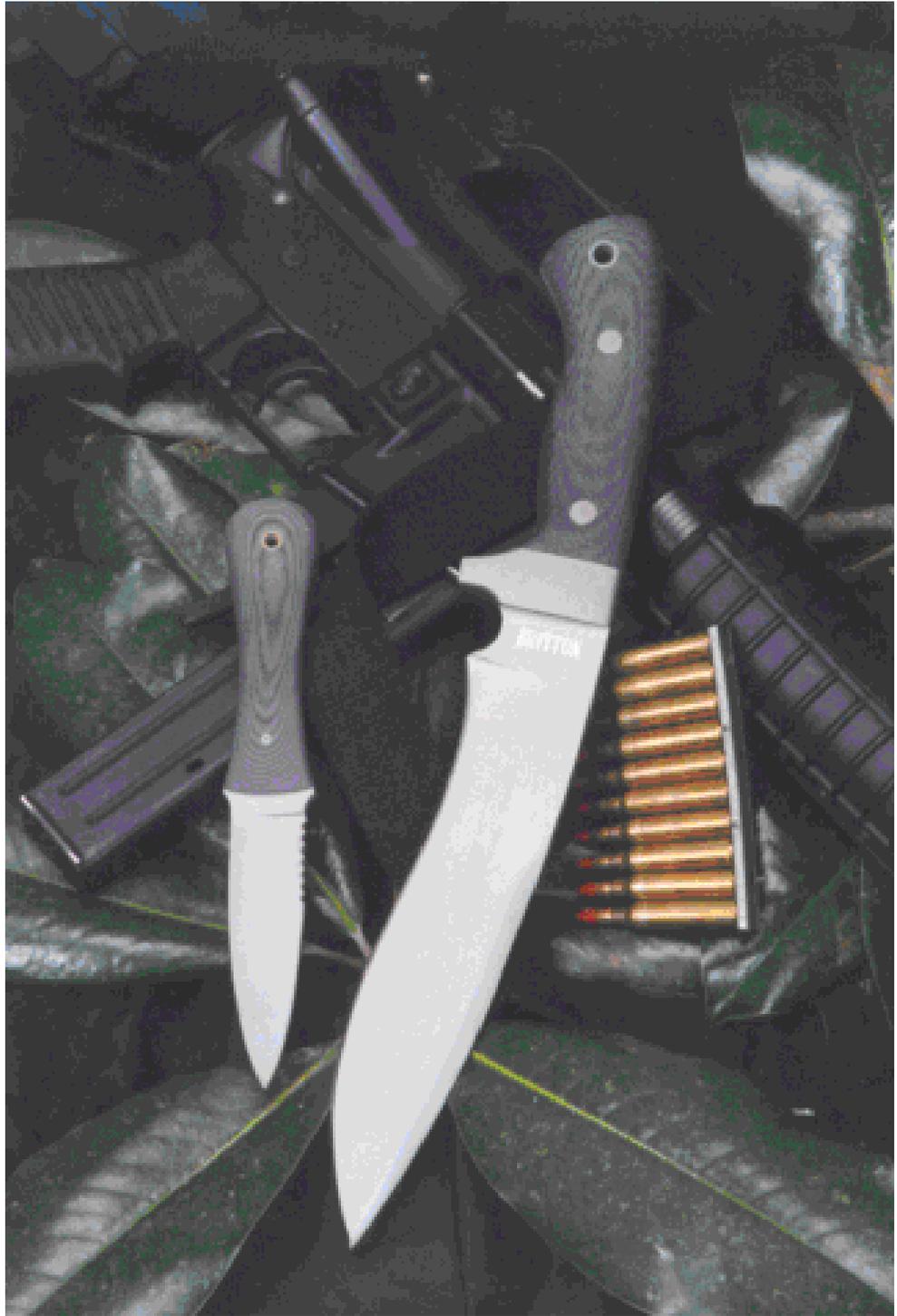


Billetts & Blades



The Official Publication of
The North Carolina Custom
Knifemaker's Guild

Dedicated to the Art & Craft of Custom Knifemaking

March 2003

Billets & Blades

NORTH
CAROLINA
CUSTOM
KNIFEMAKER'S
GUILD

Guild Officers and Directors

Billets and Blades is the official publication of the North Carolina Custom Knifemaker's Guild. It is compiled and published in four issues annually with two additional special publication dates possible each year. Compiled, published, and distributed by The Knifemaker's Guild.

The North Carolina Custom Knifemaker's Guild was formed to meet the needs of a growing body of custom knifemakers in the southeastern United States. The purpose of this newsletter is to serve as a medium of exchange for the members of the NCCCKG.

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Please address correspondence about this newsletter to the President or the Editor at the above addresses. Please direct requests for information about the North Carolina Custom Knifemaker's Guild to the President, Tommy McNabb, at the above address.

Bill Moran Update:

As many of you know, Bill Moran was not able to attend the Reno show because of an operation.

The following update came from Nancy Hendrickson, "Just a quick note to everyone. We brought Bill home from the hospital yesterday afternoon. He is doing pretty well but tires easily. The surgeon said he really came through his surgery very well but he will have to see a cancer doctor in a couple of weeks. He may have to have some type of chemo or radiation. We won't know about that until after Bill sees the doctor but I am sure that he would like to hear from his friends. If you would like to send him a note or a card, his address is :

Bill Moran
P.O. Box 68,
Braddock Height, MD 21714.

Terry "Gator" Cash Update:

Gator was rushed to the hospital Monday night (Feb 24) by his wife. He had become jaundiced and bloated over the past few weeks but on Monday he became much worse. He had a tear in his stomach that was causing the bloating and he was bleeding internally. The doctors were able to stabilize him by the surgery and a few days in intensive care. Mr. Bob Rosenfeld says Gator seems to be improving although he (Gator) says he is very weak. He is now in his own room (#202) at the Northside-Cherokee Hospital in Canton, GA. You can send cards to him there or at his home address of 113 Sequoyah Circle, Canton, GA 30015. Thanks for the update Bob.

Officer Elections

Two of the positions on the Board of Directors will be coming up for election at the April 12—13 meeting at the Montgomery Community College in Troy. The positions and duties are listed below.

Secretary: The secretary shall keep records of the acts and proceedings of all meetings of the members and officers. The secretary will be responsible for the custody of corporate books, records, contracts, and other documents. The secretary shall

perform whatever additional duties and have whatever additional powers that the Board may assign from time – to – time.

Board of Directors Member: The Director shall in the absence of the Secretary or Treasurer, respectively perform the duties and exercise the powers of those offices, and shall, in general perform such other duties as shall be assigned by the Board.

These positions are now held by Maureene Monroe (Secretary) and Barry Jones (Board Member). Nominations will be taken right up till the election. If you are interested please contact a board member

Minutes from the January 27, 2003 NCCKG Meeting

New Business:

The secretary is to send out a mass e-mail to the members to remind them to renew their memberships for 2003.

Andrew asked that anyone who wanted to volunteer to host a meeting at their shop or in their area to please contact him with the details.

Norm and Marge Gervais have donated a Canon color printer that will be auctioned off at the April meeting in Troy. Proceeds going to the general fund.

Ed Halligan donated a knife that we will raffle with the proceeds going into the Guild general funds.

Officers elections will be held at the April meeting.

On The Cover

This creation by Tim Britton, the TERMINATOR III, is 13 1/2" overall. It is a very popular design for those needing a knife for serious business. The kukhri design and substantial size maximize the chopping or slicing force. All fittings are 416 stainless steel and a custom Hendryx system is standard. This knife is standard with a glass bead matte finish. However, the knife is available in "full dress" with a hand rubbed finish. This knife has been featured in "Tactical Knives 98" and in Blade Magazine,

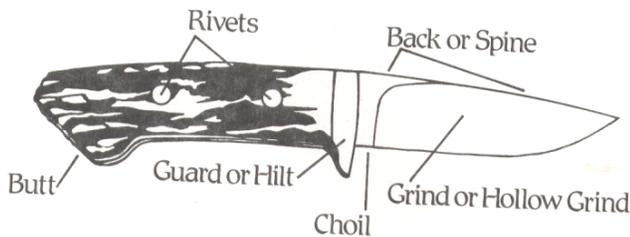
How To Build A Knife

Shaping and bonding wood, bone, horn, steel

By
Jim Small

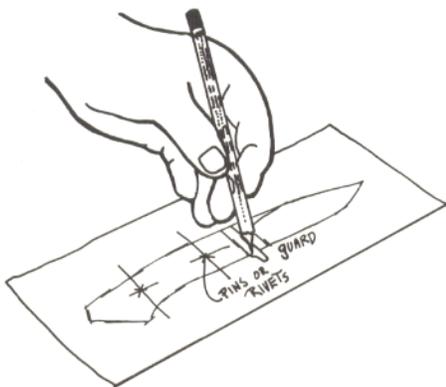
(This is the book that was written by Jim Small, published by the University of Georgia, and shown on Georgia Public Television in 1982. Because of this show, John developed an appreciation for handcrafted knives and came to believe he could make one. This will be a multi-part publication. Jim has total rights to this publication and has given his permission for reprint here. I hope you guys enjoy this.)

NOMENCLATURE OF THE KNIFE



STEP #1

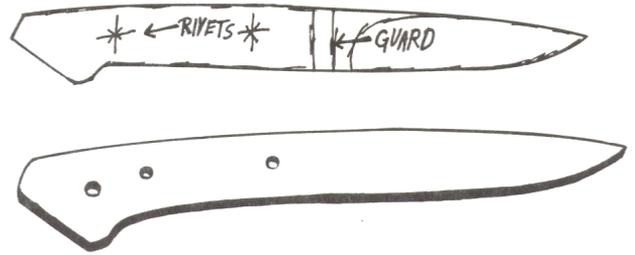
The first step in making any custom knife is, of course, to design a knife that is suitable to your needs. Put your design on paper, drawing it to the



correct dimensions. Show where the blade grind goes and where the guard or hilt goes, and where the rivet placement will be.

STEP #2

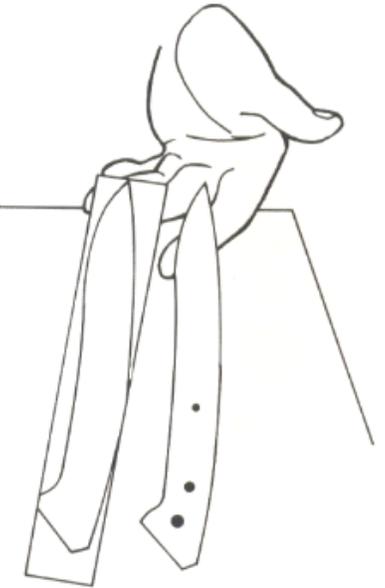
Once your drawing is done, it is ready to transfer to what will be called a template. The template is what your design will be permanently cut and designed to. Cut your paper design out, and place it on any hard material. I use plexiglass, but you can use stiff cardboard or thin sheet metal. Once your design is transferred, cut it out and profile the edge. Make your template true to size and dimension.



Also show on your template where the grind line will start, where rivet holes will be placed, and where the guard will go.

STEP #3

Now it is time to transfer your design to your blade steel. You might at this time want to dye the steel so that your scribe line will show up better. For this purpose we will use a product called Dye-Kem, a very quick-drying dye that tool – and – dye makers use. It comes in two colors: red and blue. Either



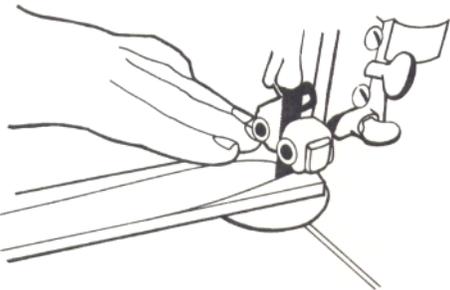
one is acceptable. Once you have painted or sprayed this dye on the steel, let it dry. Place the template on the steel and with a sharp pointed object scribe the outline of your design onto the blade material. Go over your line two or three times so you will be able to see your line clearly. Also scribe where your rivet holes will be drilled.

STEP #4

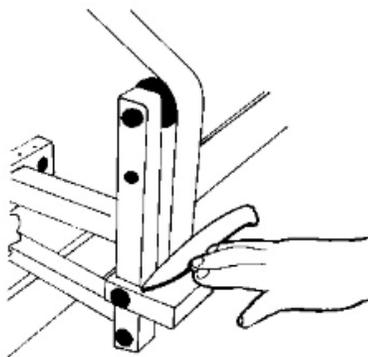
Once your design is on the steel, it's time to cut out the blade. This step can be done in any one of three



ways: (1) If your design fits closely to the outside proportions of your blade steel, you may choose to grind away all the excess steel down to the scribe lines of your design; (2) You can drill a series of hole around and to the outside of your scribe lines. Then take a hacksaw and cut your design out; (3) Take your blade steel to a machine shop and for a nominal fee have them cut out the design on a metal cutting band saw. Always remember to cut just to the outside of the scribe line.

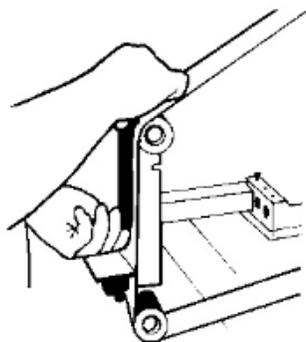


STEP #5



Once your blade is cut out, it is time to profile the contours. You will have to do this either by filing or by grinding to the scribe lines. As shown, profiling should be done on the flat platen of the grinder so that the edges are precisely square. When this step is finished, you'll begin to see your blade take shape.

STEP #6



At this time you might wish to clean the sides of your blade steel. When you get your steel from the supplier, it will be a little rough. You may choose to clean the blade steel before you start Step #3, as the timing really makes no difference. Cleaning can be done by sanding or once again using the flat platen of the grinder.

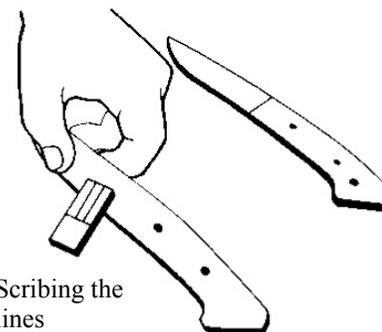
Try to keep the steel as smooth as possible. Once the cleaning is done, place the template back on your blade steel and mark the holes for the rivets.



Since we will be using a screw-type rivet (actually a bolt-on rivet) we will have to use a 3/16" drill bit. Chuck this in your hand-drill or drill press, and drill the rivet holes. When you use a hand-drill, place the blade steel upright in a bench vise for easier handling. If you use a drill press, either clamp the steel to the drill press table or clamp it in a drill press vise. Always remember to wear protective glasses when using any power tools.

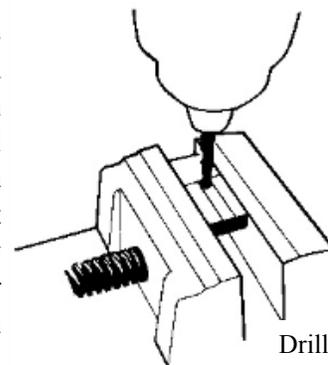
STEP #7

You are now ready to cut out the guard and fit it to the knife steel. There are three basic materials you can use for the guard: brass, nickel or German silver, or stainless steel. For our knife we will use brass. We will start with a piece 1/4" thick, 3/4" wide, and 1 5/8" long. Place your blade steel across the width of your guard

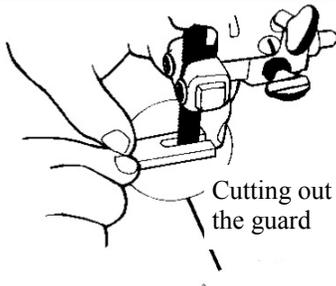


Scribing the lines

material so that just about 1/16" stick out above the top of the blade. Then scribe a line at the bottom of the blade steel. This will give you the depth line to which you will cut. The steel we are using is about 3/16" thick so center two lines down the guard material 3/16" on center. This will give you the area you'll want to cut out. An easy way to cut this center out is to drill a



Drill the hole



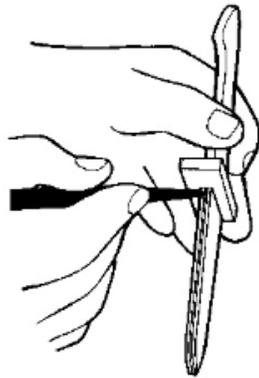
hole at the bottom of the two center lines and use either a hacksaw or a metal-cutting band saw to cut the center out.

Cut just inside

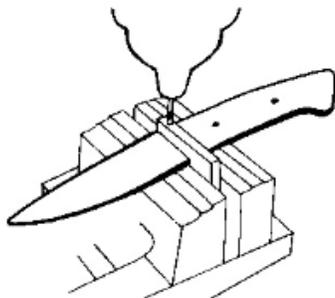
the two center lines as pictured. Once this is done, you will have to do some filing to get your guard to fit. You should take your time so you will have a good snug fit. This is a must!

STEP #8

Slide your guard onto the handle area of your knife. Turn the knife so that you are looking at the protruding part of the guard or the part of the guard that will eventually protect your finger. Here we are going to scribe two lines on either side of the guard and file a notch so that the guard will slide up into the notch.



This will help anchor the bottom the guard and assure that it will be strong. Once the notch is made, slide the guard onto the knife handle and up into the notch. Be sure that it fits tightly. Now we are



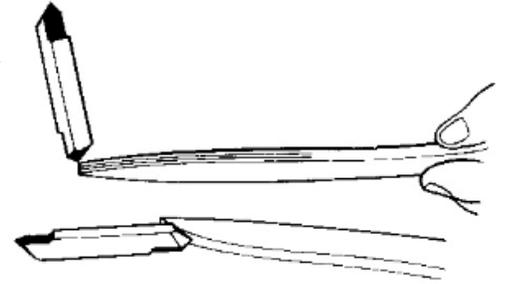
going to drill a hole $3/32$ " in diameter through the guard material and into the steel part of the blade. The procedure will stabilize the top part of the guard. Once the hole is drilled, take the $3/32$ " pin material and place it

into the hole. Now try to move the guard. You should have a very solid and strong guard fit.

STEP #9

It's time now to move toward the grinding process. There is one step that we are going to discuss that will assure that your primary grind lines are even

along the edge of the blade. I am going to show you how to make a tool to scribe two lines just off-centered of the edge of the blade. I have designed for you a tool that is made of hardened steel (harder than the knife steel).



In the drawing

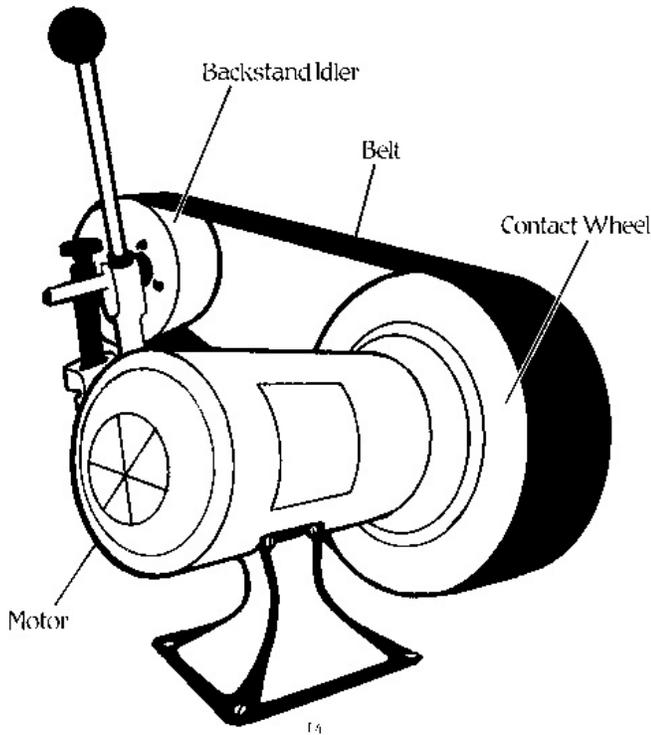
you will see how the cutting tool works in relationship to the edge of the blade.

You may scribe these lines one of two ways: (1) clamp the tool to a flat surface and work the blade edge against the tool, or (2) hold the blade on the flat surface and work the scribing tool against the blade edge. Note: some knifemakers prefer only one center line; I prefer two. These are the lines that you will grind to in your primary grinding operation. Before we start the grinding operation, we need to discuss a few important questions. One of these is the reason for grinding with abrasive belts instead of grinding stones. A belt is much faster and cooler. Moreover, grinding with abrasive belts produces less vibration and does a more accurate job.

Abrasive belts come in different grits or different granular structures. Most knifemakers use a belt that is 72" long by 2" wide. When we start our grinding process, we will use a 50 grit belt, which is very coarse. The second belt we'll use is a 120 grit belt, which has a little finer granular structure. Then we'll go to a 320 grit belt, with an even finer structure. We will stop at 320 before we send the knife off to heat treating. Once the heat treating process is completed, we'll use the 320 belt again, then go to a 400 grit belt, and from there to a 9 mil polishing belt. We will do 99 percent of the blade polishing on the belt grinder, something you would not be able to do on a stone grinder.

In this drawing you will see an easy and fairly economical way to build a belt grinder. I have listed in the back of the book suppliers from whom you can

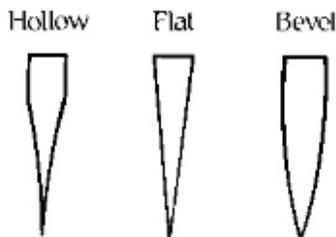
HOW TO BUILD A SHOP GRINDER



obtain all of the parts for making your grinder.

Another question that many people ask concerns the different types of grinds. I have shown in the sketch the basic types of grinds:

TYPES OF GRINDS



found on axes and hatchets, and the hollow grind is seen on most hunting, fishing, and general utility kitchen knives. The hollow-ground blade is the one we'll be concerned with.

To obtain a hollow grind, we will press the blade steel onto the surface of a round wheel over which our grinding belt passes. The wheel is convex, so the resulting operation or action of the round cut-

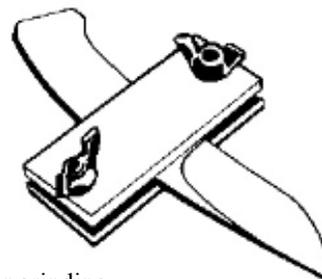
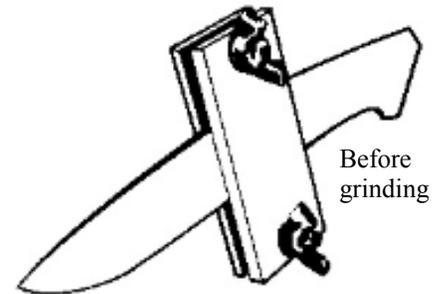
ting surface will give us a concave cut or the hollow grind.

Another common question about grinds is why one grind is better than another. The hollow-ground blade gives the best cutting performance over a longer period of time because it has a keen, more easily sharpened edge. This is why most excellent hunting knives have hollow-ground blades.

It is true that a hollow ground blade will not take the abuse of the other two designs, but remember: we are not going to cut cord wood. We are only going to slice with our knives. Knives are used for slicing and cutting, not "chopping."

STEP #10

Before we get into the grinding process, it is necessary to explain one more special tool I have designed that will be helpful in the grinding process. As shown in the drawing, the tool is designed to be clamped to the blade where the grinding will start. It will assure that your grinding lines on either side of the blade will be parallel and straight. The



After grinding

tool is made of two perfectly flat pieces of steel bolted together. When the bolts (one at each end of the two pieces of steel) are loosened, the blade steel is inserted between the two parallel pieces of steel and lined up for the grinding process.

When the bolts (one at each end of the two pieces of steel) are loosened, the blade steel is inserted between the two parallel pieces of steel and lined up for the grinding process.

(In the next issue we will finish publishing this short little book. It will cover everything from grinding, tempering, fit & finish, and supply houses. Up to this point, I have decided that I could make a knife—if I wasn't afraid of the grinder. I hope you have enjoyed this so far)

Directions to Montgomery Community College

From Winston-Salem:

Take Hwy. 52 South to Lexington; then take Hwy 64 East to Ashboro; from Ashboro take 220 South to Biscoe Exit; turn right & go approximately 9 miles until you see Montgomery Community College sign on the right; turn right at the sign, and go approximately 1/2 mile to the college entrance. Look for marked parking.

From Fayetteville:

Take Hwy. 24 & 27 West through Biscoe, go approximately 9 miles until you see Montgomery Community College sign on the right; turn right at the sign, and go approximately 1/2 mile to the college entrance. Look for marked parking.

From Charlotte:

Take Hwy 24 & 27 East through Troy, go approximately 2 miles until you see the Montgomery Community College sign. Turn left and go approximately 1/2 mile to the college entrance. Look for marked parking.

Accommodations

Days Inn Biscoe, NC 910-428-2524	Comfort Inn Albemarle, NC 704-983-6990
Sleep Inn Albemarle, NC 704-983-2770	Holiday Inn Express Albemarle, NC 704-986-2100
Uwharrie Mountain Lodge Troy, NC 910-572-3701	

We would like to extend our deepest sympathy to Tommy & Trena McNabb in the loss of Tommy's dad.

Charlie & Maureen Monroe are our Webmaster (Charlie) and current Secretary (Maureen). Charlie's dad has been quite ill and in the hospital this week. We hope he has a complete and speedy recovery and is up and his normal self quickly.

Demonstration Schedule

April 12 & 13, 2003
 Montgomery Community College
 Troy, NC

Saturday:

- 8:30am Board Meeting
- 9:30am Guild Meeting
- 10:30am CNC Milling – Wayne Bernauer

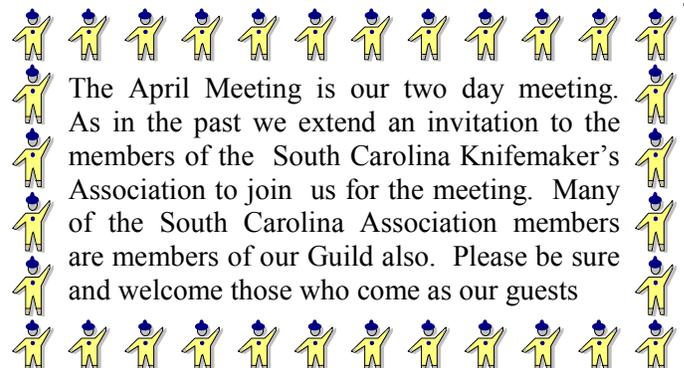
- 12:00pm Lunch (BBQ or Fired Chicken will be provided. Please bring a side dish, beverage, or dessert!)

- Pop's Knife Supplies will be set-up for business during lunch and Iron In The Hat. If there is anything special you want, Pop asks that you call him in advance so he can bring it to the meeting. (706) 678-5408

- 1:00pm Iron In The Hat
- 2:00pm CAD for Knifemakers – Barry Jones
- 3:30pm Forged Blade - Scott Goguen
- 5:00pm Departure

Sunday:

- 9:00am Tapered Tang – John Poythress
- 10:30am Nail Nicks – Andrew McLurkin
- 12:00pm Lunch – On Your Own (Numerous Local Resturants)
- 1:30pm Leather Covered Kydex Sheaths – Alan Folts
- 3:00pm Departure



The April Meeting is our two day meeting. As in the past we extend an invitation to the members of the South Carolina Knifemaker's Association to join us for the meeting. Many of the South Carolina Association members are members of our Guild also. Please be sure and welcome those who come as our guests

Profile In Steel

This month's knifemaker is no newbie to the field. Matter of fact he has been published 6—8 time in the Blade magazine, in Tactical Knives, Knives Illustrated, and Knives annual issue. He is a member of the Knifemaker's Guild, Piedmont Craftsmen, and the North Carolina Custom Knifemaker's Guild. Along with being an experienced knifemaker he enjoys the martial arts including Hakko, ryu ju jutsu, and Balintawak (Phillipine Stick Fighting). *(With these hobbies, and my poor spelling, I am not sure any of this is spelled right.)* This knifemaker is Tim Britton.

Not always a knifemaker, Mr. Britton holds a Ph.D in Sociology and is still a part time professor. He and his wife, Deb, are the proud "parents" of nine "children". Guido, Lulu, and McGoo—all birds; Spyder, Gus, Princess, and Blanca—cats; and of course the 2 possums that have taken up in his shop.

Mr. Britton creates approximately 200 knives a year. He enjoys making all styles of knives and uses both the stock removal and forging process along with all types of steel. On his preferred handle material however he is very specific, Mother Of Pearl.

His knifemaking career began in 1971 with "lots of help from Bill Wilber and Blackie Collins". He also spent 3 days in Tampa, Florida with Frank Centofante and tried to replicate his shop. He does admit that his start was a bit more basic, "one drill press purchased at a school surplus sale, 2 mandrills running off washing machine motors and a Sears Craftsman 6 x 48" belt sander which is still humming along in my shop".

Mr. Britton holds the distinction of being the first member of the North Carolina Custom Knifemaker's Guild to become a member of the national Knifemaker's Guild. But, he is very proud of the North Carolina Guild and says "it shines as a fine example of what can be done with visionary thinking and good decision making. Our classes feature the best of the best as instructors and our frequent

meetings highlight skilled presenters showing off proven techniques and materials".

Along with many of us, Mr. Britton looks forward to our show in September. He enjoys the renewing of old friendships and "showing off our latest shiny metal creations". He is very proud of the North Carolina makers and is looking for good years ahead for all of us.



A Georgia lottery winner.

And you guys thought it got cold in North Carolina this year.



Inner Strength

If you can start the day without caffeine or pep pills,
 If you can be cheerful, ignoring aches and pains,
 If you can resist complaining and boring people with your troubles,
 If you can eat the same food everyday and be grateful for it,
 If you can understand when loved ones are too busy to give you time,
 If you can overlook when people take things out on you when, through no fault of yours, something goes wrong,
 If you can take criticism and blame, without resentment,
 If you can face the world without lies and deceit,
 If you can conquer tension without medical help,
 If you can relax without liquor,
 If you can sleep without the aid of drugs,
 If you can do all these things,
 Then you are probably the family dog.



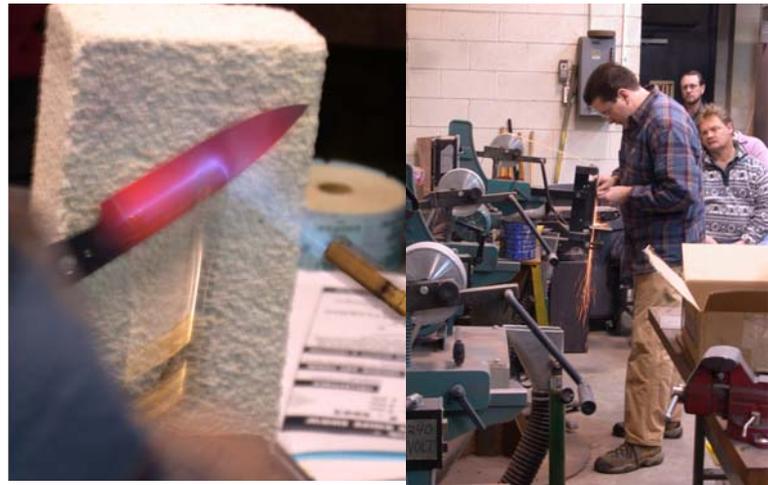


Meetings at Montgomery Community College are always well attended. Even with snow on the ground, the fellowship was warm.



Andrew gave a demo on heat treating with a propane torch.

Tommy started out the day with a discussion on different types of jigs and how he used each.



This grinder attachment is used for grinding the small radius.

And then did a great job grinding it out. Brent Fisher, one of our newest members paid close attention to all that went on.

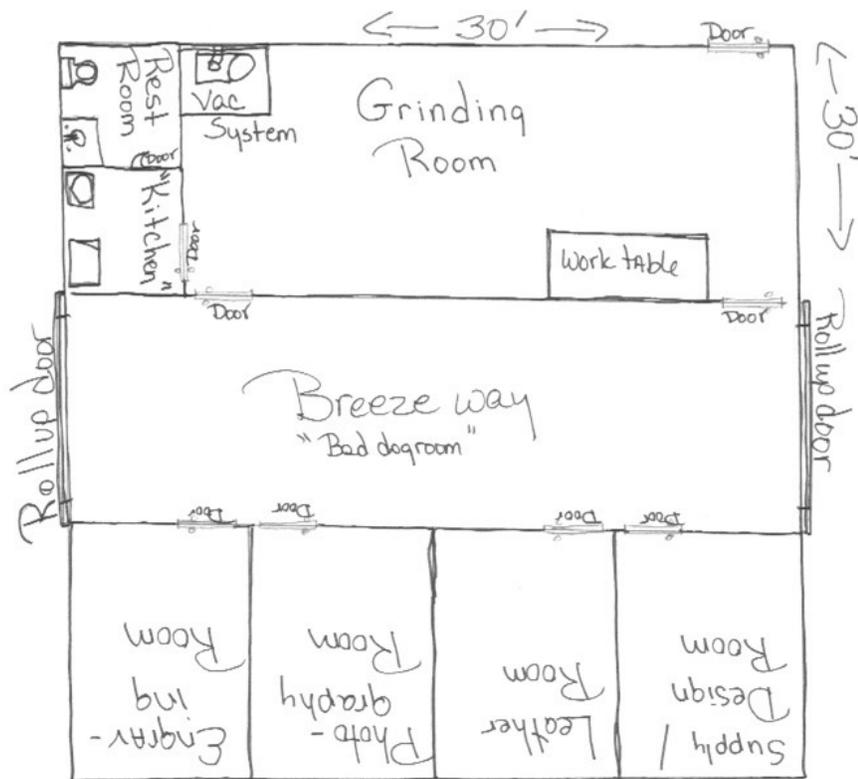


Ken Simmons tried his hand at tapping a hole with a cordless screwdriver.



And the highlight for me was to see Tim Scholl back forging after his illness. Only on Christmas morning in the eyes of a small child have I ever seen such excitement and joy. Welcome back Tim!!

After 20 years of making knives in a 12 x 12 Handi-House John finally took the big step and built his “dream” shop. It is a 30 x 30 metal building that sits behind our house. The shop is not completely furnished yet. The photography room is still in the dream stages along with the engraving room; the vacuum system is not completely hooked up yet;



the breezeway is filled with salvaged furnishings from the renovation of our local health department; and he has been so busy with the machine shop and making knives, he has not had time to work on the “extra” rooms. The “treasures” you will see in one of the pictures will be placed in some of the rooms when he gets time.

John looked at several shop layouts on the internet, talked with many of you, and checked out the design of the shops we have visited over the years with our Guild meetings. He had given a great deal of thought and consideration to how he wanted his shop to look. John says he selected this particular layout to keep the dirty work completely separate from the clean work. On the “clean” side of the shop he wanted to make sure everything stayed organized and close at hand.



The building is well insulated which makes cold, winter knifemaking much easier to endure. The two large roll up doors will help with ventilation and keeping it airy this summer. It is also a good place for him to enjoy the company of Sam, his beloved 14 year old Chow- Chow. (affectionately referred to, by me, as the “dog from.....”)



The grinding room.



A shot through one of the roll up doors. At the other end is another roll up door for warm sunny days.

John in the design room
The other rooms look basically the same.



Calendar of Events

April 2003

NCCCKG Meeting: Apr. 12-13 Montgomery Community College, Troy, NC

May 2003

Spring Hammer-In: May 3– 4 Trackrock Campground, Blairsville, GA (about 20 miles south of Murphy NC)

June 2003

The Blade Show: June 13–15, The Cobb Galleria, Atlanta, GA

Grinding Knife Blades: June 27-29, Ed Halligan, Instructor, Montgomery Community College, Troy, NC

July 2003

NCCCKG Meeting: July 19-20 Norm Gervais' Shop, Hardy, VA

Custom Folding Knives: July 23-27, Ed Van Hoy, Instructor, Montgomery Community College, Troy, NC

Metal Engraving: July 25-August 02, Howard Peacock, Instructor, Montgomery Community College, Troy, NC

August 2003

Powder Damascus Class: Aug. 1-3, Ron Newton, Instructor, Montgomery Community College, Troy, NC

September 2003

SouthEastern Custom Knife Show: September 6-7, The Benton Convention Center, Winston-Salem, NC

Custom Basic Knifemaking: Sept. 18-21, Tommy McNabb, Instructor, Montgomery Community College, Troy, NC

****2nd Annual Trackrock Hammer-In:** Trackrock Campground Blairsville, GA (about 20 miles south of Murphy NC)

October 2003

Forged Tomahawks: Oct. 10-12, Wayne Whitley, Instructor, Montgomery Community College, Troy, NC

***Tentative Dates and Details.*

Complete details on classes at the guild website at www.ncknifeguild.org

(Directions and meeting details will be sent in the Newsletter preceding each meeting)

(Register for classes at Montgomery Community College; located in Troy, NC. Lodging is available close by.)

MEMBERSHIP APPLICATION FORM

Date:		
Name:		
Address:		
City:	State:	Zip
E-Mail:		
Website:		
Choose Membership Category: (Check one)	Collector	Student
	New Member	Renewal

Membership/Renewal fees are \$50.00 per year

Collector membership fees are \$25.00 per year

Student memberships are \$10.00 per year

Please send this form with a check or money order to:

NC Custom Knifemaker's Guild

Attention: Tony Kelly

348 Bell Road

Kinston, NC 28504

<http://www.ncknifeguild.org>