos of projects they have completed, such as the interior shot below.

For additional examples go to Northern Lights. Also on their site you can find timber framing classes and other services offered.

Like all woodworking projects, the first step in the process is to create a design. Clark uses SketchUp (SU) software for this and he demonstrated how he makes use of SU plug-ins of posts, beams and rafters to create the design. With his experienced hand guiding the mouse, a building was easily created, modified and details highlighted. Those details are typically the joints - pegged mortise-and-tenon's being the predominant joint used in timber framing.

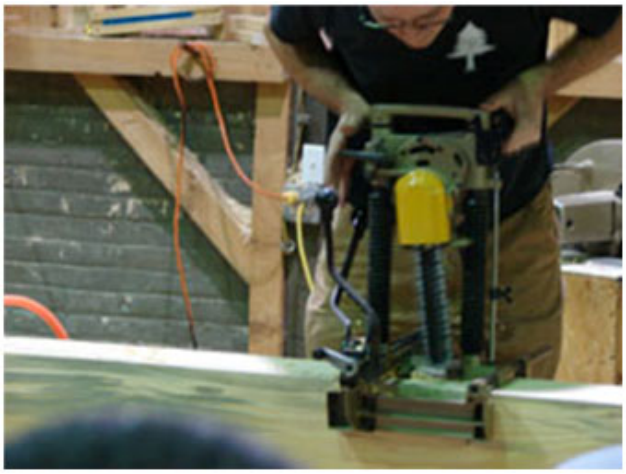
Using SketchUp not only gives Clark and his crew the information needed to build a structure, it also makes it much easier for his clients to visualize the building they are commissioning.

White pine from upstate New York and Douglas Fir from the Pacific Northwest are the preferred raw materials for timber framing. While shipping of the timbers is a cost factor, Clark is more interested in buying from suppliers experienced in milling logs for timber framed buildings. Only those suppliers have the right equipment such as four sided planers, and the understanding of which portion of the tree is best suited for posts and beams. For example in Douglas Fir the desired cut is F.O.H.C. or free of heart center, because heart wood beams will tear themselves apart over time. White pine, on the other hand, works well when the heartwood is centered in the beam, as that stops the checking.

A unique aspect to timber framing compared to conventional building is the shrinkage and movement of the timbers. Though a timber may be called out as 14" by 14", Clark has learned to base all measurements, such as from one post to another, from a side of the post designated on the plans as the reference face.

Due to the thickness of timber frame components, conventional wood drying processes do not work. Instead timber framers work with green wood and learn to deal with shrinkage considering that a trade-off made to obtain the beauty of large wooden beams. Only when building with reclaimed materials, such as beams from old barns, is shrinkage not an issue. Part of the charm of living in a timber frame house is listening to it "talk" to the residents as the parts move and settle in during the first years.

Towards the end of the meeting Clark utilized his "anti-gravity machine" - a heavy-duty crane system - to bring a timber to the front of the shop. Once placed, he demonstrated the process of creating a large-scale mortise and tenon joint. When working with timbers the tools are brought to the wood rather than the other way around. He used a circular saw with a 16" blade to cut the tenons, and then used a chain mortiser to cut the matching slot. After a little handwork with a slick (a large long-handled chisel) and mallet the pieces slipped snugly together. The following photos show the sequence of Clark making a mortise joint with a chain mortiser and then doing the clean-up work with a slick.



The Guild thanks Clark Bremer for hosting us at his shop and for the great presentation. Thanks also to the Woodcraft Bloomington Store for providing items to be given away in the prize drawing at the start of the meeting.

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January Meeting: A Technique for Ebonizing Wood, Richard Tendick

Story by Ron Corradin
Photos by Bob Bridigum

Ebony is a beautiful wood. Its rich black color and its tight grain make it the perfect highlight or contrast wood in many projects. But ebony is very expensive, sometimes embargoed, and almost impossible to find in sizes larger than a clarinet.

At the January Guild meeting Richard Tendick showed how to ebonize any type of wood using an iron oxide solution and a tannic acid pre-and post-rinse. Ten coats of buffed out shellac give the ebonized piece a French polish finish.

Richard started with recipes for his ebonizing products. The iron oxide solution is made by boiling un-oiled steel wool (he suggested the Liberon brand) in white vinegar with a 5% or 10% concentration. The acidic vinegar dissolves more iron from the steel wool than tap water will, and boiling speeds up the reaction. A pad of steel wool in a pint of vinegar kept at a low boil for 10 to 15 minutes until the vinegar turns rust red will make a good iron oxide solution. Add more vinegar during boiling if necessary. After boiling, remove what is left of the steel wool from the vinegar, strain the solution through a coffee filter, and store it in a plastic bottle. Richard suggested doing all this outside or waiting until your spouse isn't home, and recommended not using the good pans as they will stain. An enameled pan works well, but do not use aluminum.

The ebonizing technique works because a reaction between the iron oxide solution and the tannin in the wood causes the wood to darken. Some woods, like red oak, contain a lot of tannin, which is why steel nails leave black stains in oak. Other woods, like maple or poplar, have little or no tannin. Richard's approach uses a tannin pre-rinse to enhance and smooth out the darkening effect of the iron oxide solution, and a post-rinse to change the ebonized color from blue-black to pure black.

The tannin or tannic acid solution starts with a Quebracho bark extract purchased from Van Dyke's Taxidermy Supplies. Take 1 tablespoon of bark extract and mix it with enough water to make a paste. Then mix the paste with 12 ounces of tap water and store the solution in a plastic bottle. Richard called this "bark tea."

Richard's "Bark Tea"

None of these products are toxic, but wearing gloves while using them will prevent your hands from getting stained. Use an apron to protect your clothes, and wear safety glasses in case of splashes. Each solution should be applied with a brush that is used only for that product.

Richard had a seven-step process, all displayed on a piece of maple. The steps are as follows:

1. Wet the wood to be ebonized two or three times, each time letting it dry and sanding down the raised grain. Otherwise the tannic acid solution will raise the grain.
2. Apply the tannic acid solution with a brush and even out the color by wiping with a rag if necessary before it dries. The wood will turn a red/orange color. Let it dry fully before going on to step 3.
3. Apply the iron oxide solution with a separate brush. Even out the color by wiping with a rag if necessary and let the wood dry. The wood will turn blue-black.
4. Apply a second coat of the tannic acid solution to shift the color of the wood from nblue-black to true black. Do not neutralize this solution, and give it one to two days to dry. The color will not get darker with more coats, but a thinner tannic acid solution may cause a lighter color.
5. Finish with shellac. Richard suggested Zinsser 3 pound shellac (3 pounds of shellac flakes dissolved into one gallon of alcohol). Amber shellac works better on dark woods like walnut, and clear shellac works better on lighter woods. When using a badger hair brush it will be necessary to cut the 3 pound shellac 50/50 with alcohol, otherwise the brush will leave brush marks in the quick drying shellac. An alternative is to use a taklon brush (available in a 2" width from Homestead Finishing Products for $32) and use the undiluted 3 pound shellac. In either case, stop brushing when the surface becomes tacky, and dry brush the edges to prevent drips. A surface that will not be buffed out will take three coats of shellac, while a buffed surface will need ten coats. Do not sand between coats, as shellac, like lacquer and unlike varnish, melts into the previous coats to form one layer of finish. Wait about an hour between coats, and let the last coat dry for a week as the alcohol outgases.
6. Start rubbing out the finish with 600 grit wet/dry sandpaper on a felt or rubber block, lubricated with odorless mineral spirits. Sand in a circular pattern. Work up through 1000, 1500, and 2000 grits. Keep it lubricated and wipe off any slurry with a rag. Use a light touch to keep from sanding through the shellac. Richard suggested doing one-eighth of a table top at a time, or about 2 square feet. The finer grits of sandpaper can be found at O'Reilly Auto Parts or auto body supply stores.
7. Polish with Meguiar's Swirl Remover, which is about 4000 grit. Finish the process with Meguiar's Show Car Glaze. Both are available at auto body supply stores. Mineral spirits are not needed with these products. Do all this by hand. A power buffer generates too much heat and ruins the finish. The result will look like a traditional French polish.

The finishing procedure is similar for a brushed lacquer finish. Richard recommends using gloss, not satin lacquer.

Richard's ebonizing process is described in detail in the October/November 2010 issue of American Woodworker Magazine.

Members at the January Meeting

Isaac Griffin-Weisner handled camera duties at the January Meeting

Show and Tell Portion of the January Meeting

The meeting began with a show and tell session. Doug Perlick had a new router jig that used splines and wedges to hold the work piece and work stops for the router. Ed Neu had a child's chair whose parts he had turned on a new treadle lathe he had just completed. The chair was painted fir with a woven cloth tape seat. Tarryl Letcher had a walnut stool that he built to use with his drawing board. He said he got the idea for the sculpted seat from a Tage Frid design. Mike Hipps had photos of a baptismal font he had built for Good Samaritan United Methodist Church in Edina. Mike has also built an altar table and a lectern for the church, with all three pieces using an oak tambour design.

Another Guild member brought an old saw sharpening clamp made by the Buckeye S.V. Company. The clamp would be nailed temporarily to a fixed surface to hold the saw during sharpening, and then put back in the carpenter's toolbox.

Door prizes were provided by Rockler Woodworking, Woodcraft, and Gorilla Glue and included gift cards from Rockler.

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What's on Your Bench?

Story and photos by Mike Siemsen

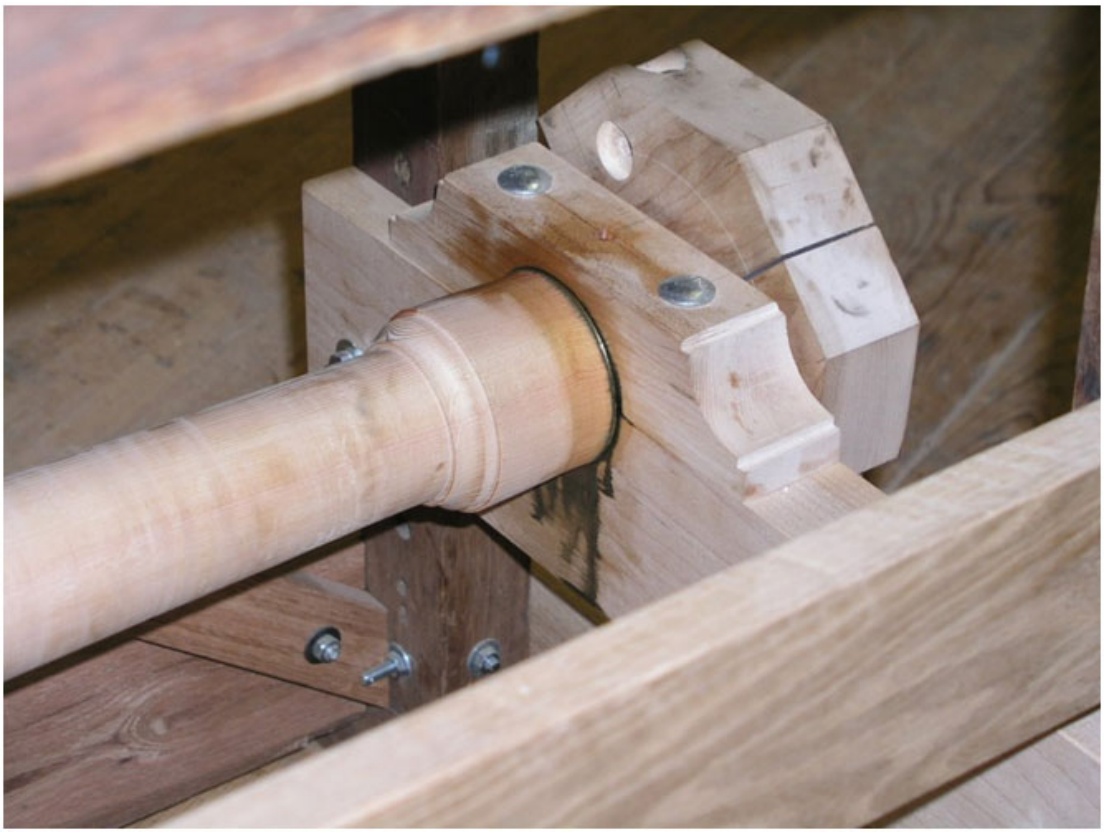
For some time I have been interested in building a treadle or pole lathe so when I came across an antique lathe on Craigslist I picked it up. The seller told me that he purchased it from the Shoquist farm near Scandia Minnesota. I could tell that it was fairly old because all of the hardware used in its construction is hand forged. The lathe is 6 feet long with 4 feet between centers. When I got it the lathe had no treadle nor did it have a motor on it. My goal is to get it back in to working order without doing much modification of the original parts.

The lathe as I found it.

I did some poking around on the internet and found a lathe with a similar headstock that was in Sweden. Scandia is community with a strong Swedish heritage so this makes sense. I would not be surprised if this machine is at least 150 years old but this is anybody's guess without more research.

Swedish Lathe (A very similar headstock)

The lathe needed some bracing and a system to drive it. The bracing wasn't too difficult and with the help of some more internet research I was able to come up with an idea for a treadle system to drive the lathe. I had an old flat belt pulley that was given to me by a friend. The story that came with the pulley was that it came out of a Pillsbury flour mill. I decided that it would make a good flywheel. I wanted to make as much of it from wood as possible so I turned a crankshaft for the flywheel to run on from a 4 x 4 piece of fir from the lumberyard. I used some 2½ inch steel pipe which I turned down on my metal lathe to make bearings. I pressed the steel bearings on to the shaft and made blocks for them to run in from hard maple. I temporarily attached an electric motor to the lathe and ran in the bearings to get them running smoothly.



The hard maple blocks and end of crankshaft after running in.

The lathe showing the flywheel and temporary motor.

I made a flat belt from some webbing that I had in the shop and ran it around the flywheel and drive pulley and connected up the treadle to the crankshaft. I am currently experimenting with different placements of the connecting arms to find the optimum arrangement for power and speed so the lathe will actually work. I am also practicing turning while standing on one foot! This has been a fun and interesting project and one that I hope will be an ongoing one, not only as I tweak its performance but also as I learn to use the machine and find out more about its history and heritage.

The rear of the lathe showing bracing, crankshaft and flywheel.

A front view showing progress so far.

I will probably need a bench to lean against to operate the lathe but I will find out more as I progress further. I hope to bring it to a future guild meeting and demonstrate how it works, when it works!

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President's Notes

by Charlie Kocourek

I have said it before and will probably keep saying it until someone tells me they are sick of hearing it, but I truly believe that the Guild is a great organization! So what is it that makes a great organization? Recently, I was pondering this question more in reference to my day job, but my thoughts very quickly turned to the Guild. If allowed only one word to describe what distinguishes a great organization, I would choose "engagement."

The funny thing about engagement is that it benefits the individual as much or even more than the organization.

I see engagement at each monthly meeting. Everyone in the room has a passion for woodworking and even though we tend to be a solitary lot, at some level we all want to share our passion with like-minded individuals. Listen closely and you will hear members talking about their most recent projects, special finishing techniques, types of glue, and the latest and greatest new tools.

Engagement happens at a very personal level, and I believe it's probably more about the little things. I think someone saying hello and asking another attendee why he or she is visiting one of our monthly meetings can go a long way towards that person becoming engaged in our organization. If these "little things" are in place then the big things will probably take care of themselves.

So, the next time you are at a meeting take 30 seconds to say hello to someone and ask them about their latest project or what they think about the latest and greatest new tools. It will benefit the Guild, it will certainly benefit the person you are talking to, and the truth is that it will benefit you, too.

Looking forward to talking to you at the next meeting,
Charlie Kocourek

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New Members:

Mark Anderson

Lavern Eick

Lester Strom

Paul Ydstie

Todd Ascher

Dennis Dischinger

Gregory Moulton

David Samborski

Michael Dekarak

John Larson

George Schwartzbauer

Matthew Heidner

Thomas Lang

Peter Molinaro

Terry Potts

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Upcoming Meetings

February Meeting: Hand Tool Olympics

Date: February 15, 2011
Time: 6:30 pm for show and tell, 7:00 the games begin
Location: Forest Products Supply, 2650 Hwy 61, Maplewood, MN

The Hand Tool Olympics are returning this year for our February meeting. Last year's games were an excellent competition with the two teams very close in the overall points standings.

Mike Siemsen's School of Woodworking is providing the necessary tools, stock, and work holding devices again this year. Mike and the event helpers are versed in hand tools and will be there to willingly coach anyone who needs or wants some helpful hints. If you are curious about integrating hand tool techniques into your work habits this is a great opportunity. If you use hand tools regularly, come on out and show us what ya got!

The events will be the same as last year:

Ripping Crosscutting
Jointing Boring
Dovetailing Tenon cutting

The February meeting has traditionally been a festive gathering to combat Minnesota cabin fever and give the group a chance to socialize with like-minded folks. This in mind, there will be both beverages AND food so bring your appetite. If you have a shop-made tool or any interesting antique or rehabilitated tool you would like to show off, bring it along.

March Meeting: the Art and Artistry of Giant Woodturnings w/Virgil Leih

Date: March 15, 2011
Time: 6:30 pm for show and tell, 7:00pm presentation
Location: TBD, please watch the guild website for updates.

When most of us want to try something new in woodworking, we buy a book or a DVD or we take a class. Virgil Leih had few such resources available when he decided to turn tree trunks into giant hollowform vessels. Virgil rescues discarded urban tree trunks and turns them into sculptures the size of a man. His sculptures are truly works of fine art. He turns the 2,000 pound trunks on a giant lathe. The story of how he developed the tools and techniques to turn tree trunks is inspiring and a lesson to all of us with a desire to push the boundaries of our art form. You may have seen Virgil's sculptures on display at the Landscape Arboretum or in the fine arts building at the Minnesota State Fair. His work has also been featured in the press and on television. We are pleased to welcome Virgil to our meeting to present his story of discovery and to show some of his work.

This special meeting is being held jointly with the Minnesota Woodturners Association. The two groups have much in common, and this is a great opportunity to meet and mingle.

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THE CLASSIFIEDS

Advertising in the classifieds is provided to members of the Minnesota Woodworkers Guild free of charge. Ads placed should be for goods or services of general interest to the woodworkers who make up the guild community.

Ads for services will run until cancelled. Other ads will run for one issue unless renewed. Submit ads to: jebeutel@gmail.com.

Help Wanted

Mark Laub Studios has a great opportunity for 1 or 2 competent woodworkers. You will be helping build award winning, very high end, complex, original design furniture. Friendly, supportive, learning environment. Flexible hours and pay.

Call or email Mark 612.210 7793 marklaubstudios@gmail.com

Tools

Jet 10-20 Bench Top Sander $225 - like new - Cliff - 952-432-1425 or venturesmith@charter.net

10" Radial Arm Saw by Ridgid with mobile base Very Good condition. $350 ecbartz@msn.com Cell 651-307-9184

Services

Woodcraft Education Program. Located in Bloomington, we offer the Twin Cities most complete selection ofwoodworking classes. Our classes cover furniture making, carving, turning, hand and power tools, and finishing. We also offer free demonstrations everyn month. Close by, small class sizes and the best local and national instructors make it a great place to bring your skills to the next level.
Website: Woodcraft Bloomington Store Phone: 952-884-3634

Mike Siemsen's School of Woodworking. We have another great line-up of classes this year including some tool sharpening and tuning classes with Mike and a fantastic finishing class with Roland Johnson. We are also highlighting Glen Huey's class Build a 4 drawer Chippendale Chest. Classes are held in my shop on a quiet rural setting 35 miles north of the Twin Cities. The shop is heated and air conditioned for your comfort year around. Reserve your spot now!
Website: www.schoolofwood.com e-mail: mike@schoolofwood.com Phone: 651-257-9166

Plane soles milled flat, price ranges from $12 for a block plane to $40 for a #8. Sides can be milled square to the sole for $15-$20. Contact Chuck Pitschka at 952-935-0660, or by e-mail at cpitschka@mn.rr.com.

Workbench Plans. Plans now available for Adjustable Height Workbench with a built in Mobile Base. Email Charlie Kocourek at Charlie@Jack-Bench.com or visit my website www.Jack-Bench.com