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# ***Billets & Blades***

**Official Newsletter of the North Carolina Custom Knifemakers Guild**  
**Editors: Danny McManus & Ed VanHoy**

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First, let me take this opportunity to express my apology to some of the members who did not receive their last issue of the newsletter. This problem was one caused exclusively by Kinko's and could only be avoided if I were a psychic. They will not be given the responsibility of mailing the newsletter again since they don't have a good quality assurance program.

Hope you enjoyed the Blade Show in Atlanta, Georgia, this year. For those who attended I know there were exciting moments as well as times when one may have wondered why he was even there. Such is the business world or even the world of the hobbyist. It is full of moments of joy and excitement as well as times of depression and disappointment. It seems that man's expectations has no bounds; however, nature also has a limitless arsenal of schemes to counter anyone's attempt to attain his expectations of himself. The most effective way of fighting nature's arsenal is to set attainable goals and muster up all the perseverance that one can find down deep inside of himself to attain those goals. One's dreams and hopes will all fall by the wayside as rubbish without the personal trait of perseverance.

One observance that I made at the Blade Show was that there was a knife supply that far exceeded the knife demand for the show as a whole. There were a select few people whose knife demands exceeded their knife supply, and they went home as happy campers with money and no knives. Good marketing techniques and personal promotion makes

some people sell out while poor marketing techniques and poor personal promotion causes one to hold their inventory longer. One probably knows an individual who make inferior knives compared to others; however, the maker with inferior knives who knows how to market his knives and self can demand a higher price for each knife as well as a stronger demand for the same. It doesn't seem right, does it? Yes, it does! In a competitive market one can say "If it is legal, then it is right." In a free enterprise system, competition is your best friend as well as your worst enemy. If you are going to compete in this society, you must bring it all together. One must produce a superior knife at a reasonable price, and one must also be able to market the knife and himself to be successful and accomplish his goals.

The goal of this newsletter should be to make its members be the very best that they can be.

## **Words from Our President:**

Great News!

The Southeastern Custom Knife Show of 1996 is almost sold out. Only nine tables are left. So if you want a table - HURRY.

Over 130 people have signed up for our banquet on Saturday night. Many of the table holders are bringing a collector or customer as a guest. We will have door prizes and items to auction off - So be there!

The menu will include: Garden Green Salad, Pasta Primavera Salad, Chicken Paprika, Beef Stroganoff with buttered noodles, Double Stuffed Potato, Steamed medley of vegetables, Green Beans Almandine, Dinner Rolls with Butter, Assorted Pies, etc. There will also be an open bar for your pleasure.

We now have a Remington 12 gauge model 11-87 Shotgun to raffle off. Tickets are \$1.00 each or 6 for \$5.00. Please call me or Tim Scholl to get tickets to SELL or to buy for yourself. This will help offset the cost of our banquet.

We also have Post Cards for you to mail or pass out to your customers and friends that are good for \$1.00 OFF at the door. I'll have some at our next meeting.

We are looking forward to a great meeting in July with lots of good demos, food, and supplies.

James Poplin will be present with supplies for sale. All members are encouraged to bring things for sale. Also remember to bring something for our Iron in the Hat drawing.

Thanks,  
Tommy McNabb

## **NCKG Meeting:**

**Date:** Saturday July 27th & Sunday July 28th, 1996:

**Location:** Ed & Tanya VanHoy, Star, NC (See inclosed travel map for meeting location and written directions found below)

**Time:**

**Saturday:**

9:00 - 9:30 Check-in business

9:30 - 10:30 Business meeting.

10:30 - 12:00 Jack Hyer will demonstrate fabrication of knife handles and knife file work.

12:00 - 1:00 Lunch (Each person to provide their own).

1:00 - E.O.D. Tim Scholl & Tommy McNabb will demonstrate sword forging and sword handle wrapping.

~5:00 - 8:00 Pig picking dinner (Provided). See details enclosed in this newsletter.

**Sunday:**

8:00 - 8:30 Check-in.

8:30 - 9:30 Board of Directors meeting.

9:30 - 10:30 Knife grinding demonstration given by Ed VanHoy.

10:30 - 12:00 Jessie Houser will demonstrate the art of knife handle checkering

12:00 - 1:00 Lunch **NOT** provided.

1:00 - E.O.D. Tommy McNabb will demonstrate the art of inlaying knife handles

~5:00 - till Depart back to your homeplace.

**Special Event:**

Kenneth Fritz will demonstrate the firing of his handmade black-powdered rifles. Kenneth is well known for his art of gunsmithing.

**Meeting Cost:**

Estimated \$10.00 per person to cover dinner, coffee & drinks, porta-toilet, etc. Please do not send money in advance but RSVP so we can get a formal commitment and headcount. The above cost may be adjusted higher or lower depending on the actual cost of the above items.

### Special instructions:

Please bring some type of folding chair(s) because chairs will not be provided. Please, if you can, bring some type of desert of your choice which will be very much appreciated.

### Pig Picking Menu:

Pork barbecue, cole slaw, baked beans, potato salad, hush puppies, and tea, soft drinks, and coffee for drinks.

### Directions to NCCKG Meeting:

#### From Winston-Salem:

Take Hwy. 52 South to Lexington; then take Hwy 64 East to Ashboro; from Ashboro take 220 South to Star/Robbins Exit; turn left & go approximately 2 miles until you see Hogan Farm Rd; turn left on Hogan Farm Road; go another 2 miles until you come to a fork in the road; our white home is on the right, "look for the signs".

#### From Fayetteville:

Take Hwy. 24 & 27 West through to Hwy. 220 North; go to the Star/Robbins exit & take a right; go approximately 2 miles until you come to Hogan Farm Road; turn left on Hogan Farm Rd; go another 2 miles and when you come to a fork in the road; our white home is on the right, "look for the signs".

#### From Charlotte:

Take Hwy. 24 & 27 East through Troy & Biscoe; at the bridge take 220 North & go approximately 6 miles to Star/Robbins exit; take a right & go approximately 2 miles until you come to Hogan Farm Road; turn left on Hogan Farm Road; go another 2 miles and when you come to a fork in the road; our white home is on the right, "look

for the signs".

### Motel in Troy:

Uwharrie Mountain Lodge  
Hwy. 24/27  
(910) 572-3701  
Free water



Perseverance will carry you a long way; however, extreme competition sometimes is very self defeating.

### Calendar:

*The following excerpt is reprinted by permission from Blade Magazine.*

### July:

**July 18 Bradford, PA** 2nd Annual Case Collectors Day, Contact Case, attn: J. Sullivan, Dept. BL, Owens Way, Bradford, PA 16701 (814) 368-4123.

**July 19-21 Orlando, FL** 27th Annual Knifemakers Guild Show. Contact The Knifemakers Guild, POB 928, Dept. BL, Madisonville, TN 37354-0928 or call (615)442-5767

## August:

**Aug. 2-3 Minneapolis, MN** 3rd Annual North Star Blade Show. Call Les Ristonen (218) 538-6633 or Charles Mossefin (612)757-5351.

**Aug. 3-4 Bayfield, Ontario, Canada** Canadian National Art Knife Show. Contact Wolfgang or Dianne Loerchner, Dept. BL, POB 255, Bayfield, Ontario, Canada NOM 1G0 (519)565-2196

**Aug. 9-11 Lexington, KY** Central Kentucky Knife Club Show. Contact G.T Williams, Dept. BL, 4499 Muddy Ford, Georgetown, KY 40324-9280, (502)863-4919.

**Aug. 16-18 Denver, CO** 4th Annual Denver Custom Knife Show. Call Willard Patrick (406)458-6552 or Don Davis (303)669-8850.

**Aug. 18 Marlboro, MA** NCCA One-Day Show. Contact Joe Hughes, Dept. BL, 771 Boston Post #179, Marlboro, MA(508)485-3326.

## September:

**Sept. 7-8 Winston-Salem, NC** Southeastern Custom Knife Show. Contact Tommy McNabb, Dept. BL, POB 327, Bethania, NC 27010, (910)759-0640

**Sept. 7-8 San Jose, CA** 7th Annual San Jose Custom Knife Show. Contact Bill Mittelman, Dept. BL, POB 2, Dunsmuir, CA 96025 (916)235-0177 FAX(916) 235-4959.

**Sept. 8 Reading, PA** 4th Annual Reading Custom Knife Show. Contact Stephen Tirdell, Dept. BL,

783 Fairmont, Mohnton, PA 19540, (610)777-3096.

**Sept. 13-15 Chicago, IL** 18th Annual American Edge Collectors Association Show. Contact Jim McNally (708)969-5394.

**Sept. 14 Lebanon, MO** Case Celebration in the Ozarks. Call the Walnut Bowls-Cutlery Store at (800)727-4643 and ask for Randy Reid.

**Sept. 14 Graham, TX** 6th Annual Graham Knife Show. Contact Harrell Braddock, Dept. BL, 1412 Los Colinos, Graham, TX 76450, (817)549-2607.

**Sept. 20-22 Costa Mesa, CA** California Custom Knife Show, Red Lion Hotel, 3050 Bristol St. First time under new *Blade* ownership, will include the inaugural presentations of the 1996 BLADEhandmade™ Awards & much more. Contact *Blade Magazine*, c/o Krause Publications, 700 E. State St., Iola, WI 54945, (715)445-2214.

**Sept. 27-29 Louisville, KY** NKCA Louisville Fall Show. Contact NKCA, Dept. BL, POB 21070, Chattanooga, TN 37424, (800)548-3907.

## Upcoming Seminars:

1. **August 22-25, 1996** George Herron will be doing a workshop on the Art of Making Folding Knives at Montgomery Community College. This class is now sold out.
2. October 26 & 27 location is open.
3. January 25 & 26 location is open.

Anyone with a big enough shop who could help with hosting a seminar, please contact Tim Scholl. Also, anyone with any ideas for our seminars, please contact the same.

## Special Invitations for Montgomery Community College:

Tanya & Ed VanHoy would like to take this time to invite you to visit the college. For those of you who do not know, we have been studying metal engraving at MCC, and we feel that it has been one of the greatest experiences of our lives. Our experience there will benefit us in the future as full time knife makers and engravers. The friendships developed there can only be described as once in a life time.

There are many curriculums offered there as well as special studies such as gunsmithing, taxidermy, pottery, auto-mechanics, metal engraving, etc.

If I may I would like to quote Tommy McNabb in saying, "MCC has been very supportive of our Guild as well as providing knife seminar settings and meeting places". In closing as it will be our last quarter at MCC, I would like to personally thank Mr. Jessie Houser for his patients and devotion in teaching Tanya & I the art of metal engraving. Jessie, you have been a great friend and a wonderful instructor. Sincerely, Ed & Tanya VanHoy.

### Mokumè: How To Make It

*The following article is reprinted by permission from Blade Magazine. The article is by Wayne Goddard, an ABS master smith.*

**1: I would like to know how to make mokumè to help embellish my knives. How is it done? (Thomas J. Janstrom, Townsville, Australia)**

Mokumè is a Japanese word that means wood grain and it can apply to layered iron, steel or non-ferrous laminates. The mokumè in which you are interested

is the non-ferrous type that is made by a fusion-welding process. To use the word mokumè correctly, it would always include the type of materials used for the lamination.

Contemporary mokumè is usually made of combinations of copper, nickel, silver, brass, bronze alloys and pure nickel. My favorite is copper and nickel silver made by **Devin Thomas**. I buy the bar stock, then saw and forge it to shape. At times I carve grooves in it before forging to develop a pattern.

After finishing the mokumè parts, I etch them and then develop a patina by using either cold blue or a commercial antique finish for silver working. Mokumè parts don't have to be etched to delineate the layers but I find they stay nice looking longer when etched and then given a patina treatment. Devin will furnish straight-layered, ladder or dot-pattern mokumè in a variety of materials and number of layers. His address: 2344 Moonlite, Dept. BL., Las Vegas, NV 89115 (702) 643-6783.

To make mokumè, you need the following:

- Thin sheet stock of the contrasting materials chosen;
- A pressure plate;
- A clay/water mixture;
- A heat source--charcoal, coal, electric or gas--with a temperature range of 1,500-1600 degrees F

A good size for your first batch of mokumè would be 1 inch wide and 2 inches long. Use 15 pieces of copper and nickel silver, each piece .030 inch thick. Cut the pieces to size, flatten as necessary and then hand sand the surfaces down to bare metal. Wear rubber gloves so that the pieces are not contaminated with oily fingerprints. Wash with acetone or lacquer thinner, and stack the alternating pieces all nice and neat. Work in a dust-free area because any dust or oil between the layers will

cause a flaw. Sometimes it's good to use a thicker piece of copper on the bottom of the stack to serve as the base for a part that will have only one side visible, such as a bracelet, belt buckle or pommel cap.

Prepare the pressure plate by coating the inside surface with the clay mixture. This keeps the mokumé from welding to the pressure plate. Stainless-steel heat-treating foil should also work in place of the clay/water mix. With the stack bolted securely in the pressure plate, put the whole works in a nice, easy fire. Slowly and uniformly bring the fire up to the temperature at which fusion takes place (1,500-1600 degrees F).

Fusion and welding are the same thing. Here's how they work: as the metals to be joined are heated, the atomic particles begin moving faster and faster. The weld is made when the particles move so fast that they interchange with any compatible material with which they come into contact.

As the stack of alternating materials in the pressure plate reach the point of fusion, a *shadow* or *shimmer* will be visible on the surface. This is a sign that the welding should be complete. However, most of the time I remove the pressure plate from the heat source and lightly work it with a hand hammer to ensure that the weld will hold. The weld's success depends on the flatness/cleanliness of the lamination, and that the entire stack reached the correct temperature. Copper, brass and nickel silver melt at around 2000 degrees F. Hence, there is always the danger of melting all or part of the billet.

After cooling, remove the billet and grind the rough and uneven edges to check the weld's quality. Then, saw the billet into rough shapes for pattern development and forging. Mokumé can be forged somewhat at room temperature if it is annealed. It is safer to forge it hot because there is less chance of questionable welds coming apart. Non-ferrous

materials are forged at a low temperature. If there is much color in the billet, it may be too hot. A temperature of 1,100°F is about right. Forge your mokumé nice and slow. It's easy to tell when you have worked it too hot because it will start coming apart in large crystalline pieces.

I finish mokumé by hand sanding to 800 grit without any buffing. I believe I get a better etch with the open grain of the hand-sanded finish (this also applies to forge-welded steel). After the etch to delineate the layers, I rub it out with 2,000-grit paper, then treat it with an oxidizer to give the color-contrast patina.

Send your questions to **The Blade Magazine**, P.O. Box 789, Oolteewah, TN 37363-0789. Include a SASE for a personal response from Mr. Goddard. Due to the large volume of questions, please be patient in receiving your answer. **BLADE**

### **Articles for Publishing:**

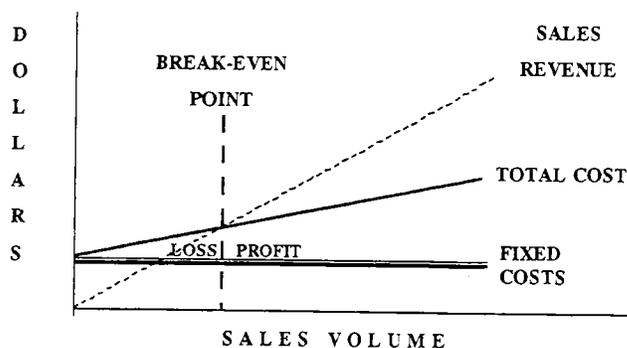
We call on each of you to send the editors of *your* Newsletter articles of your choosing which you would like to see published. This paper will, in part, be what you make of it. It can be a medium for all to sow seeds as well as for all to reap a harvest. If no seeds are sown, then there can, of course, be no harvest. Your support will be greatly appreciated. When possible, please send articles by E-Mail because it saves publication word processing input time.

### **How Much Does It Cost? Part II**

*By Jack Hyer*

We left off last time by extending an invitation to all readers to attend our regularly scheduled quarterly meeting held at Tim and Kathy Scholl's house. For those of you who did not attend, you missed a great meeting, a lot of informative knife conversation and some great demonstrations. As

## Break-Even Analysis



(BREAK-EVEN ANALYSIS Chart)

promised, I made a presentation dealing with the first part of this article and followed up with much of what you will read here. There were a lot of great suggestions and observations made by the attendees. The original article received much more attention than I thought it would. The bottom line on that commentary is that many makers are becoming increasingly aware and concerned about costs and profits.

From the first article, you probably have a fairly good idea on how to go about calculating what your real costs are. I'll break out these costs and provide a little description of what they are in this segment. First, however, I want to bring your attention to the Break-Even Analysis chart. This chart is worth taking some time and figuring out what it is telling you. If you take the time to plot these numbers, Total Cost Dollars and Sales Volume, you can easily determine how many knives or how much sales volume it is going to take to calculate your Break-Even point. Break-Even is defined as that point where Total Expended Cost equals Total Revenue. For example, if your Total Cost, that is made up of Fixed and Variable Costs equals \$1000.00 and you are selling knives at \$100.00 each, you have to sell ten knives to Break-Even. Notice on the chart that once you hit this point, you continue to incur costs because you are making more product but you are also selling more knives. What the chart is saying, is that beyond the Break-Even point, although costs continue to accrue, Sales Revenue not only should offset those costs but also provide Profit.

### More On Costs....

To assist you in identifying and quantifying the costs associated with making knives, the following list and explanations might be helpful:

**Fixed Costs** - Fixed costs are defined as costs that do not change over the course of a year or costs that are established to be fixed for a year. Example, rent, loan payments, etc.

**Variable Costs** - These are costs that change from period to period. Example, electricity, phone, repairs, steel, belts, shipping charges etc.

Some other costs that are not so obvious. Cost of doing shows; to include travel, hotel, meals, table fees, taxes, and time lost from production. Advertising costs; to include photography, ad design, phone calls, brochure production and mailing. Last but not least, is Inventory Carrying costs. A knife once built and taken to a show and not sold, does not get cheaper the next time around. Just the opposite. The knife represents an investment of materials and labor. Anticipation of further production is based on the expectation that

a knife will sell and additional materials will be purchased so that production can continue. In other words, if you built twenty knives and went to a show and didn't sell any, how many more would you go home and build? How many more could you afford to build and for how long? So the longer you hold on to a piece and drag it around to shows, the more cost is invested in it. As a parting comment, one of the attendees, whose name I can not remember, (I hate that!), came up to me at our meeting and showed me a form that he had been using that identified the cost of each knife he made. This is an excellent idea and provides for great income tax information when it comes time to actually calculate profit versus loss. A copy of this form follows this article. You can use this format or develop one of your own, but this is a great idea. Lastly, when the first article appeared a gentleman from South Carolina called and said that he was a full time knifemaker and that he and his partner have been keeping very detailed records of costs and profit by individual knife. His statement was that he and his partners' average cost per blade over two years was \$142.00 and \$146.00 respectively. It should be pointed out that many of their knives are engraved and schrimshawed. How do you control costs?

### **Cost Cutting Tips from the pros....**

In order to reduce your overall per knife cost, you have to first analyze where cost cutting opportunities may exist. The easiest one to identify is Quantity Discount. This means that if you buy a lot it should cost less. Generally this is a true if not expensive statement. I have not set down and calculated the cost of a ton of ATS-34 but I'll bet it's a lot! The same is true of sanding belts and certain types of handle material such as stag. Many of us, on our own, can not afford to buy in meaningful quantities. However, getting involved in an organization or getting several makers to go in on a purchase together can drive costs down

significantly. Another area to analyze is shop practices. For instance, it is much more efficient and cost beneficial to cut and profile and grind many knives at the same time instead of one at a time. For instance, you can maximize belt usage by grinding your first grind with a 3M Metaloy belt at 60 grit. This belt will easily grind nine to ten knives. But if you grind one or two then move on, chances are you will use this belt for something else and it will be worthless the next time you want to grind a blade with it. At about \$5.00 each, that means two blades accrue \$2.50 each as opposed to ten blades at \$.50 each !!!! That's some savings. Heat treating is the same perspective. My heat treater charges between \$9.00 and \$15.00 per blade up to \$75.00. But you can send him up to fifty blades of the same steel for \$75.00. So that's \$1.50 per blade as opposed to \$15.00 per blade. In a statement, think about not only what you are doing but how you are doing it. Take advantage of shop practice efficiencies and efficiencies gained by human engineering and quantity service pricing.

### **Where and What are you selling? ....**

If you ask most knifemakers what they are selling, they would look at you as though you just landed from the planet Mongo and say "Well, knives of course!". But you can't make impressions on the intellect by stating the obvious. Knives and money are merely the mediums of exchange. I give you money; you give me a knife. But what are you selling? Well, from what I observe about the knife business, you can be selling one or more commodities. For the purposes of our discussion, those commodities are labor, market value, niche', reputation and/or retail/wholesale. Let's take a little closer look because if you are not realizing your goals financially from knifemaking, you may want to consider these perspectives.



■ **Labor** - Many makers actually build knives very similar in function, design and quality to other makers. But it takes only ten minutes of walking around at a show to realize that pricing is all over the place. One reason for this is that one maker may be selling by reputation while another is selling his labor. For example, assume that you and I both make a hunter with a stag handle. Your knife sells for \$250 and mine sells for \$150. You on the other hand, are a full time maker and very well known, while I do this as a paying hobby/business. If I were not making knives, I would be watching Baywatch for which I could not charge anything. However; I choose to go to the shop and make this knife. My costs are \$60 and I want to make \$15 an hour for shop time. It takes me six hours to build the knife and that plus my costs gives me a selling price of \$150. I am selling and profiting from my labor alone. I am looking to be paid for time.

■ **Market Value** - Let's say I decide to make a Back-Packer model that is built from ATS-34 with a skeleton handle. Cost is fairly low because there is no handle material, just a piece of steel and a sheath. I look around and determine that these types of knives sell for \$75 to \$125. I go down to the shop and determine that if I make one of these, my cost and labor may exceed \$125 and therefore exceed the high end of the market value. However, if I set up to make twenty at a time, I can drop my cost and labor to \$55. I can still sell the knife for \$75 to \$125. This is selling Market Value. In other words, how much I can sell a product for is not determined by cost but what the general market will pay for it.

■ **Niché Market**-Pure and simply, this is a

specialty market. The maker builds a knife so uniquely that it caters to a very select buying group. These may be high art pieces or just something no one else builds. Price is usually set at whatever the market will pay as opposed to market value.

■ **Reputation** - All makers would say that their reputation is on the line with each sale and they would be correct. That's not what we are talking about here, though. We are addressing those makers whose names evoke legend. The word knives and the makers name make buyers hands sweat, knees tremble and wallets itch. Anything that rolls out of their shop is a 'done deal' and price is not much of an issue. You know who I mean, and more importantly, so do they.

■ **Retail/wholesale** - This is an emerging direction in our business. A maker will design or may even build a knife that will be marketed and sold through a distributor or exclusive market. The knife may be a custom piece or it may be a design that will become a factory issue such as Spyderco, Berreta, etc. The maker in this case may be paid outright for the design and the use of his name or he may be paid a royalty based on the success of sales. This trend is really potentially positive because of the possibility that a customer seeing or buying such a product may eventually become interested in the maker/designer to actually purchase a custom knife from the maker or other makers. Full-time makers are looking at it from an income increasing stand point and a way to shield themselves from the fickle custom knife market. These deals can be quite lucrative and therefore appealing to custom makers with a name or reputation that will have mass market appeal. Having a knife in a major motion picture seems to

help a lot.

Well, I sincerely hope that these articles have been informative and useful. As for opinions expressed, they are my own and like Dennis Miller, they are my opinions and I could be wrong!

Here is the form that a gentleman handed me at our last Guild meeting. The man's name is Steve Popp. It is well designed and covers a great deal of what we all do. I hope you will find it helpful and thanks again Steve.

(See KNIFE WORK SHEET on page 15)

## Etching Damascus Steel:

*By Tim Scholl*

The following is the method I use to etch damascus steel. The materials needed are ferric chloride (archer etcher from Radio Shack), rubber gloves, safety glasses, plastic or glass pan to etch in, sand paper, baking soda, and ammonia. **Step (1).** Finish your blade. Do all grinding, heat treating, polishing, etc. as if to make you ready for your handle. I finish my blades with 2000 grit paper, then buff the blade so I have basically a mirror finish. **Step (2).** Clean the blade thoroughly with hot water and soap while making sure all oil, buffing compound, etc. is removed from the surface of the blade. **Step (3).** Mix one part of ferric chloride to two parts of water and pour into whatever container you have to etch in. I like ferric chloride because it's relatively safe to use. It will not cause severe burns. You can put your hands in it without gloves and not worry about pulling back a nub. However, it does stain your hands, so wear gloves. **Step (4).** Place blade in solution and let it set for 4 or 5 minutes while turning blade over several times during this period. **Step (5).** Remove the blade from the etchant, rub with sand paper and rinse with hot water. Repeat this process until you have a desirable etch, usually 15 to 20 minutes. **Step (6).** At this point, I rinse

and rub the blade one last time, and I pour baking soda all over the wet blade. Coat it good! **Step (7).** Then soak the blade in hot water in a small pan to dissolve baking soda. **Step (8).** Rinse again. Now soak in ammonia. The baking soda and ammonia neutralize the etching process. **Step (9).** At this point, I dry the blade, coat blade in oil (Rust Free from A. G. Russell works wonderful), and let it set until I'm ready to finish handle, guard, bolster, etc. Hence, the process of etching a damascus knife blade is finished.

## ATS-34 Cold Rolled Plate vs. Hot Rolled Bar Stocks:

*By Ed VanHoy*

The information contained in this article is presented for your information to make you aware of some of the problems associated with the purchasing of ATS-34 steel from various suppliers. The following event is associated with Ed VanHoy about his purchasing of blade steel and the inherited problems of mirror finishing the steel to an acceptable standard for selling.

Due to the demand of ATS-34 steel at approximately the end of December 1995, I found myself in a circumstance where no ATS-34 hot-rolled steel was available. After having not realized that there was a difference between hot-rolled bar stock and cold-rolled plate, I inquired about purchasing enough of the ATS-34 cold-rolled plate from a certain supplier to build approximately 150 knives. I notified the supplier that the intended use of the steel was for mirror finished custom knife blades. After being assured from the supplier that the steel would work great for the requested purpose, I proceeded to finalize the purchase of the ATS-34 cold-rolled steel.

Upon arrival of the purchased steel at our shop Tanya and I proceeded to cut out, contour, drill

holes, and hollow grind the 150 intended knives for heat treating. The above process consumed our time for the biggest part of January 1996. After the knives returned from Hanui-Richmond heat treaters, we observed that there were obvious appearance problems with the grain structure of the heat treated cold-rolled steel. The grain structure looked somewhat similar to finished & etched damascus steel. After reflecting back on the grinding of the blades, I realized that the blades did look different during the initial grinding process.

Not being deterred, I proceeded to finish grind and mirror polish several blades. I was unable to remove the damascus looking defects from the surface of the steel by means of mirror polishing or hand rubbed finishing. I was very alarmed, to say the least. I immediately called Hanui-Richmond heat treaters to see if all of the heat treating specification for ATS-34 steel had been closely followed. They assured me that they had closely followed the specs and suggested that I talk to the supplier about the problem that I was having with the subject steel.

Then I called the supplier of the subject steel and told them of the problem that I was having with the mirror finishing of the steel. They informed me that they would investigate the problem, and they would contact me very soon and inform me of their findings. After several weeks of having not heard from the supplier, I decided to contact Hitachi Metals(USA). The process that follows took months of written and telephone conversations. Hitachi sent several of my blades to Japan for testing. The period of time that this took created a situation of my not knowing the quality or structural integrity of the steel. This, in fact, created an inability of my not being able to sell or show any of the subject knives for the period of time that the quality of the knives were in question.

At last after months of waiting, the result of the test

arrived. The test results showed that the process of how the steel was rolled during the extrusion was the cause of the enlarged grain structure. It appears that the multi-directional rolling of the cold-rolled plate steel to achieve the sheet size of plate disfigures the grain structure of the steel. This problem does not occur for the one-directional rolling of the hot-rolled extrusion of the bar stock steel. The cold-rolling process is the root cause of the subject problem.

In closing, the supplier has offered to replace the steel. They will not, however, replace the labor and related material cost of belts, drill bits, heat treating, electricity, and shop wear cost. They claimed that if they did so, then they would have to do the same for others. They refuse to assume product liability in this case. Their stance is very understandable from a business viewpoint, after all, who of us want to lose money.

The intent of this article is not to discourage you from using ATS-34 steel. I will be using the same in the future; however, it is to inform you of the specific differences between cold-rolled sheet steel and hot-rolled bar stock. Hitachi Metals has informed me that they have notified their suppliers in the USA and abroad of the test results in order to keep this from happening to someone else. The company's new policy is to have the suppliers more informed to needs of the customer given the finishing characteristics of both of these ATS-34 steels.

By the way, Tanya & I have a new line of bead-blasted knives (Ha! Ha!). It is the only way to cover up that stuff showing in that cold-rolled plate steel.

If any of you would like a copy of the Hitachi Metals report, please give me a call and I will provide it to you along with the material supplier.

As a result of Hitatichi Metals and my personal findings, it is my opinion that cold-rolled plate should only be used in knife blade applications where bead-blasted or grit-buffed finishes are used. I guess you might say in the game of life that a big fish has just swallowed a little fish.

Thanks for giving me your attention. Ed VanHoy

## **April 26 & 27, 1996 NCCKG Meeting:**

### **Old Business:**

Tommy McNabb gave a report on the Southeastern Custom Knife Show to be held in September in Winston-Salem. Approximately 80 or so tables have been sold. There are 115 tables available and it is expected that the show will sell out. Kathy Scholl has asked for help preparing cakes, cookies, etc. for the hospitality room at the show. Any type of sweets that can be served easily on a napkin would be great. Also, help is needed before and during the show to assist knifemakers setting up, attending to their tables if needed, and in the hospitality room and at the door. Anyone who can help in any way, please contact Kathy.

Tommy McNabb asked for suggestions for judges for the show. If anyone has any suggestions, please contact Tommy. Also, there are banquet tickets available for those who might need extras. For details, notify Tommy McNabb.

Dr. Jim Lucy has been invited to the show and may bring part of his collection of "Scagels".

### **New Business:**

A motion was made by Ed VanHoy to make Danny McManus a honorary member of the Guild for his contribution made publishing our newsletter. A second was made by Bill Maynard. A vote was taken and the motion carried to make Danny a

honorary member of the Guild.

Ed VanHoy discussed the problem of the distribution of the newsletter. Many members have not received the March issue of the newsletter. The problem seems to be with the company assigned the responsibility of copying and distributing the newsletter. This problem should be corrected and those who have not received a newsletter can get one from Tommy McNabb.

A raffle was held at the meeting. A collection of goodies was brought by those in attendance to raise money for the guild. Tickets were \$1.00 each and over \$100.00 was raised.

An election of Vice President and one Board of Director was held. Jack Hyer was nominated for Board of Directors by Tim Scholl. A second was made by Ed VanHoy. A vote was taken and passed. Tim Scholl was nominated for Vice President by Ed VanHoy and seconded by Bill Maynard. A vote was taken and passed. Both of these terms are for three years.

## **Next NCCKG Meeting:**

The date and location of the next NCCKG meeting will be discussed at Ed and Tanya's home at the July 27th Guild meeting.

## **Advertisements:**

1. Ed & Tanya VanHoy will do custom leatherwork and Kydex sheaths, also, custom metal engraving for your knives for a reasonable cost. If interested, please contact them per address in this newsletter.

Moreover, we have multiple quantities and sizes of ATS-34 steel as well as stainless steel demascus for sell. Please contact Ed for prices and quantities.

2. **Machinery for sale:** Jack Hyer has a milling machine for sale. The unit is a Jet 18, 220 volt, single phase machine. Also included is a 6" milling machine vise, one set of collets, one drill chuck mounted on a R8 arbor. Contact Jack at (910) 769-1427 for more information.
  
3. Danny McManus will take pictures of your knives for magazine submittals, etc. If you have an interest, please contact him per address of this newsletter for price-list.
  
4. *If you would like to advertise any material for sale and/or service for hire, please send it to the address of Danny McManus (Co-Editor) per the address in this newsletter. This service is only for members of this Guild. This space could be yours.*

(910) 428-4390 Home/Office/Fax

**Director:** Jack Hyer  
 1768 Union Cross Road  
 Kernersville, NC 27284  
 (910) 769-1427 Home

**Newsletter Editors:**

Ed VanHoy  
 1899 Hogan Farm Road  
 Star, NC 27356  
 (910) 428-4390 Home/Office/Fax

Danny McManus  
 413 Fairhaven Drive  
 Taylors, SC 29687  
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 (864) 676-5603 Office  
 (864) 676-6918 Fax  
 Danny C. McManus, 76511,3600 CompuServe

**Guild Officers**

**President:** Tommy McNabb  
 4015 Brownsboro Road  
 Winston-Salem, NC 27106  
 (910) 924-6053 Home  
 (910) 759-0640

**Vice-President:** Tim Scholl  
 Route 3; Box 158-1A  
 Angier, NC 27501  
 (910) 897-2051 Home  
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**Secretary and Treasurer:** Gary Gaddy  
 205 Ridgewood Lane  
 Washington, NC 27889  
 (919) 946-9103 Home/Office

**Director:** Ed VanHoy  
 1899 Hogan Farm Road  
 Star, NC 27356

The Newsletter is mailed to members of the North Carolina Custom Knifemakers Guild four to six times per year. Dues are \$50.00 per year and are due by October 1st every year. Make checks payable to NCCKG.

The purpose and policy of this newsletter is to serve as a medium of information exchange for members of the NCCKG. Related organizations may copy the information used herein as long as credit is given.

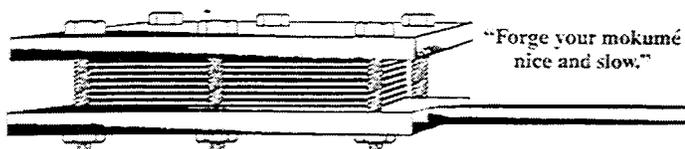
This organization has been formed to help meet the needs of a growing body of custom knifemakers in the Southeastern region. In addition, the Guild seeks to provide a training forum and educational resource for new and veteran makers alike.

Knifemaking and its related crafts are inherently dangerous occupations; therefore, the North Carolina Custom Knifemakers Guild, its officers and the Editorial committee specifically disclaim any

responsibility for damages or injuries that occur as a result of the use, in any way, of any information contained in this newsletter.

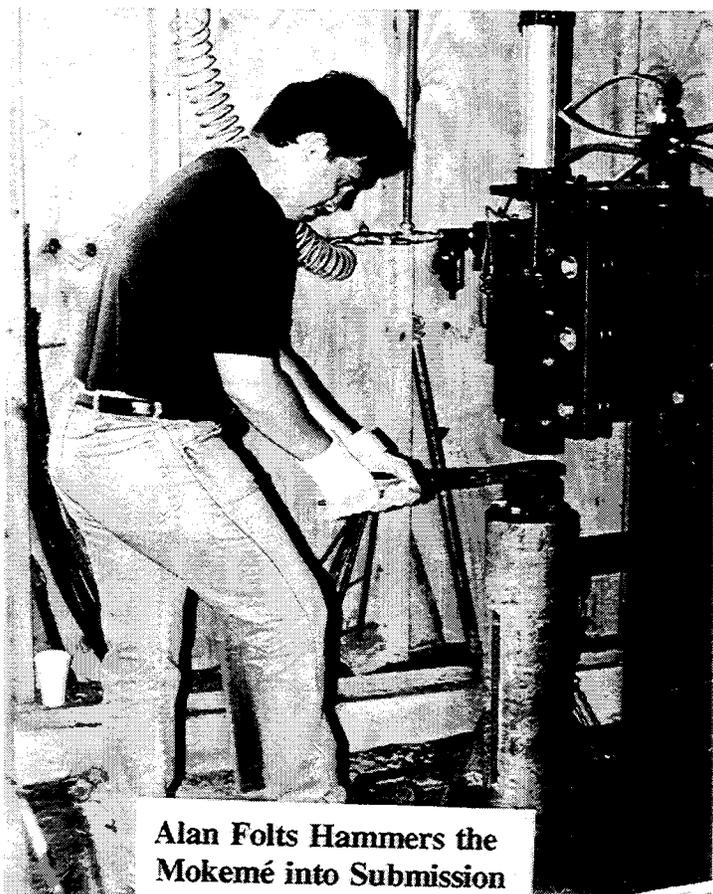
## Concerning the Tables for The South Eastern Custom Knife Show:

Please sign up for the South Eastern Custom Knife Show now. Over 106 tables have been sold and paid for currently. Nine (9) tables currently remain. Don't get left out. So act now!!!:



*"Forge your mokumé nice and slow."*

*With the mokumé stack bolted securely in the pressure plate, put the whole works in a nice, easy fire.*



**Alan Folts Hammers the Mokemé into Submission**



**Tim Scholl Demonstrates the Art of Etching a Damascus Knife Blade at Last Meeting**

## KNIFE WORK SHEET

1. Profile Blade \_\_\_\_\_
  2. Grind Side of Blade \_\_\_\_\_
  3. Grind in Cutting Edge \_\_\_\_\_
  4. Heat Treat \_\_\_\_\_
  5. Clean after Heat Treat \_\_\_\_\_
  6. Temper Clean Up \_\_\_\_\_
  7. Fit & Shape Guard \_\_\_\_\_
  8. Solder Guard & Clean Up \_\_\_\_\_
  9. Fit Handle & Epoxy \_\_\_\_\_
  10. Grind False Edge \_\_\_\_\_
  11. Sharpen & Final Buff \_\_\_\_\_
  12. \_\_\_\_\_
  13. \_\_\_\_\_
  14. \_\_\_\_\_
- Total Labor: \_\_\_\_\_

1. Steel \_\_\_\_\_
  2. Handle \_\_\_\_\_
  3. Guard \_\_\_\_\_
  4. Butt Cap \_\_\_\_\_
  5. Belts \_\_\_\_\_
- Total Material: \_\_\_\_\_

- Embellishment:
1. File Work \_\_\_\_\_
  2. Top of Blade \_\_\_\_\_
  3. Engraving \_\_\_\_\_
  4. Guard \_\_\_\_\_
  5. Butt Cap \_\_\_\_\_
- Total: \_\_\_\_\_

Special Instructions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Heat Treat: \_\_\_\_\_ RC \_\_\_\_\_  
 Temper: \_\_\_\_\_ RC \_\_\_\_\_  
 Cost: \_\_\_\_\_

Total Time: \_\_\_\_\_

Sheath: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Cost: \_\_\_\_\_

1. 01 Tool Steel \_\_\_\_\_
  2. 440C Stainless \_\_\_\_\_
  3. ATS-34 Stainless \_\_\_\_\_
  4. 5160 Spring Steel \_\_\_\_\_
  5. Damascus \_\_\_\_\_
- Steel Cost: \_\_\_\_\_

**SUMMARY OF COST:**

Total Labor \_\_\_\_\_  
 Total Material \_\_\_\_\_  
 Embellishment \_\_\_\_\_  
 Heat Treat \_\_\_\_\_  
 Sheath \_\_\_\_\_  
 Grand Total: \_\_\_\_\_

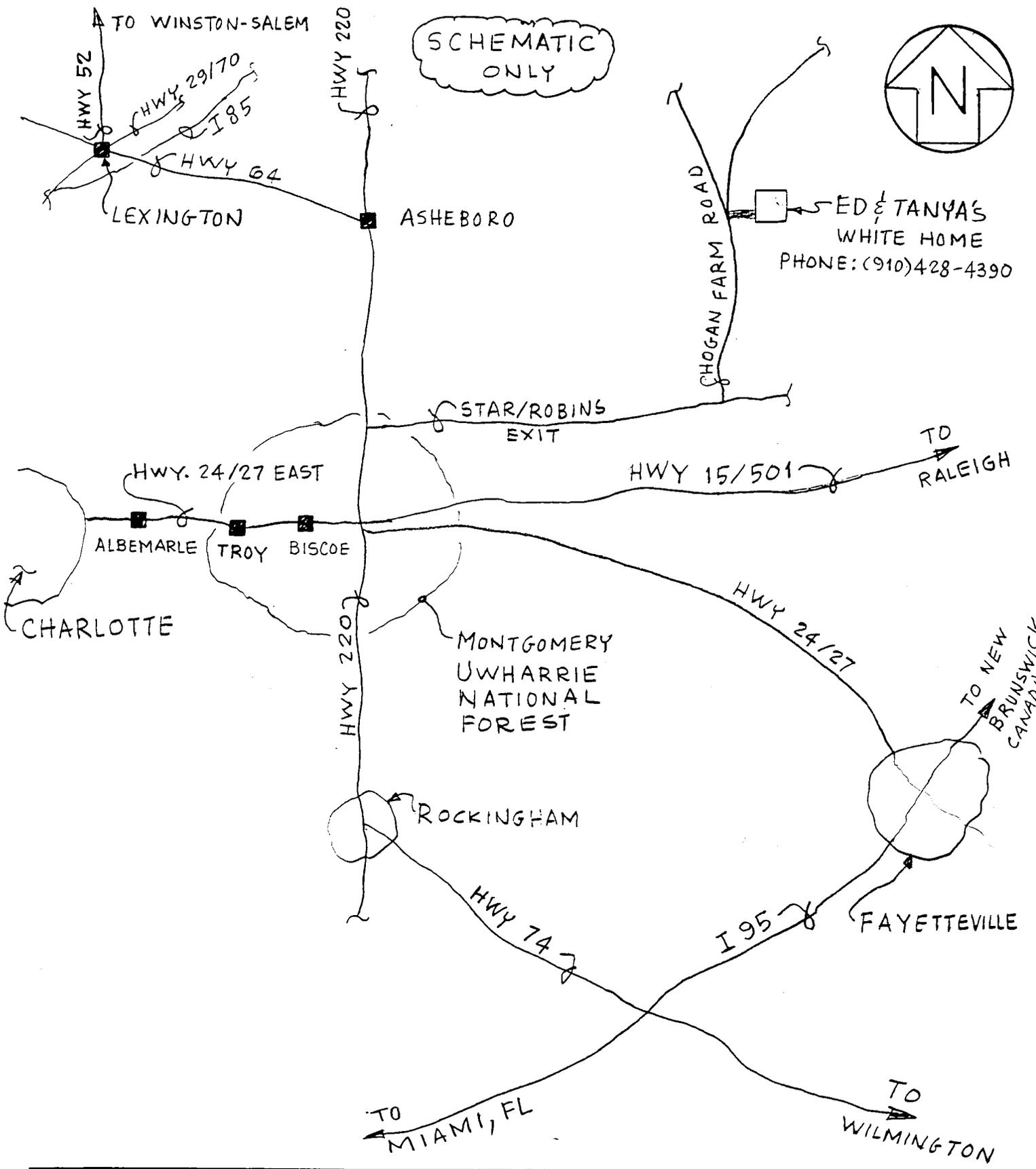
Handle Material:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Cost: \_\_\_\_\_

**COST OF THIS KNIFE:** \_\_\_\_\_

Serial No. \_\_\_\_\_

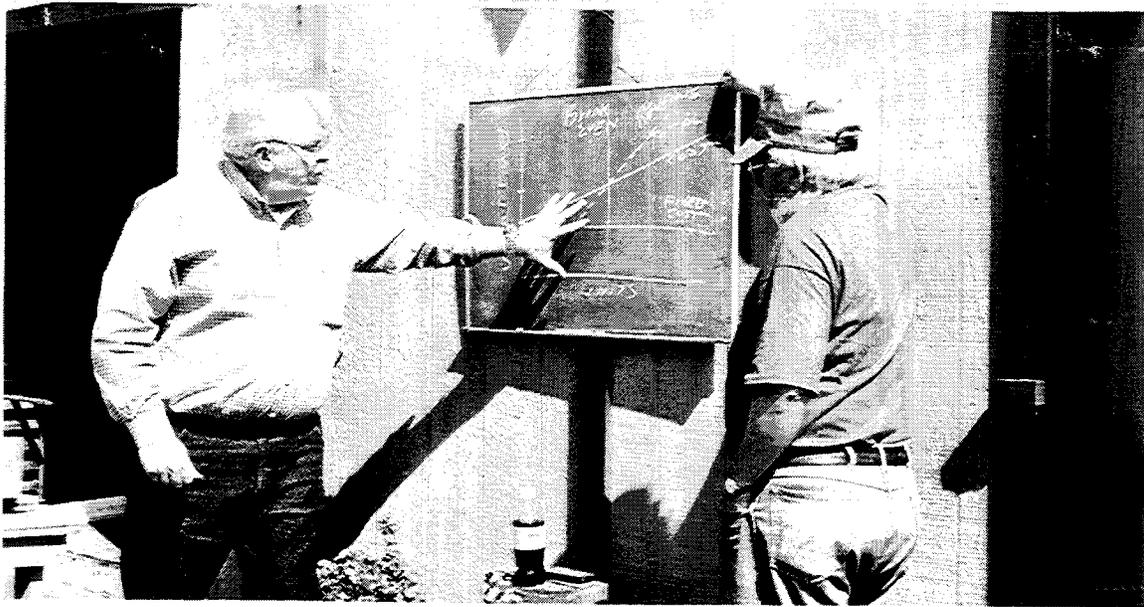




APRIL GUILD MEETING



This Was the Most Fun Part--Casting Your Bucks for Knife Materials. Some Won and Some Lost, but All Got a Sun Burn



Jack Hyer Draws Some Graphs Related to Pricing Knives While Tommy Gets Close Enough to See

## APRIL GUILD MEETING



The Meeting Had a Great Number That Came

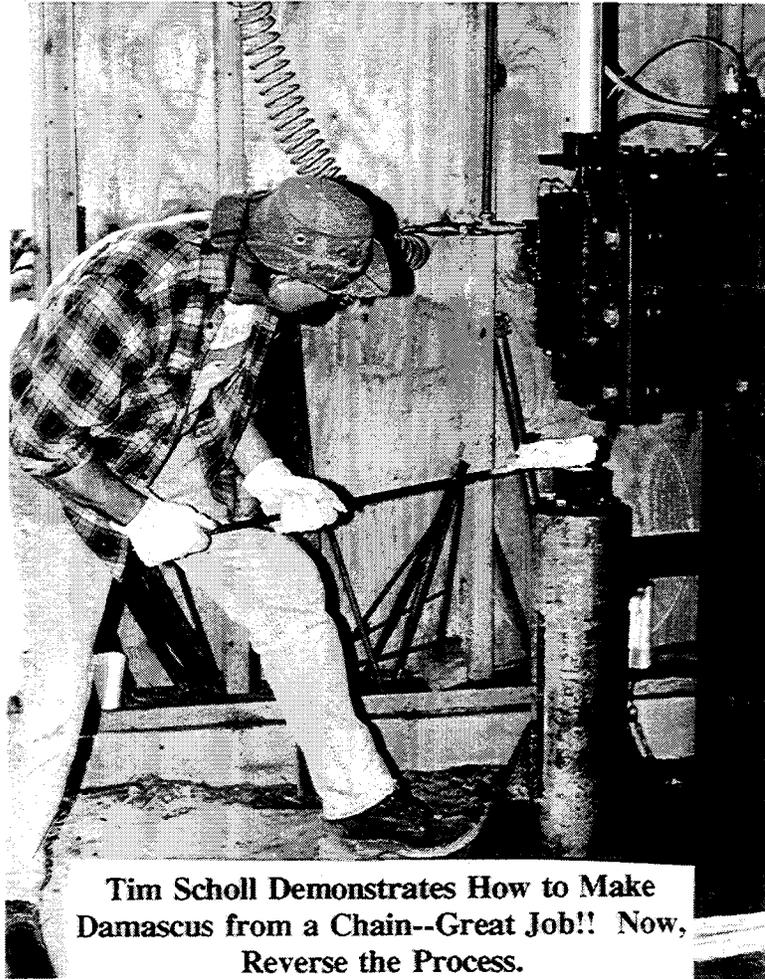


Some Looked While Others Just Watched

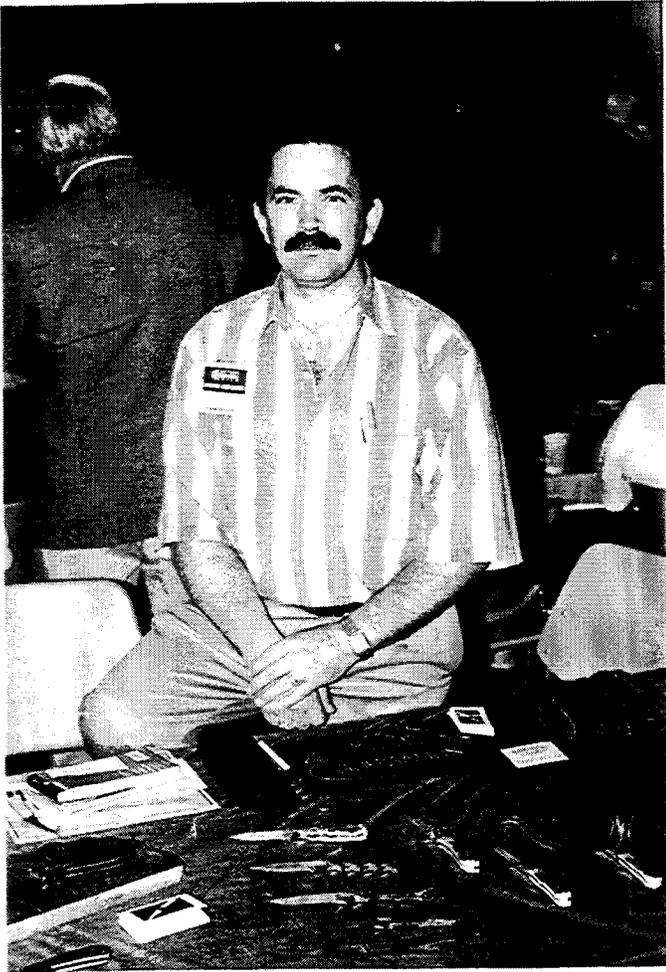
**APRIL GUILD MEETING**



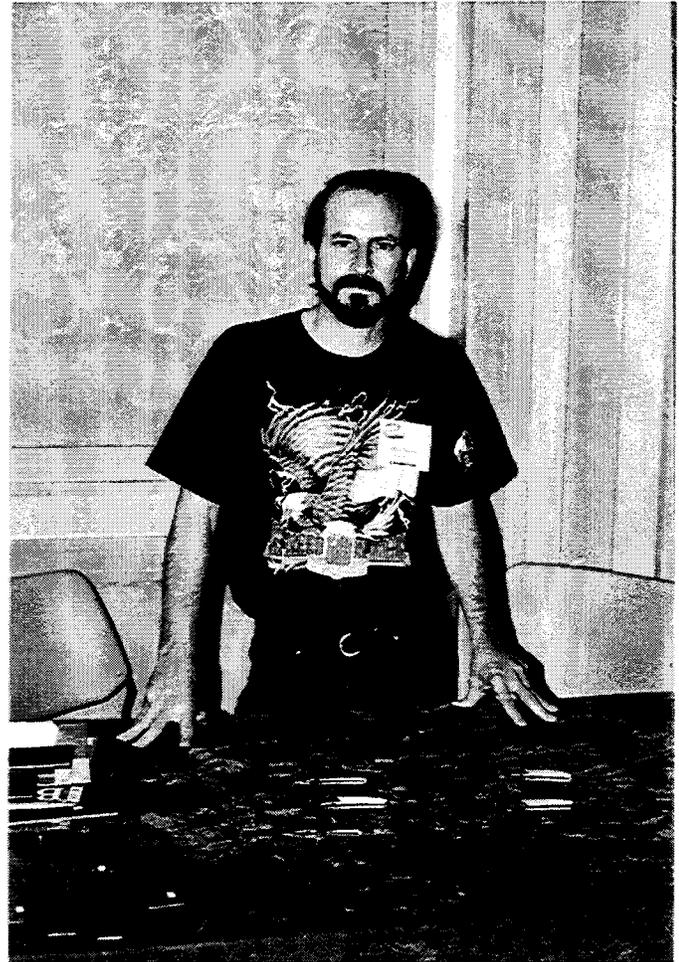
**They Brought Their Knives and Proudly  
Showed Them to One Another**



**Tim Scholl Demonstrates How to Make  
Damascus from a Chain--Great Job!! Now,  
Reverse the Process.**

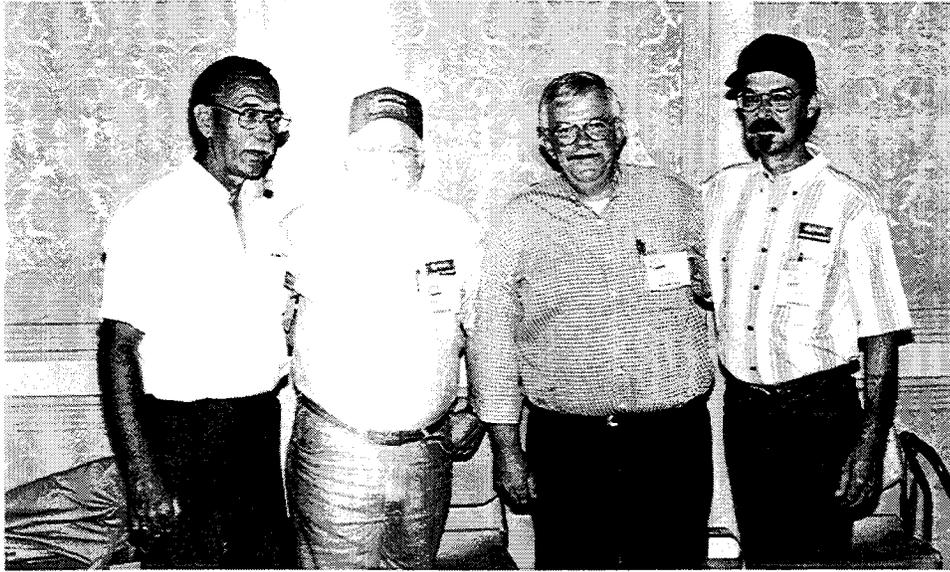


Marvin Gurganus Voted Best Pose for Picture



Mike Norris Thinking about an Automotive Problem of His at the Blade Show

1996 BLADE SHOW



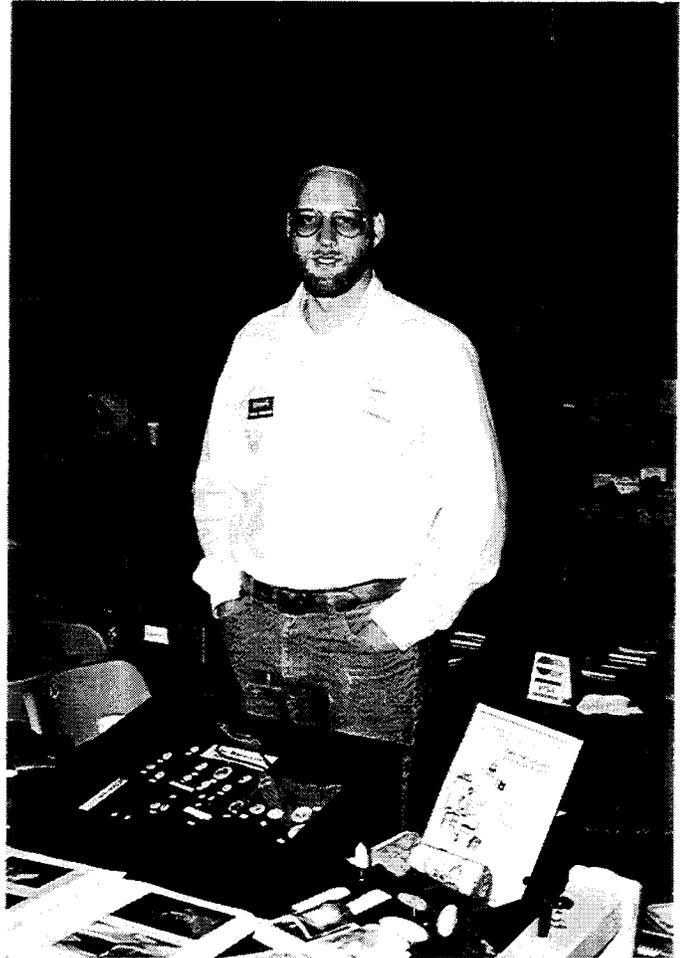
Just Say the Word Picture, and Travis,  
Tommy, Jack, & Wayne Form a Line at the  
Blade Show



Tim & Kathy Scholl were Voted Best Looking  
Couple by Ed and Danny at Blade Show



**Ed and Tanya, with Selling on Their Mind,  
Think They See a Customer all Across the  
Room**



**Mike Weaver's Million Dollar  
Smile at the Blade Show**

APRIL GUILD MEETING



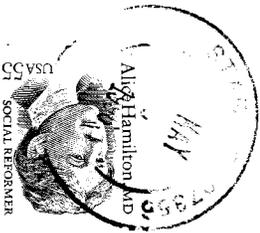
Close Up Shot of Tim Scholl as He  
Demonstrated the Art of Etching a Damascus  
Knife Blade at Last Meeting  
Wasn't He a Nice Host?

**FIRST CLASS MAIL**  
**Next Meeting**  
**April 27 & 28, 1996**  
**Angier, NC**

Barry & Phillip Jones  
Jones Knives  
221 North Ave  
Danville, VA 24540

Star, NC 28665  
1899 Hogan Farm Road  
Edward VanHoy, Editor  
**Billets & Blades**

**CUSTOM**  
NORTH CAROLINA  
KNIFEMAKERS  
GUILD



## MEMBERSHIP APPLICATION FORM

**CUSTOM**  
NORTH CAROLINA  
**KNIFEMAKERS**  
GUILD

Please send to: NC Custom Knifemakers Guild  
**\$50** Attention: Gary Gaddy • P.O. Box 2574  
Washington, NC 27889

DATE \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE: \_\_\_\_\_ HOME \_\_\_\_\_ WORK \_\_\_\_\_

In which category would you be interested in applying: Knifemaker \_\_\_\_\_

(How long have you been making knives?) \_\_\_\_\_

Collector \_\_\_\_\_ Just Interested \_\_\_\_\_