

Billets & Blades

THE OFFICIAL PUBLICATION OF
THE NORTH CAROLINA CUSTOM KNIFEMAKERS GUILD

SPECIAL POINTS OF INTEREST:

- The next **North Carolina Custom Knifemakers Guild** meeting date: July 16, 2022 at MCC



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ABOUT THIS PUBLICATION AND OUR GUILD

Billets and Blades is the official publication of the North Carolina Custom Knifemakers Guild. It is compiled and published in four annual issues, with two additional special publication dates possible each year.

The North Carolina Custom Knifemakers Guild was formed to meet the needs of the growing body of custom knife makers in the southeastern United States. The purpose of this newsletter is to serve as a medium of exchange for the members of the NCCKG.

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Advertising Policy:

The NCCKG accepts no paid advertising as a matter of policy. From time to time, advertisements may appear that are deemed by the officers to be in the best interest of the Guild. Space for advertisements is offered free to Guild members who wish to promote a service or offer specific items for sale. The officers and editor reserve the right to edit advertisements for brevity.

Members, please submit ads to the one of the board of directors listed on the following page.

FROM THE EDITOR

If you are a new member, please make sure that we have your correct email and physical mailing addresses. You may send this information to us via email.

If you are currently receiving *Billets and Blades* but are no longer interested in receiving it please let us know.

If you know of someone who may be interested in becoming a member, please let a board member know and we'll be happy to mail a copy of the current newsletter to that person.

Existing members, please check the website to verify that we have your correct information. Especially your correct email address so you may be contacted should the need arise. We are always in need of pictures, articles and ideas on how to make the website and newsletter better. Please contact a board member with any suggestions.

LETTER FROM THE PRESIDENT

July 2022

We are coming up on the July meeting.

Barry has some good demo's planned. I hope to see everyone there.

The Blade show was a great success. We talked to many people about the guild and the classes at the collage.

Murphy and Gene set up a nice booth that made a great rest area. Many members took advantage of the rest stop and a place to store heavy items as they continued their shopping.

The Guild will have a booth at the upcoming Autumn Jubilee at Dan Nichols Park Oct 1-2.

We will also have a booth in the heritage section and will be doing forging demo's.

If you wish to sell knives or just want to get in some hammer time see David Askew.

It was a big success last year and we believe it will be again.

Barry has a great prize for the golden ticket drawing. Contact Barry Clodfelter if you have an article for the newsletter. You'll want to be in on this drawing.

As always Barry is looking for articles for the News Letter and people willing to do demo's.

This is your guild , "Participate" .

Things you think everyone knows? Well they don't.

The knowledge in this guild is tremendous, share what you know.

It may be a different way of doing something that makes it simpler for someone who has been doing it differently.

Don't be afraid to share.

Hope you all are having a Great Summer

Andy Sharpe
President NCKMG.

2020 GUILD OFFICERS & DIRECTORS

President

Andy Sharpe
Lexington, NC 27295
336-853-6854
sharpeknives@yahoo.com

Vice President

Barry Clodfelter
Davidson, NC 28036
704-791-6588
barry@clodfelterknives.com

Secretary/Treasurer

Darrin Sirois
Fay, NC 28304
910-584-6928
knives@TCTKnives.com

Director

Murphy Ragsdale
Southern Pines, NC 28387
910-276-6660
mragdale77638@roadrunner.com

Director

David Askew
Gold Hill, NC 28071
704-433-4293
askewbama@aol.com

Editor & Webmaster

Barry Clodfelter

Random thoughts from your VP and editor:

We are going to draw the Golden Ticket at the July meeting!! If you missed Blade Show you missed a fantastic show this year! This year the winner will receive a Nordic Edge file guide donated to us by Nordic Edge. This is a really high quality file guide with replaceable carbide inserts.

So far we have the following folks with a ticket:

Andy Sharpe - July demo
Barry Clodfelter - July demo
Andy Sharpe - October demo
Barry Clodfelter - October demo
Phillip Jones - October demo
David Askew - October forging at Autumn Jubilee
Barry Clodfelter - October forging at Autumn Jubilee
Andy Sharpe - April Demo
Phillip Jones - April Demo
Joel Sandifer - Newsletter article

It's not too late for you to step up and give back by writing an article or doing a demo. You can start the list for the Golden Ticket 2023. Please let me know what demo you want to do and I will be happy to schedule that at our next meeting. If you want to write a knife making article please include pictures and preferably Microsoft Word format. I will edit all articles for content and formatting for the newsletter. I will also spell check it if needed.

The more you do for the Guild the more tickets you can have in the drawing! Don't be shy everyone has something they can provide and earn a ticket!



My adventure in stabilizing by Joel Sandifer

After buying some stabilized handle material at blade show last year, I became curious about the stabilizing process. So, what is stabilizing? Good question, I am glad you asked! Stabilizing is a process of impregnating a piece of wood with a heat activated/cured resin. Making them harder and resistant to moisture thereby reducing the chance of warping and cracking. Dyes can also be added to the resin to add some color to most wood. Notice I said MOST not ALL. I started watching videos online and reading what I could find on the whole process. The equipment needed to accomplish it was a whole new ballgame. Here is what I have learned so far.

From my research, I knew the first thing that I needed was a stabilizing pot. Now there are plenty of them out there to choose from. Some come in a kit, complete with everything you need. Kind of like this one found on Amazon for around \$170.



I like the road less traveled; I enjoy repurposing, I get that from my dad. I started looking at various options. I found an old pressure canner that had a good seal on it. I figured if it is strong enough for canning it should hold up to a vacuum. You can find one at a thrift store reasonably priced and replacement seals are cheap. Kind of like this one.



Then, I began to look at different vacuum pumps. Now everything I read said to get a 2 stage vacuum pump. But why? Why do I need a 2-stage pump? More research, A two stage design has two rotors and vanes. This means that the first stage generates vacuum, and the second stage cleans the system, leading to a deeper ultimate vacuum level. As a result, two stage pumps can produce a deeper vacuum than single stage pumps. Learned something new. Now to find one.

I was on a budget, so harbor freight was my first choice. They have a 2-stage vacuum pump that was reasonably priced around \$75. It had good reviews, so I bought one. Like this one.

PITTSBURGH AUTOMOTIVE > 2.5 CFM Vacuum Pump

★★★★☆ (1,169) [Write a Review](#)



Then, I needed some shut-off valves and some various piping. I dug through my box of miscellaneous parts for forge making and found 2 half- inch valves, and some various small pieces of pipe. What I did not find was a port for the pot. I needed a port that would go through the pot wall but keep a sea, allowing the piping to connect. Went to Lowes, no luck. Found one online through Amazon and ordered it.

Next, I knew I needed a gauge. The gauge would tell me how much vacuum pressure was being pulled. Added that to my amazon order as well. Like this one for less than \$15.

Brand: DuraChoice ★★★★★ 1,507
DuraChoice 2-1/2" Oil Filled Vacuum Pressure Gauge, Water Oil Gas - Stainless Steel Case, Brass, 1/4" NPT, Lower Mount Connection -30HG/30PSI



Since I was going to have to wait anyway, I went ahead and ordered the stabilizing fluid as well. I went online and found Cactus juice from Tex-turn. It was the fluid most talked about online as I was researching. Literally could be in a book Wood Stabilizing for Dummies! They even sell component parts to build your own Vacuum chamber. Now they tell me. Oh well. Too far to turn back now! Being that this was an experiment so to speak I just bought a quart. It was around \$30 plus shipping. They were quick too. I got the cactus juice before the port! The instructions were easy enough to follow to activate it. After activating it, you must keep it cool below 85 degrees, It has a shelf life of a year once activated and 2 years if not activated. It also cleans up with soap and water. That's a positive for me because more than likely I am going to make a mess!



The day finally came when I had all the parts! Let the games begin! WooHoo!

I began to assemble everything making sure to use pipe tape on every joint. I drilled a hole for the port and installed the port. I removed the screw in the lid and installed the vacuum gauge. Now if you have ever worked with a pressure canner you know the lid has several areas meant to hold pressure but not vacuum. I had to get creative. On each of them I mixed up some JBWeld and sealed them up.

Waiting, but not so patiently, I moved on the getting the vacuum pump attached to the piping. I had an old set of gauges and tubing used to connect to an AC unit to check Freon. The connector fit perfectly. Got everything connected and oil in the pump and fired it up. The vacuum seemed to be pulling pretty good. I was getting excited to give it a try. Still waiting on the JBWeld to dry completely.

From my reading, I knew I would need a wide-mouth glass container to use in the pot so it wouldn't take as much juice to cover the wood. It would also make cleanup easier. Found one at a thrift store that was perfect. Very large and bigger than a quart jar.

Finally, the JBWELD was dry. I did a test run. It pulled the vacuum down to -25 which wasn't too bad. Feeling happy, I closed the shutoff valves and let it sit. An hour later it was back at zero. Dang! So now I start chasing a leak.

A leak in a vacuum line is much different than chasing a leak in a pressurized system. In a pressurized system, a little soap, a few bubbles and viola leak found. In a vacuum it's not as easy. It becomes trial and

error, or search and destroy! However you want to look at it! I got my Grandson, Tanner, who has much better hearing than me, and the leak was found! There was much rejoicing. A little more JBWELD and more forced patience to allow it to thoroughly dry.

It pulled down to -25 again closed the shut off valve and let it sit overnight. The next day, success! It was still at -25. Happy day! So now to find some wood.

I found a piece of maple that I didn't mind destroying, put it in the jar and added the Cactus juice. Well, the wood floated. I looked around and found some rabbit wire and cut a piece to fit in the jar. I got a metal weight that would hold it down. Improvise, adapt, overcome. Thank you, Clint Eastwood! So, this is what I came up with:



I put about an 1 inch and a half of juice above the wood to allow for absorption and still leave it covered. Then I realized a flaw in my system.



You see with the complete kits, they come with a clear acrylic top about an inch thick and you can see everything inside. With my system I'm blind. So, when you turn it on you can't see the air bubbles that look like foam. It can spill out of the jar into the pot making a mess and leaving the wood exposed.

Refusing to give up! I did what every good soldier does in the face of adversity, charge ahead make it work, find a solution. I turned it on a little at a time. I pulled -5 and waited a few minutes, pulled -5

and waited a few minutes, pulled -5 more and waited. Once I reached -25 I closed the valve and let it sit 24 hours.

The next day, I opened the valves slowly, pulled the wood out. I wiped off the excess juice and wrapped it tightly in aluminum foil. The foil just prevents a mess in the toaster oven. Some of the resin will always leak out and harden. I had my toaster oven preheated to 190 degrees and put it in for 2 hours. After what seemed like forever it was done. Now I had to let it cool to room temperature.

When I pulled off the aluminum foil it had crystals all over the outside. So initially it was a good sign the Cactus juice had hardened. Then I went to the grinder, a Wilmont of course, and ground all edges with a 120-grit belt. It looked good, smelled like cactus juice. Now the real test. I took it to the bandsaw and cut it up. I cut it length wise and cross ways to look at the penetration level. It was not as deep as I had hoped. My process was off somewhere.

Back to the research! I did some more reading. One mistake I found, was not letting the wood sit overnight in the toaster oven at about 100 degrees before anything else to remove the moisture from the wood. I had a moisture meter already so that helped. A gain, there are many on the market that are reasonably priced.

Okay start again. More wood, into the toaster oven overnight. The next morning, I pulled the wood out and put it in a ziploc bag to cool. This keeps the wood from absorbing moisture from the air. I opened the Ziploc and checked the moisture content, it read 0%. I was ready!

Put the wood in the jar, screen, weight on top and added the juice. Went through the same process as far as the vacuum pot goes and let it sit overnight. The next day I release the vacuum and left it to sit for another 24 hours in the resin.

When I opened it up and removed the weight, I noticed the wood was still slightly buoyant. I followed the same process. I wrapped the piece in aluminum foil and put it into the toaster oven. This time when I cut it up, it had penetrated deeper but still not completely.

Again, looked at my process. So, more reading! I found that buoyancy means air. I started over again. The next time, once I released the vacuum, I left it soaking in the resin for 48 hours. When I removed the weight, the wood did not float! It just sat there. I followed the same process of wrapping in foil, toaster oven, letting cool, unwrapping, and then cutting it up. The penetration was 100% complete saturation. I was a happy camper! The piece sanded and buffed to a beautiful finish. Add some Tru-oil and it really pops! Here is a knife with some Amboyna Burl that I stabilized using this process.



Other lessons learned, keep the vacuum pump away from the pot itself as it does run hot. Don't want the stuff hardening prematurely. I also keep the cactus juice in the refrigerator for the same reason, unless your shop temperature stays below 80 degrees in the summer. Don't stack pieces together unless separated by foil or parchment paper. They will stick together, and you have a challenge getting them apart. Finally, adding what I spent on the pump, gauge and port, for \$70 more plus shipping, I would have an acrylic lid and would have saved some time and aggravation! Oh well, where is the fun in that?!?!

I just ordered some more wood, cactus juice and some dye. Looking forward to seeing the results! Still thinking about buying a piece of acrylic so I can see the bubbles. It would speed things up a bit! Hope this helps someone thinking about stabilizing.

2022 Montgomery Community College Knifemaking Schedule

Basic Knife Grinding Techniques

The core of all knife making is the 2"x72" belt grinder. This class covers the importance of proper set up of the machine as well as proper technique. Students will grind knife blades to learn different grinding techniques. By the end of class students will have a complete working knowledge of the machine and its capabilities. Instructor: Ed and Tanya VanHoy

Basic Knife Grinding Techniques | 2/24-2/27 | THFSASU | 9AM-6PM | \$356.60

Holiday Knife Making (Easter)

Just in time for a great holiday gift! MCC is proud to present its annual tradition of the holiday (Easter this year instead of Christmas) knife class with the legendary Ed VanHoy. In this class, you will learn how to fashion a knife from scratch complete with a custom leather sheath. Students will design, shape, heat treat, cut custom grips, hollow grind, polish, and sheath their own knives. All Materials are provided. Instructor: Ed and Tanya VanHoy

Holiday Knife Making | 4/28-5/1 | THFSASU | 9AM-6PM | \$375

Basic Knife Making 101

This class teaches the proper techniques of free hand grinding, it will cover hollow grinding, flat grinding, and basic knife scale installation. It is open to all levels of experience. All materials will be provided, all students will finish a fixed blade knife of the courses design. Instructor: Ed and Tanya VanHoy

Basic Knife Making 101 | 5/5-5/8 | THFSASU | 9AM-6PM | \$346.60

Intermediate Knife Making 102

This class covers all phases of fixed blade knife construction, students will finish one knife of their design, and designs will be approved with level of experience. All materials for class project are provided. Class will be open to all levels of experience but it is preferred that students have some knowledge of knife making or having taken the Basic Knife 101 course. Students will finish a completed knife. Instructor: Ed and Tanya VanHoy

Intermediate Knife Making 102 | 6/23-6/26 | THFSASU | 9AM-6PM | \$346.60

Advanced Knife Making 103

This class covers more advanced methods of custom fixed blade knife making to include advanced grinding techniques and handle installation including hidden tang. All materials for class project will be provided. Class is open to all levels of experience. Some knowledge of knife making or completion of Basic Knife Making 101 and Intermediate Knife Making 102 is recommended. Students will finish a completed knife. Instructor: Ed and Tanya VanHoy

Advanced Knife Making 103 | 8/25-8/28 | THFSASU | 9AM-6PM | \$356.60

Basic Folding Knife Making

This class covers basic design and construction of a frame lock folding knife with exposed pivots. All materials for class will be provided. Class is open to all levels of experience. Some knowledge of knife making or completion of other classes in knife making is recommended but not required. Students will finish a completed folding knife. * Limited seating available* *Basic knife grinding skills are highly suggested for this class.* Instructor: Ed and Tanya VanHoy

Basic Folding Knife Making | 9/15-9/18 | THFSASU | 9AM-6PM | \$356.60

Advanced Folding Knife Making

This class covers design and construction of knives, including advanced topics like the use of hidden pivot, bolsters and liners. Class will be open to all levels of experience. All materials will be provided for the class. Some knowledge of knife making is recommended but not required. Students will finish a completed folding knife. * Limited seating available* *Basic knife grinding skills are required for this class.* Instructor: Ed and Tanya VanHoy

Advanced Folding Knife Making | 10/20-10/23 | THFSASU | 9AM-6PM | \$366.60

Tomahawk Forging

Forging a tomahawk is a great starter project for blacksmithing. Forging the head will introduce students to the basic practice of drawing & shaping steel as well as forge-welding and heat treating to harden the edge. Students will forge a traditional style "wrap-around" tomahawk head and will shape/ fit the handle form provided hardwood blanks. Then students will personalize and complete this "hawk" with traditional details and embellishments of their choosing. Open to all levels of experience. Instructor: John Hege

Tomahawk Forging | 10/28-10/30 | FSASU | 9AM-6PM | \$316.60

D-Guard Bowie Knife

A "D-Guard" Bowie was the traditional short sword carried by many confederate troops during the American Civil War. So called because the closed hand guard is shaped like a D, it is a large fighting Bowie featuring a blade about 16 or more inches long. While there are many manufactured versions, there are also many other versions made by local blacksmiths. Making a D-Guard Bowie is a good project for someone new to bladesmithing. During the class, students will hammer out, harden and finish a blade and fashion and fit a steel guard and wooden handle. Instructor: John Hege

D-Guard Bowie Knife | 12/9-12/11 | FSASU | 9AM-6PM | \$316.60

Intro to Damascus Knife Making

Who doesn't love Damascus? The beauty of the two interwoven metals is mesmerizing! In this intermediate level class we will learn all about it. Students will forge out their own billet blanks and learn about forming patterning. Once the billet is formed the students will then learn to grind knives from the blanks. *Basic knife grinding skills are required for this class.* Instructor: Ed and Tanya VanHoy

Intro to Damascus Knife Making | 11/17-11/20 | THFSASU | 9AM-6PM | \$356.60

What a great line up of classes for 2022! This list will be updated as more are announced.

Contact Montgomery CC for additional class information or to register for a class.

UPCOMING 2022 GUILD MEETINGS

Stay tuned for meetings when restrictions are lifted.

Dues for 2023 are due at the October meeting.

July 16, 2022 - Guild meeting at MCC

October 15, 2022 - Guild meeting at MCC

Events Include:

Board Meeting begins at 8:30am, to be followed by our General Business Meeting, Demos & Iron in the Hat

Demos:

Will be determined and published on the website prior to the meeting.

If you are not a juried member and wish to become one bring at least three knives for the leadership team to review.

WE'RE ON THE WEB
WWW.NCKNIFEGUILD.COM

The **North Carolina Custom Knifemakers Guild** was founded in June of 1992. Our goals are to:

- Promote the craft of custom knife making
- Seek to constantly improve the craftsmanship of its members
- Provide an educational resource to anyone interested in the craft
- To encourage new makers and provide a forum for their training

Through public knife making and forging demonstrations by a group or individual members, we try to display the craft and to educate the public. It is our intent to raise the general awareness of custom made knives and the people who create them. That is why there is no cost to attend one of our meetings, and we welcome anyone with an interest in knife making.

Our quarterly meetings are organized around speakers and various demonstrations of activities important to our craft. These speakers and demonstrations are from our members or experts in the field who come as our guests. As a training resource, our Guild is prepared to present any aspect of our craft to organizations that feel it would be beneficial and informative.



10001 Archer Rd.
Davidson, NC
28036

ncknifeguild@gmail.com