



WOOD FORUM

Newsletter of the Sonoma County Woodworkers Association

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April 2024

The SCWA calendar is beginning to fill up again, with several events in the offing.

To begin with, we have scheduled a Monday, April 29 evening meeting at Chimera, the Artist Maker Space located in Sebastopol. The event begins with a tour of the facility, followed by a milk paint demo by Kalia Kliban, and possibly followed by a show-and-tell by members of recent work, time permitting.

Looking ahead to Saturday, May 25th, John Moldovan will open his studio at 1pm for a 1-1/2 hour speaking presentation, where he will delve into his creative process, inspirations, and the techniques he employs in his woodworking. Following the talk, there will be a Q&A session where participants can ask John specific questions about his pieces, materials, and artistic journey.

Moldovan Studio Furniture is located at:

19480 8th Street East

Sonoma, Ca. 95476

For a preview of what you'll see, John's website is:

<https://jmoldovan.com>



On July 2 we have scheduled a 7pm meeting at the studio of James Gray, an artist who works in multiple media, including wood, metal, stone, resin, and glass. His studio is also in Sonoma, and examples of his work can be seen here:

<https://studio-gray.com/>

James will discuss the various design decisions involved in his creative process, material selection, and techniques he has developed over the years in his artistic journey. The evening will evolve into a Q&A session where he opens the floor to questions from the members. This is an evening not to be missed.



Membership Meeting

February 6, 2024

David Marks' shop was filled to capacity for the Tuesday evening meeting of the SCWA, and Don Jereb got things rolling with the information that our recent *Artistry in Wood* show drew record-breaking crowds throughout the run, with attendance peaking at 100 to 220 viewers per day for the last three days of the show. The show also generated some sales and sales inquiries, good news for the professionals in our group. David Marks commented that he sold his *Voodoo Vessel* to



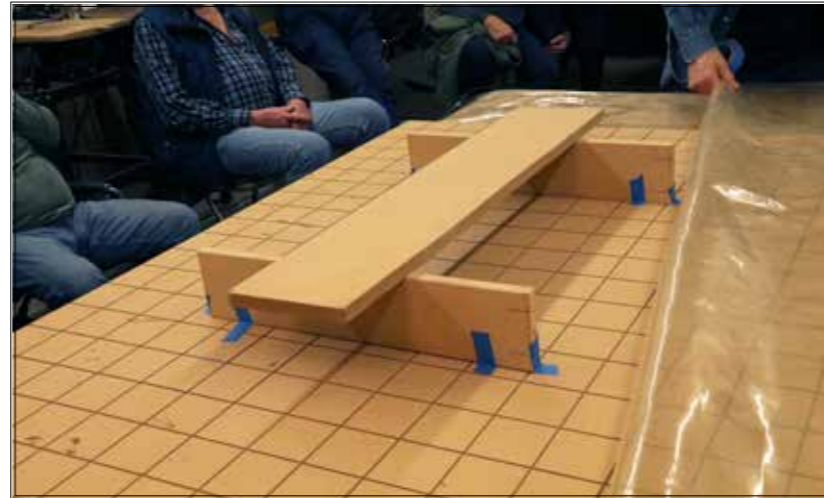
a Napa buyer. There were 43 contributors to the show, with 78 pieces, and all hands felt the show was a great success.

Following a few brief announcements, David got the presentation underway with a discussion of atmospheric pressure and the part it plays in vacuum bag pressing for glue-ups.

At our elevation (close to sea level) the atmosphere exerts 14.7 psi on everything in our world, including us. That equates to well over one ton per square foot. But we do not feel that pressure because the same pressure is in every cell of our body, pushing outward, so the forces cancel one another. The same is true of a plastic bag, where the pressure is the same inside as out. But if you were to seal the bag and contrive a means to remove all the air from within, the pressure would be enormous. If you could achieve a perfect vacuum (which is measured in inches of mercury, where a perfect vacuum is 29.92"Hg) you would have

more than a ton of pressure pressing against each square foot of your plastic bag surface. That pressure would be applied to anything inside that bag as well.

The reality is that a perfect vacuum is not attainable, but the vacuum pumps used in woodworking can routinely reach 25"Hg which equates to more than 12 psi, or 1768 pounds per square foot.



David set up a demonstration of this extreme pressure by placing three pieces of MDF in a bridge configuration inside his 30mil polyurethane zipper bag (more about this later) and turned on his vacuum pump. Within a minute the MDF bridge collapsed catastrophically; the main span collapsed first, and the outside edges quickly followed. The sound of each failure was like a gunshot, startling everyone in the room. I'm not sure what level of vacuum had been reached, but it was far from 25"Hg.



Most woodworkers who use vacuum bags are using 20~30mil vinyl bags, which are inexpensive and fairly easy to use. One downside is that they are susceptible to puncture. Another is that getting a large project into the bag is sometimes difficult, and shifting of parts can sometimes occur in the process. The new zipper bag David demonstrated makes getting the work into the bag a breeze - just unzip the bag, set your project inside, and zip it back up. And according to David the polyurethane bags are virtually puncture proof. The downside is that they are expensive, and only available in large sizes, 4x8' and 5x10'. David bought his from Darryl Keil of Vacuum Pressing Systems.

There is more to the setup than just the bag and pump, of course. You need a way to ensure that all the trapped air has an exit path out of the bag. The standard method is to make a platen with shallow grooves in a checkerboard pattern that eventually ends at the vacuum hose nipple. The work lays on the flat surface, and the air travels in the grooves. This works fine for ordinary flat work, but some jobs are more three dimensional, which can leave pockets of trapped air. This can result in inadequate pressing in those areas. One solution David employed early in his education was rope, which creates a passageway along its length. Nowadays he uses vacuum breather mesh; one brand is called Evacunet. It typically is placed over the work, so that some portion of it is in contact with the grooves in the platen.

The platen itself can be made of any sheet good, such as 3/4" MDF. The platen needs to be coated so that glue squeeze out does not bond your project to the platen. Wax or plastic film will do the job. But making it out of Melamine, though a bit heavier, will be better in the long run.

Speaking of platens, David mentioned an experience he had a few years ago while making his domed piece *Ocean*, which was awarded Best of Art in the 2021 *Artistry in Wood* show. The dome was roughly 3 feet in diameter and about 8" in elevation, produced on the

lathe. It was hollow underneath. For more about this, see the *Wood Forum*, February 2022, page 5. <https://tinyurl.com/59vxnrzs>

The project was an intense, 3000 hour long journey involving laminating the dome with rare quilted mahogany, then inlaying numerous sea creatures made of wood and shell. The veneering process involved many passes through the zippered vacuum bag. The hollow dome was placed on the platen, a piece of veneer was coated with glue and held in place with packing tape, the bag was sealed, and the pump was turned on. Within a short time he heard the sound of his platen imploding into the hollow rear of the dome. David had unknowingly created a vacuum chamber between the dome and the platen. Fortunately, the platen was weaker than the dome, so it caved in and the dome survived. Lesson learned.



David brought out a form he had once used to produce a curved panel. To make such a form, he suggests drawing the curve full scale to determine the radius of the curvature. He uses wiggle board (bending plywood) as the form's curved surface, so its thickness must be subtracted from that radius, then he draws that new radius of a piece of wood that will become a rib. Once the curve is refined and perfected, he then



duplicates it using a template router bit, making as many ribs as he needs for the form. The suggested maximum spacing between ribs is 6 inches, though less is much preferred. As the rib spacing increases, the danger of building a corrugated form becomes a real possibility, which of course will be reproduced in your work. Remember that 1768 pounds per square inch! Another thing to remember is that air inside the form must be evacuated, so you must have a passageway between the ribs, and to the outside of the form. This can be done by drilling holes in the ribs, or simply cutting a saw kerf perpendicular to the ribs through the bottom of the form.

As a side note, he suggests using convex forms. It is easier to use; a concave form can be difficult to get all layers to bend together and reach the bottom of the curve.

David told a tale of a long ago commission he took on in which he was asked to rebuild a table originally made by a deceased woodworker, who as the end neared told his family to "find someone who is good with veneer and have him make it right." Long story short, the man had used rubber cement to adhere all the veneer, and it of course moved, as rubber does. All the joints opened and looked terrible. David's mantra: Just say no to rubber cement!

He brought out samples of dried glue, some Titebond (PVA), some Unibond 800 (urea resin), and passed them around the room. An interesting thing happened: after being handled for just a couple of minutes, the Titebond chips became noticeably flexible. The Unibond chips remained rigid. The lesson: don't use PVA adhesives when rigidity is important. An alternative to Unibond is waterproof epoxy, but its short open time can pose a problem.





recommendation is to always do a dry run (sans glue) to test your setup. Flat work is not usually a problem, but sometimes taller pieces can create odd wrinkles in the bag, which can stress the corners of the zipper and cause leakage. Emergency solutions include gasket putty, duct tape, and rolling up the bag and applying a clamp.

Mark offered another bit of advice. When preparing several layers of veneer for the press, it is common practice to hold things in place with packing tape or even blue painter's tape. The problem arises when you



Unibond 800 is a two-part mixture consisting of a liquid resin and a powdered catalyst. By varying the ratio of the two, you can have a quick setting glue or a long open time, as long as 45 minutes. Temperature is also a factor: Unibond will not reliably cure below 70 degrees, but higher temperatures will speed things up. David's solution is to work in a cool room, then apply an electric blanket over the vacuum bag once the work is inside. He suggests 80 degrees as a good goal. Mark Tindley suggested saving a bit of the mix in a plastic bag, and putting it under the blanket as well. It will let you know when your glue has cured.

He cautions that urea resin adhesives are toxic. He wears a charcoal respirator mask, and uses a fan for ventilation.

A question was asked whether the zipper bag ever leaked, and how to deal with that. The first



try to remove the tape. That pressure has REALLY bonded the tape to your work. Trying to peel it away can sometimes take bits of wood with it. If you see that happening, STOP. This is akin to planing against the grain. Instead, pull in the opposite direction. Sometimes the application of a solvent can help things along.

Responding to a question from the audience regarding applying marquetry, David explained first of all that he prefers using 1/16" veneer, and that as he cuts out the individual pieces, he joins them to their neighbors with Titebond glue, so that when finished the picture is one homogeneous sheet. Then he applies the sheet to the core in a vacuum bag using Unibond 800. He set up a demo version of this technique using a marquetry panel, when suddenly

THE LIGHTS WENT OUT!

But David, being the trooper he is, carried on as multiple flashlights appeared, and the presentation was brought to its finale just before 9pm. A warm round of applause followed, and we made our way to our vehicles in a completely blacked-out neighborhood.

More from *Artistry in Wood* 2023...



String Quartet by Ray Schultze

Photo by Jose Cuervo

Ray dedicated this work of art to his father, who played the fiddle. Woods include maple, cherry, walnut, bubinga, Mississippi red gum, zebrawood, yellowheart, purpleheart, canarywood, and ebony.



Kris rescued these two multi-center ash stem vases from the firewood bin at Heritage Salvage.

Ashes of Firewood by Kris Janik

Photo by Jose Cuervo



A Table for Two by John Clark, maple and walnut burl

Photos by Debbie Wilson



Oval Serving Platter by Warren Glass, sapele, Good Stuff finish

Photo by Debbie Wilson



Showcase by Dominique Charmot, mahogany and maple



Chair by Dominique Charmot, mahogany and maple

Photos by Debbie Wilson



Floating Platter by David Fleisig, oak and Brazilwood

Photo by Jose Cuervo



Let 'em Live by Dugan Essick, claro walnut

Photos by Debbie Wilson



Black Oak Coffee Table by Dugan Essick

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Wood Forum is the monthly newsletter of the Sonoma County Woodworkers Association. Please feel free to submit articles and photographs for inclusion in the publication. You can send your submissions to the Wood Forum Editor at SCWAEditor@gmail.com. Advertisements are also accepted with a nominal cost for paid members.

Membership Application

I would like to join the SCWA to meet other people interested in the craft, the art and the business of fine wood-working. Enclosed is my check in the amount of \$35 for the annual dues. I understand that this fee entitles me to attend monthly meetings and to receive the Wood Forum newsletter by email or via the SCWA's website.

Name _____ Email _____

Address _____

City, Zip _____ Home Phone _____

Cell Phone _____ Work Phone _____

What can you do to help further the organizational goals of our volunteer-run association? Please tell us how you would like to help:

Please send check and completed application to:

Sonoma County Woodworkers Association, PO Box 4663, Santa Rosa, CA 95402