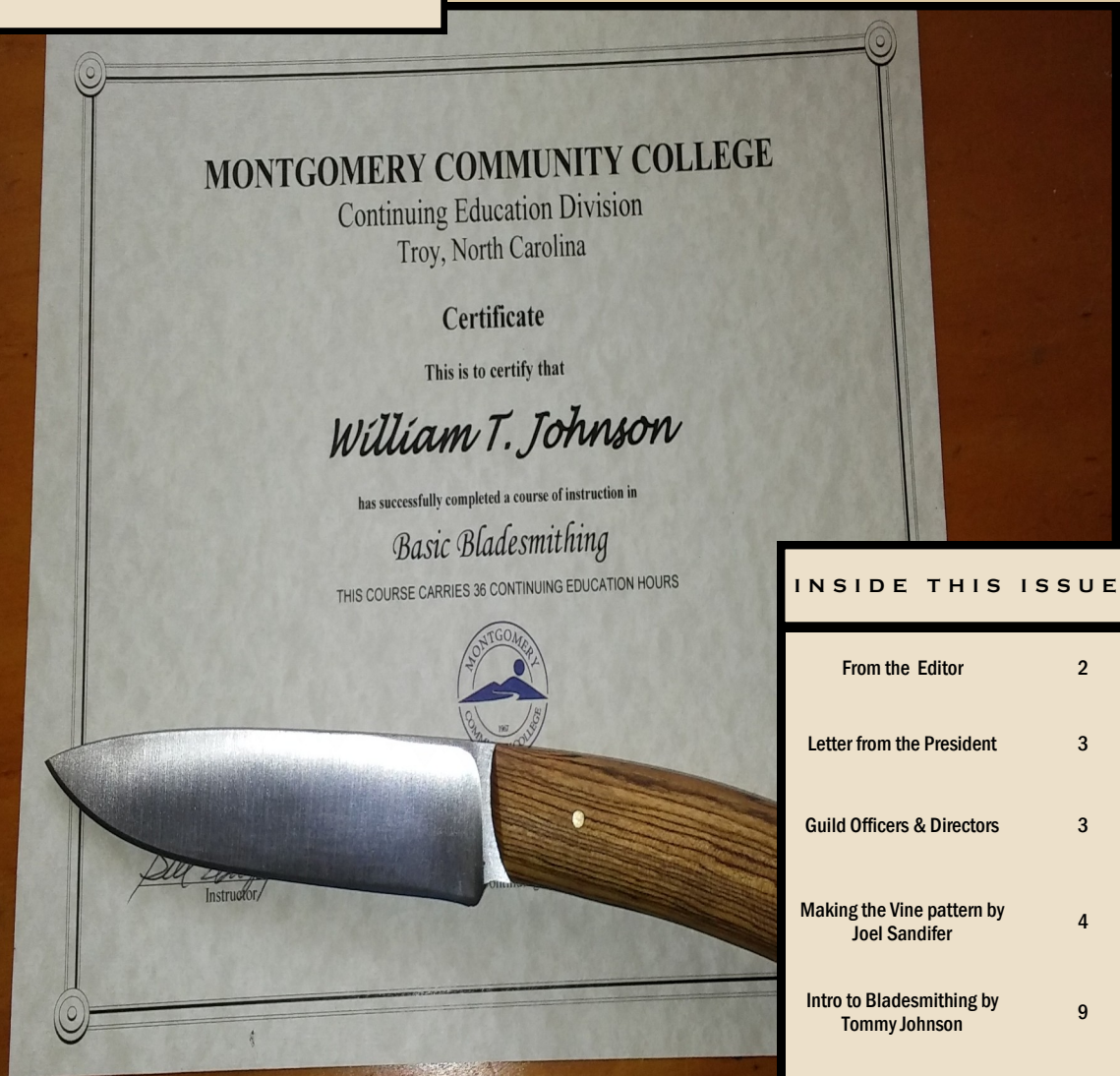


Billets & Blades

THE OFFICIAL PUBLICATION OF
THE NORTH CAROLINA CUSTOM KNIFEMAKERS GUILD

SPECIAL POINTS OF INTEREST:

- The next **North Carolina Custom Knifemakers Guild** meeting date: October 21, 2017 at Lowe Warner Park



INSIDE THIS ISSUE:

From the Editor	2
Letter from the President	3
Guild Officers & Directors	3
Making the Vine pattern by Joel Sandifer	4
Intro to Bladesmithing by Tommy Johnson	9

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 NCKKG.

Billets and Blades is copyrighted in its entirety by the North Carolina Custom Knifemakers Guild. Permission to quote small noncontiguous passages is freely given as long as appropriate citations are used. Permission to reprint, in whole or in part, must be requested from the Guild. Please contact the editor.

Knife making and related endeavors are inherently dangerous crafts or occupations. The material contained in this newsletter is for information only and is not intended for private instruction. Therefore, the North Carolina Custom Knifemakers Guild and its Officers and Editor specifically disclaim any and all responsibility for damage or injury that may occur as a result of the use of any information that is contained in this newsletter.

Advertising Policy:

The NCKKG 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.

Just a reminder that 2018 dues are due this month. If you are not going to be at the Guild picnic on October 21 please consider sending in your dues as soon as you have a chance. As part of improving the record keeping process for the Guild we are now requiring that each member fill out a new application each year. There is a membership application within the pages of this newsletter for you to fill out and bring to the picnic or mail in.

Stay sharp my friends!

LETTER FROM THE PRESIDENT

Well another year has past and October is upon us. I'll take this opportunity to remind everyone that dues are paid in October.

I hope everyone had a great summer. I will be looking forward to seeing everyone at the Oct. meeting. The meeting will be a great time to just visit and have a meal. Remember to bring any knife related items that you have for sale.

Hopefully the college will be finished with our area by the Jan. 2018 meeting. Things have gone slow but I feel it will be great when it's completed.

We are still looking for articles for the newsletter. Remember the guild pays \$25 per article. Think about it, 2 articles will pay your dues for the year. Could be a great way to pay for sanding belts or handle material. Or just something you can do because this is YOUR Guild. Barry is always looking for demo's for upcoming meetings. Every member has something to offer. We have a lot of new members that really want that piece of knowledge you posses.

I would also like to take this time to wish everybody a Happy Holiday Season. Many of you I may not see until after the Holidays.

I would again like to reiterate that this is your guild! As members the meetings and newsletter are only as good as you make them. Your contributions matter. Your knowledge cannot be share if you keep it to yourself. Those of you that can draw are welcome to submit drawings or cartoons also.

Thank-you all

Andy Sharpe
President NCKMG

2017 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
longbowbarry@gmail.com

Secretary/Treasurer

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

Director

Murphy Ragsdale
Laurinburg, NC 28352
910-276-6660
mragdale77638@roadrunner.com

Director

Mark Hall
Clayton, NC 27520
919.810.8408
markhallcustomknives@gmail.com

Editor & Webmaster

Barry Clodfelter

Making the Vine Pattern

By Joel Sandifer

The decision to enhance the back of the knife or the handle is complex. First you have to decide is this worth doing. It is time consuming when you first start out doing it. If you are cranking out a 100 knives there is no way you would want to consider doing this to all of them. However there are people that will want something special, and this is perfect for that person. It really stands out and people always ask, "How do you do that?" My answer is always the same, a good set of needle files, good glasses and a lot of patience! Second is deciding whether or not you can recover from a mistake on that blade. Andy Sharpe always told me there are no mistakes just design opportunities but some design opportunities you can't recover from and they end up in your personal collection.

There are many different patterns and styles for file work and you just have to pick what you like and go for it. The one I chose is the vine. I liked it the first time I saw it and was determined to figure out how to do it. I learned a whole lot trying to figure it out.

So let's talk about tools, you will need a few tools. I will talk about the tools I use now and some that I started with. I was on a very tight budget to start with, so you learn to be creative.

A marking ruler: Extremely helpful to ensure your grid pattern is laid out evenly. Any ruler can do the job as long as you have steady hands. This is the one I like to use it has small holes every 32nd of an inch that you can use a carbide scribe and make a mark, and it is somewhat flexible to follow the curvature of the blade. The #641 Industrial Precision 6 In. Flexible Steel Rule can make very precise linear measurements. A small hole at each graduation enables accurate marking with a carbide scribe or sharp pencil. Polished stainless steel finish.

Cost about \$11.00 - Can be found from - generaltools.com, Lowe.com

A Carbide Scribe: Extremely helpful to put very fine marks to layout the grid pattern accurately.

The #70088 Utility Carbide Tip Scriber/Etching Pen with Magnet uses a tungsten carbide point to mark and scribe steel, ceramic and glass.

Cost about \$7.00 - Can be found from - generaltools.com, Lowe.com

A Small Protractor/Square: Helpful but not required. This is similar to what I use to mark my cross lines.

The #444 Depth/Angle Gage precisely measures the depth of small holes and slots. It also works as a protractor to facilitate setting an angle to 30°, 45° or 60° on either side. It has a graduated stainless steel rule in milled slot at 90° angle to base.

Cost about \$20.00 from Amazon.com.

A set of Needle files: Absolutely necessary to do the vine pattern. I started with a Harbor Freight set then I bought a set from General Tools and now I use a set of Nicholson files and some Swiss Files. The ones I most use are: Half Round, Flat, Round, Three Square (triangle). I recommend getting the best you can get. They will hold up longer and will not have to be replaced as often. Sometimes it is easier to buy the specific files you need instead of a set. Maybe start with a harbor freight set to see if you like it before investing too much in files you won't use.

A set of needle files can be found from – Harbor Freight.com These will get you started if you are on a budget. Cost is about \$2.99

A set of Diamond Needle files can be found from – Harbor Freight.com. Cost is about \$7.00.

These are great for embellishing a hardened blade or making adjustments to your pattern after the blade has been hardened.

File brush: A file brush will help to keep the files clean so they cut cleanly. Cost is around \$10.00.

Layout Fluid: Needed but an alcohol marker will work in a pinch. I use Dykem. It holds up better than a marker for me. Can be found on most knife supply websites. Cost for a small bottle is around \$10.00.

A Vise to hold the blade: Necessary! There is no way to do this without something to hold the blade. I started out with a wood clamp like this. It angles down so it's not in the way as much when you are filing. Cost for an 8" wood clamp from Harbor Freight is around \$8.00. I also have used an old handsaw sharpening vise I picked up at an estate sale and it works quite well. They can be found online for around from \$40 to \$50, or at an Estate sale for \$5, check local flea markets as well.

Lights: You need lights and something to magnify your work area. Those of us that need reading glasses appreciate magnification more. It helps to see the work clearly.

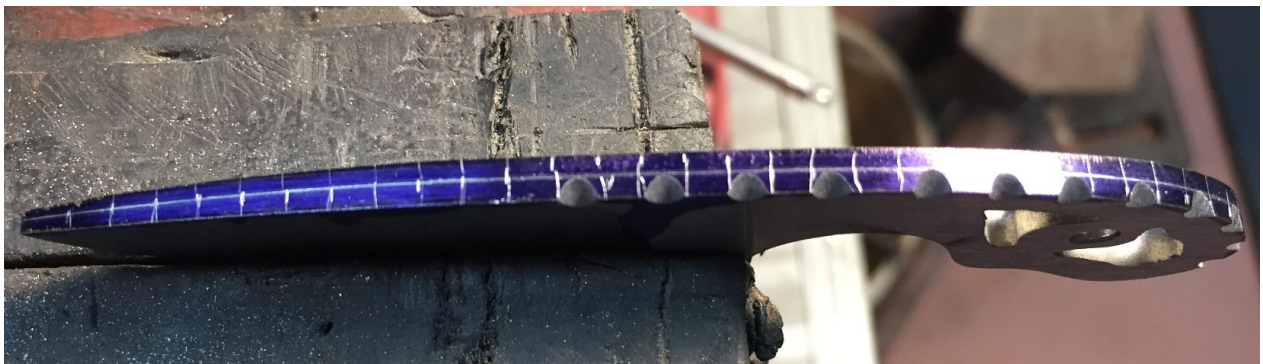
Calipers or Height Gauge: You need some way to establish your centerline on your blade. There are many different ways to do this. You can simply use a drill bit the size of the steel you are using. Mark one side, flip it over and do the other side. This is to ensure it shows you the center. It's not perfect but it will work good enough to start. If you want more precise get a set of calipers. You can buy a set of digital calipers for around \$20.00 from Harbor Freight. These work just fine and are pretty accurate. Then if you really want to get precise you can get a height gauge. I got mine from Grizzly, it is a 6 inch height gauge for around \$32.00. It has a carbide tipped scriber and is very accurate.

The last thing and probably the most important thing is Patience! Tons and tons of patience! Don't get frustrated, take your time, get up and walk around some, have a cup of whatever works for you. You can't rush this too much. There are a couple of short cuts but they are minor ones and may not help save much time.

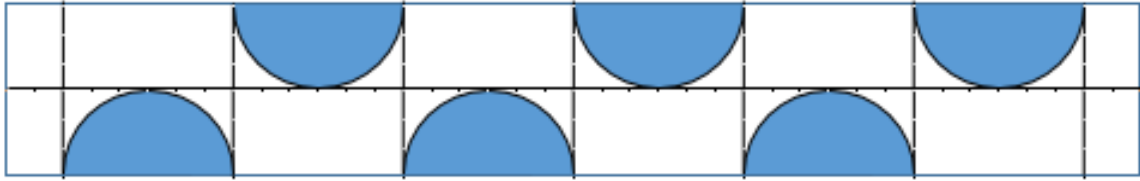
So now we have discussed the tools, let's get started. Make a good decision and practice on something you don't mind throwing away. Something like a thin piece of maple or some scrap metal close to the thickness you will be working with. You can try different thicknesses and vary your pattern. Start with the ¼" spacing and then try ½" spacing. See which you like better and what works for you.

I start by sanding my work area to at least 120 grit to give me a clean and smooth area to lay out my grid. Then I dye it using the Dykem. I use my height gauge to scribe my center line. Make sure if you are working with a guard on your blade, know where the guard is going to be so you don't interfere with the seating of the guard.

At this point, I use my ruler with the holes in it, my carbide scribe, and begin laying out my grid pattern. The spacing is up to you depending on how close or how spread out you want your thorns to be.



This is a neck knife that shows the ¼" spacing pattern laid out using Dykem and a carbide scribe. You can see the grid layout and the half round portion being done on one side.

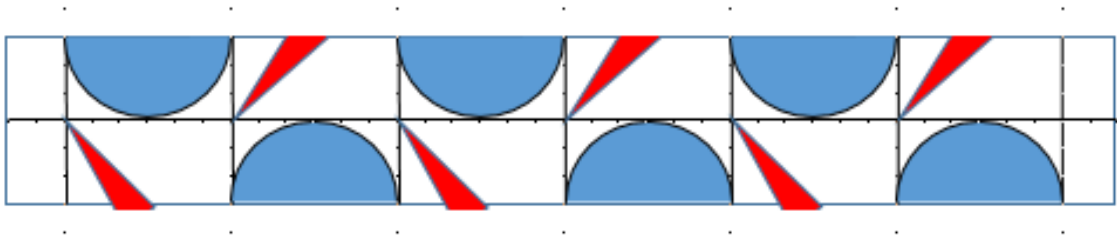


You can see by the drawing that you alternate from side to side with the half circles. These half circles are filed in at about a 45 degree angle and only go in as deep as the scribed centerline. If you cut too deep, it will distort your vine. Oh yeah, the shortcut! You can use a Dremel tool with a round carbide bit to cut your half circles as long as you have a steady hand. It will save you some time but not a lot. It does increase the chances for a mistake.



Here you can see how the grid layout helps with the spacing for the half round portions. The half round portion is now done on both sides.

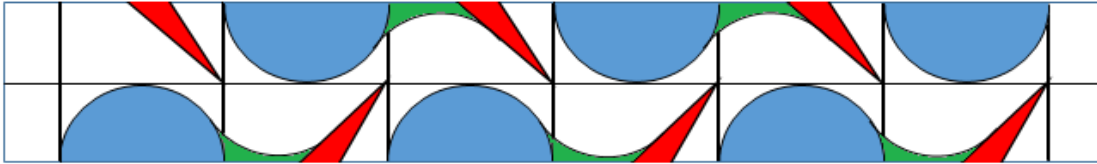
Next I start cutting my thorns. If you look at the drawing you can see the center of the thorn (red area) points to the center of the vine. That is your target. The more centered it is the more symmetrical your vine looks. The thorns can be cut in with either a triangle file or a half round file with sharp corners. They will both give you good results however I have found the half round tends to have sharper edges. You want to cut these in at about a 22 degree downward angle. Remember to start small, you can always take off more but you can't put any back. Sometimes it helps to scribe a line where you want your thorn cut. If you cut too shallow you have a thin thorn and too deep almost cuts through the vine. Do a little, then stop, and look to see if the placement is where you want it. These thorns are only cut about half as deep as the half circles. Look at this drawing and hopefully you will see what I am talking about. I always aim for the center of the vine.



This photo shows the thorn portion is now cut in on both sides. Notice how blocky looking the vine is. All of the areas need to be refined to give it a smoother and more even look. I have seen some people that are happy with it at this point and stop here. I prefer it to be smoother looking. So I go on.

this point and stop here. I prefer it to be smoother looking. So I go on.

Next I go back and begin smoothing and rounding the vine (green area). You can use the flat side of the half round and it works quite well. Be cautious not to damage the thorns, it will distort them.



Then I start cleaning up around the thorns and rounding the back side (orange area) of each thorn, again to give it a smoother appearance.



Here is where your patience will really be tested. You will look at each piece of that vine and make slight changes until you are happy with it. You can see in this picture it is a little more rounded and the thorns are smoother. Attention to detail here is very important. If you miss something here and heat treat the blade you will have to use the Diamond needle files to fix it. Take your time, walk away for a bit then come back and see it with fresh eyes, it helps.

If you want the vine to be thinner you can go back over all the areas and make it thinner all over. Be careful not to distort your thorns. If you go too much at this point you will either have to sand it all down and re-file the whole thing. So be careful and go slow.

Now you are ready to clean it up and sand it, in preparation for heat treating. You sand down the scribe marks and inspect your work again. Make any adjustments needed, then heat treat the blade.

After the blade is heat treated you can clean up all your file marks with sand paper in every thorn or half round area. You can also leave it blackened from the oil to help the polished vine pattern to stand out more. That's your choice.

If you ran the vine pattern through the handle area, when you glue it up ensure you leave enough epoxy to fill the holes along the handle so it is smooth. It just looks better, trust me.



Here is a different version of this using 1/2" spacing on my layout. It is more stretched out and thinner. It also has finger grooves cut in mid-way to add more grip. You can do this just make it blend in with your pattern.

This photo shows the vine is now finished and polished up. You can add dye to the epoxy to really make it stand out.

Here is a different version of this using ½” spacing on my layout. It is more stretched out and thinner. It also has finger grooves cut in mid-way to add more grip. You can do this just make it blend in with your pattern.



That about wraps it up. Just remember practice on something first and then go for it! I really enjoy doing this pattern. I hope this article will help you and inspire you to give it a try. Looking forward to seeing some of your work at the next meeting!

Joel Sandifer
Sandifer Custom Knives
Raeford, NC.

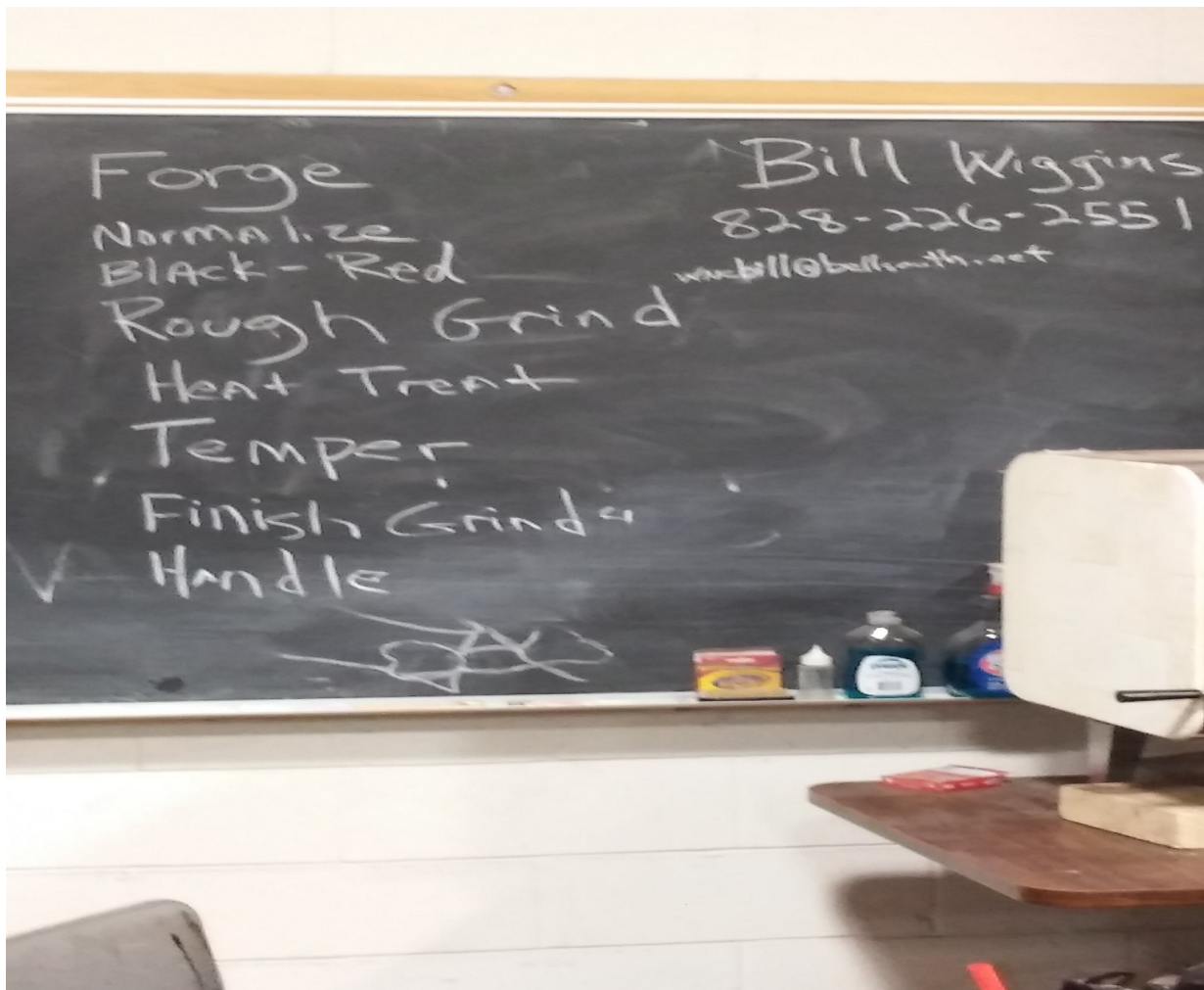
Intro. To Bladesmithing

Tommy Johnson

On a mild January morning I joined seven other men in the effort to learn the fine art of forging a knife. Our experience ranged from never having made a knife on up, I believe my thirty plus years of stock removal was the most. A couple had already tried their hand at forging, but this was my first attempt.

Bill Wiggins, a Journeyman Smith with the ABS, was our instructor and he expertly guided us through the four days of the class, aided by Barry and Phillip Jones. To start with he made a list of steps to follow:

Forge, Normalize, Heat to a black-red, Rough grind, Heat treat, Temper, Finish grind, Handle



Then gave a brief description of each process. Then he went to the forge and anvil and demonstrated how to shape the tip, form the bevels all the while keeping the blade straight and shaped the way he desired. Next he shaped the handle. After making sure everything was straight and true came the normalizing process, heating the steel to critical temperature and allowing it to cool slowly. This is usually done two or three times and is done to relieve the stresses in the steel caused by the forging process. Then came the red-black step where the blade is heated until it has a dull red color when held in a dimly lit area. The previous steps I was somewhat familiar with from watching our guild members demonstrate forging in the past, but I didn't recall this step. Things like that are the primary reason I wanted to take this class rather than just jumping into it with just what I had observed.



Our turn came next, we were given our choice of 5160 or 1084 steel and I began my entry into the world of bladesmithing. The tip was more difficult than I had expected, but the bevels were easier than I had thought they would be. After a little while I had a knife shaped piece of steel that I was fairly pleased with.

Each step was demonstrated by Bill in a clear and easy to understand way. Rough grinding went well for me although I'm used to starting with a blade with the edge the same width the full length and neatly marked with a clear centerline. Not the case here with the bevels roughly formed and a somewhat irregular edge, but it came out well in the end. Hardening and tempering went well, I had used a forge for the hardening many times and all the blades were tempered together in the oven.

Finish grinding came next, after that was completed I had a slight warp in my blade. That was when Bill showed me a technique that I had never seen before, he used a torch to heat a small spot on the spine and as soon as it turned red he dunked it in water. After three or four of these the warp was gone. Always learning something new!

All that was left was to select my handle material, a nice piece of bocote, and make the handle.

I think everyone ended up with a finished or nearly finished knife, some more than one.

I know that I was very pleased by my experience and strongly recommend that anyone interested in forging a knife take this class, they won't be disappointed.



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.

