

# THE HOT IRON SPARKLE

\* Newsletter of the North Carolina ABANA \*

www.ncabana.org

Volume 27 Number 4



4th. Quarter 2009 – Oct/Nov/Dec



Demonstrating at the 2009 North Carolina State Fair in Raleigh, North Carolina

Inside This Issue					
President's Message	P 2	Scholarship Report – Robert Timberlake	P 16	Gravestone Made by Bill Tanneberg	P 32
Editor's and Secretary's Notes	P 3	Roxboro Courier Times Article	P 19	Controlled Hand Forging – Cutting a Bar	P 33
Regional Group Meetings	P 4	NC State Fair 2009 Report	P 21	Forth Quarter 2009 Chapter Meeting	P 35
Third Quarter 2009 Chapter Meeting	P 9	Images From NC State Fair	P 23	Blacksmith's Exchange	P 36
Bonus 2009 Chapter Meeting	P 10	2009 Dixie Classic Fair	P 27	Forms	P 38
Health And Safety	P 13	Working By Hand – Peter Ross	P 28	2009 Chapter Calendar	P 39
2010 ABANA Conference	P 15	Brian Brazeal's Visit to Big Blu	P 30	New Members and Chapter Officers	P 40



Jimmy Alexander  
Photo by: Hill Willis

## A Message from Our President

This is from our First Lady. Cindy Alexander:

I wanted to let the blacksmith group know what is going on with Jimmy. He is in rehab at Wake Med in Raleigh after being very sick with bacterial spinal meningitis. He had elective back surgery in August and has had one complication after another. At the moment he is having problems with his short term memory. Your thoughts, prayers and cards are greatly appreciated.

The chapter held our 3<sup>rd</sup> quarter meeting at Jason Craft's shop out in Roxboro or more like VA (from what I hear). Robert Timberlake demonstrated his knowledge he gained from taking a class in Maine. I read the article from the newspaper...very impressive!

I heard that the state fair was a profitable one this year. Thanks to all who give their time to help make it a hit.

Jimmy and I did not make it to Brasstown this year due to his illness, this is the first time we have missed it since the beginning of this joint meeting. I'm already looking forward to next year!

Our 4<sup>th</sup> quarter meeting will be at Roger Barbour's shop on December 5, Jerry Darnell will be our demonstrator. I hope that Jimmy will be able to make it but if not we'll hold the meeting anyways.

We will have nominations for vice president and secretary at this meeting. Sorry we forgot about it for our last meeting.

I will be working on next year's meeting calendar after the holidays. If anyone would like to host a meeting please let me know.

I hope that everyone has a safe Holiday Season.

Forge safely,  
Cindy

---

Submissions to the HOT IRON SPARKLE can be made to:

**Martin Lyon**  
**220 Fearrington Post**  
**Pittsboro, NC 27312**

or e-mail at: [ncabanaml@earthlink.net](mailto:ncabanaml@earthlink.net)  
(919) 642-0098

*The Hot Iron Sparkle* is published quarterly by the North Carolina Chapter of ABANA. Chapter dues of \$25.00 per year include a subscription to *The Hot Iron Sparkle*. Any original material herein may be copied in any Blacksmith Newsletter provided appropriate credit is given. All other rights reserved.

## EDITOR'S NOTES

Dear Readers,

We are all deeply concerned for the health of our President, Jimmy Alexander. Please read Cindy's "A Message From Our President" on the preceding page. Cindy mentioned their appreciation for your thoughts, prayers, and cards. Many of you will want to express your concern, and hope for speedy recovery, through a letter or greeting card, so, I don't think Cindy will mind if I publish the address of the rehabilitation facility Jimmy is in:

Wake Med  
Room 2C05  
3000 New Bern Ave  
Raleigh, NC 27610

If you would like to visit Jimmy, visiting hours are 4 PM to 8 PM Monday through Friday, and 11 AM to 8 PM Saturday and Sunday.

When you have the opportunity to demonstrate at an event, or attend a blacksmithing event, please let me know some time in advance. We know, from experience, that demonstrations invoke strong desire in some of the audience to learn more about blacksmithing. I would like to mail you a bunch of the "Blacksmithing In North Carolina" brochure that you can make available to the audience. This pamphlet contains information about NC ABANA and our regional groups. It also contains a membership application. Parks Low says in his "North Carolina State Fair – Report", found on page 21 of this issue, that he handed out about 150 of these brochures. We have at least one new member from the fair audience. If you do not have the brochure you can tell people that the same information, along with a membership application, is available at: "Join NC ABANA" on the left side of our website, NCABANA.ORG

I would surely appreciate an article, with photographs, if possible, of any event you attend that is related to blacksmithing. See Randy Calhoun's article "Brian Brazeal Visits Big Blu" on page 29. This is the kind of article I'm talking about. The last issue had a report of Allan Green and Ed Rost demonstrating at the North Carolina Museum of History.

From time to time, I send out emails to all membership with email accounts. I also send out individual emails where I expect a response back from the member. Often, I do not get any response. I'm beginning to expect that it is not because of rudeness, but because my message may be blocked by spam filters. Please, if you can, prevent my email address: NCABANAML.EARTHLINK.NET from being blocked. If you do not know how to do this let me know and I will provide you with some help. Also, if you change your email address please send me an email from this new account so I can update the NC ABANA database. Of course, if you change your residential address please let me know so you will not miss your newsletter. The post office will not inform me of your new address any longer.

Good Blacksmithing,

Martin Lyon, Editor

## SECRETARY'S NOTES

There is no Secretary's Report for this quarter

Respectively Submitted,

Martin Lyon, Secretary NC ABANA

## Regional Group Meetings

### Triangle Blacksmiths Guild Meetings - Randy Stoltz

#### Meeting at Heritage Forge at the NC State Fairgrounds – October 3, 2009

The Triangle Blacksmiths Guild met Saturday, October 3 at the North Carolina State Fairgrounds forge shop to prepare the shop for the State Fair. Despite this meeting being our annual work day at the Heritage Forge, 21 members showed up to clean up, set up, and unpack the tools. With a large crew it did not take too long to get the shop ready, inside and out, for the thousands of visitors that come by the blacksmiths shop during the fair. There was even time to fire up the forge and heat up some steel



---

---

## Triad Area Blacksmiths – Marshall Swarington

The Triad Area Blacksmiths held 6 meetings in the third quarter of 2009. There was an average of eleven members at each meeting.

George Manuel led the July 7<sup>th</sup> meeting. He completed his demonstration of different twists. George used the twist that he demonstrated to create a handle on a railroad spike knife. Then he finished the demonstration with the forging of the blade. Questions were asked about heat treating and answers were delivered in a long conversation.

The July 18<sup>th</sup> meeting was a day of fun and getting ready for the Dixie Classic Fair. After the business meeting was handled, shop and museum were readied for the fair, members began to work on their pet projects or enjoy the fellowship and storytelling. Not sure how many of the stories you can believe. Bob Ray has finished his work on the gulf coast and was home for a few days before he leaves for six months in Minnesota. Bob stopped by the shop and joined us for while.

Richard Howard was our demonstrator for August 4<sup>th</sup>. He purchased some wrenches at the Denton Threshers Reunion. Since they were destined to be twisting wrenches, they needed handles.

August 15<sup>th</sup> was our last Saturday meeting at the shop before the Fair. There was no demonstration scheduled. Everything was made ready and only a little work left to be done before opening day. Members enjoyed the afternoon hammering away.

Our September 1<sup>st</sup> meeting was open forges and getting ready for the Honeybee Festival.

Our September 19<sup>th</sup> meeting was held at the Honey Bee Festival in Kernersville, NC. Hand crank forges were set up and members acted like they were back in the shop at the Dixie Classic Fair. Everybody brought items for sell. A good time was had by all. The festival committee has asked if we will participate next year.



*These Photographs are from the Honey Bee Festival in Kernersville, NC*

## Brasstown Blacksmiths – Paul Garrett

We just had our Oct. gathering of blacksmith here in Brasstown and this time we met in my shop here at the Folk School. With an energetic crowd, we made all sorts of things, but the focus seemed to be on the repairing and making of parts for post vices. I had a 6" vice that I found at Quad State that needed a spring, so we made one using another as a pattern. John Ziegler and I cut one hot out of a piece of leaf spring, and forged it to shape. Charlie Stenman assured us that it would not have to be heat treated, and since he bought the vice, that was agreeable to all. It was the first time that I have made a spring, and since I need to make another, I will be interested to see how that works out.

I also had another big vice that was given to me by a friend years ago that was good except that the pivot bolt was frozen up. I had tried repeatedly, to get it out with no luck, and Butch Dey used his old candle wax trick to free it up. He heated it up on both sides with a rosebud, and let it cool down enough so that the paraffin would not flame when applied to the hot bolt. It melted all around it and penetrated down into the rusted threads. After it had cooled completely, it gave up to a couple of stout licks with a sledge hammer. We were all impressed, especially me as I had used up all of my tricks, and I have learned a few over the years playing with machines and rusty things.



We also talked about the virtues of the NASCAR axles and its material, and I demonstrated its air hardening qualities with a hot cutting chisel that I have been abusing for years with big hammers. I have a nice stock of the axles and sold several at the end of the day.



Our next meet will be at John and Judy Ziegler's place in December 19<sup>th</sup>. It is the annual Christmas meeting with forging in the morning, and a potluck style holiday meal in the afternoon. It will be in conjunction with the Alex Bealer group meeting there as well. Join us.

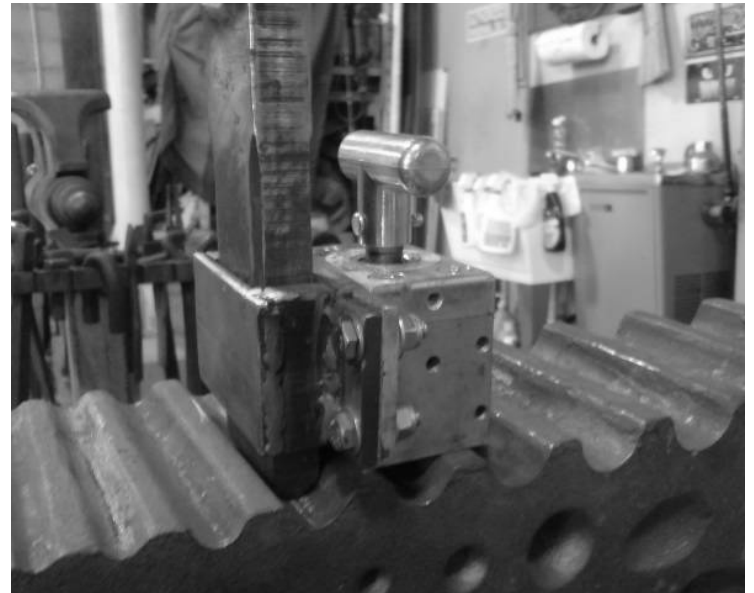
**Happy holidays.**

## Southern Foothills Blacksmiths – Randy Calhoun

The Southern Foothills Blacksmiths met on Sunday September 13th at Steve Baringer's shop in Mooresville. We had a lot of show and tell this month. One of our members, Ben Andrews, brought a very well-made splitter that he forged from a race car axle. Rick Hartline brought his newly fabricated guillotine tool. This guillotine was made like a standard C-frame with one creative exception. The top half can be quickly removed due to the clamping magnet that holds it in place. Not only does the magnet allow for a quick disconnect, it also allows the smith to clamp the upper half to the anvil, a table or a swage block to act as a top tool. Rick also demonstrated on Sunday showing how to forge a duck's head. It was a very informative meeting and everyone had a lot of fun. As usual we thank Steve for being such a generous host.



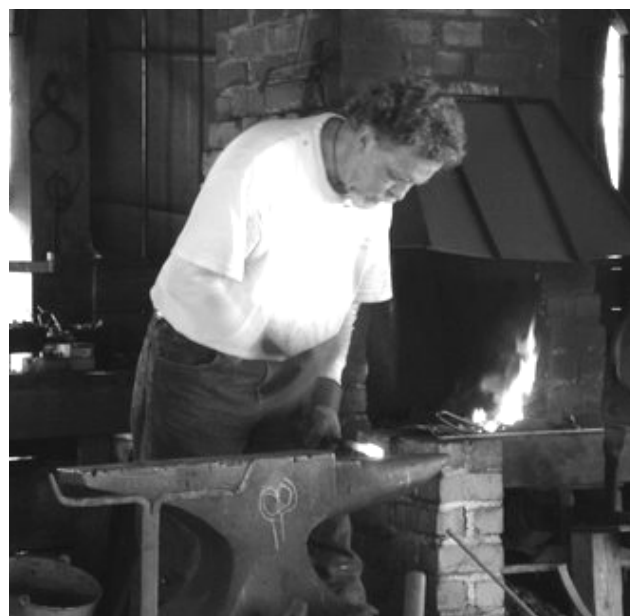
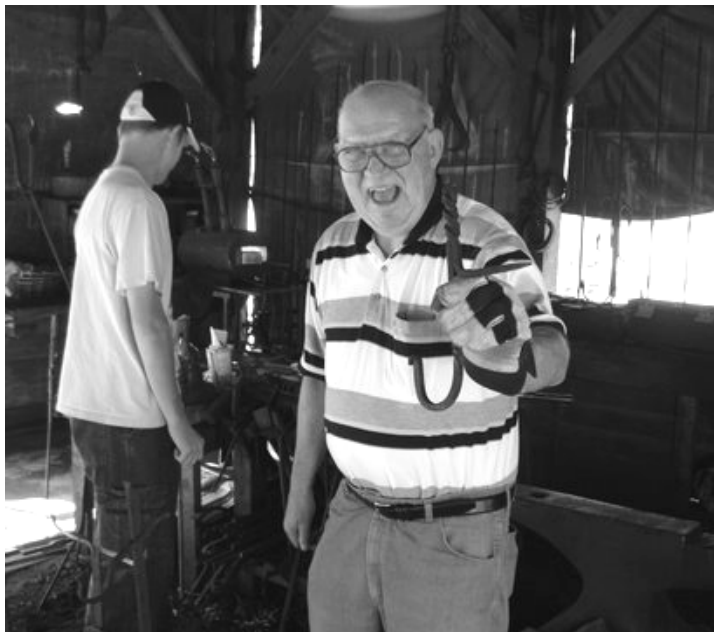
*Rick's Duck's Head*



*Two Views of Rick's Magnetic Guillotine Tool*

## Southeastern Blacksmiths – Paul Whitty

The Southeastern Blacksmiths met at Poplar Grove Plantation on Saturday September 12. We had 12 members present and 7 of us did short demos at the anvil. The Poplar Grove Plantation smithy is a great place to expose the public to what we do as blacksmiths. There were many visitors in and out all day long. A lot of different techniques were demonstrated during the day and everybody had a chance at the anvil. We all had a great time at Poplar Grove and would like to thank them for the use of their smithy. Also thanks to Kevin Lauri (the resident blacksmith) for his help in setting everything up.





## Third Quarter 2009 Chapter Meeting

Jason Craft's Shop, Roxboro, NC – September 26, 2009



***Robert Timberlake Forging a Knife Blade***

Don Fogg's course concerns a Japanese method of heat-treating knife and sword blades. The hamon is a temper line visible along the length of the blade. That's all of the explanation to be given here. Robert's article presents the process in detail. This process is quite different from heat-treating methods many of us know and what is taught by the American Bladesmith Society. Read Robert's article before reading any further here.

In the morning, Robert forged a small knife blade. He then took a blade, he made earlier, which was sanded and polished, and showed us the heat-treatment process. He applied the refractory material, heated it in the oven, and quenched it in oil. The blade was then tempered in a toaster oven. Later, he took another blade and demonstrated bench polishing without a grinder or any other power driven equipment. He started by draw filing and then proceeded to use strips of sandpaper. His article explains this process of starting with 180 grit and proceeding to 2000 grit. Quite labor intensive.

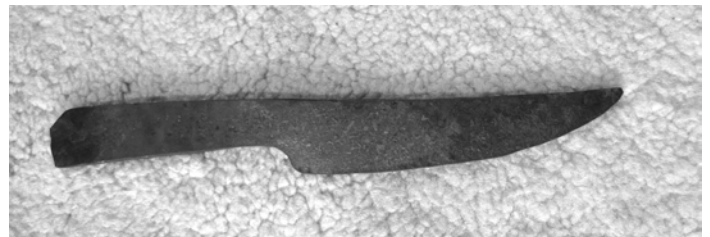
We want to thank Robert for an excellent demonstration and Jason for being such a good host – of course he could have ordered us up better weather.

It's always good to go to a new place for a meeting. Jason Craft's shop, north of Roxboro, almost to the North Carolina - Virginia border, was a new location for me and for many others who attended on a rainy Saturday. Jason is new to NCABANA and the meeting afforded us the opportunity to sign up some of his friends as members.

We were pleasantly surprised by having two members of the press in attendance. Vicki Berry and Ken Martin of the Roxboro Courier Times were reporter and photographer respectively. Vicki's article, unfortunately, without Ken's photographs appears on page 19.

The demonstrator was Robert Timberlake: charter member, former officer, and former newsletter editor of NC ABANA. Robert had recently attended Don Fogg's course "Mastering the Hamon" at the New England School of Metalwork in Auburn Maine.

Robert attended under a NC ABANA scholarship. His demonstration fulfilled part of his obligation for accepting the scholarship. Writing an article on what he learned at the course is another obligation and that article appears on page 16 of this issue of the newsletter.



***The Blade Robert Forged***



*Blade Prepared With Refractory Material*



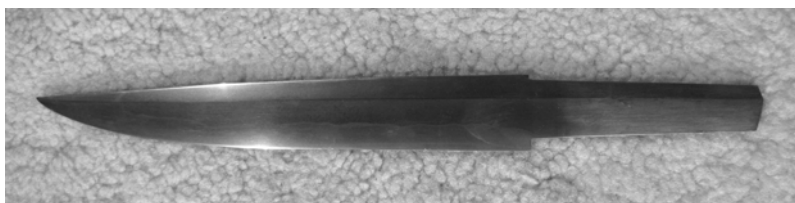
*Tempering In Toaster Oven*



*Heat-treatment In the Oven – Quench Tank Below*



*Robert Bench Polishing By Hand*



*Final Result – Hamon Line Barely Visible In Lower Part of Blade (It Might Not Show Up After Printing Process)*



*Two Examples of Robert's Work – Above And To the Right*



## Bonus 2009 Chapter Meeting

### J.C. Campbell Folk School, Brasstown NC – Nov. 7, 2009

As most of you know, the Folk School hosts an annual blacksmith meeting here in the Francis Whitaker Blacksmith Shop, and also the Blacksmiths Auction on the same day in the Keith House community room. The event is always on the first Saturday of November, rain or shine. This year it fell on the 7<sup>th</sup>, and the day was picture perfect with sunny 70 degree weather.

We had good number of attendees here again (about 80 as near as I could tell), and I am always honored to hear how far some folks drive to get here. There were a few trucks in the tailgate sales area, with everything from anvils, tools, and good old antique stuff that I look forward to every year. The meeting is also host to the Appalachian Area Chapter of Blacksmiths who hold one of there chapter meetings here. Many thanks to the AACB for making this such a big event.

This year, the demonstrator was Dave Smucker from Brasstown, who was incidentally, the AACB's former newsletter editor. Dave covered heat treating and some related metallurgy, as it applies to the class that he teaches here in the fall, "Making Woodworking Tools". It was a great demo and good mix of information, forging, and some humor too.

Donnie Fergus of the Rutherford County Blacksmith's Association presented a check for \$1,000 to the school for the "Buy a Beam" fundraising campaign to build the blacksmiths shop's new forge building. The RCBA is a small local group of smiths who committed some of their limited resources to help the Folk School realize its financial goal to finish the new building and open it for classes by April 2010. Thank you RCBA.

Lonnie Farmer, Jack Wheeler, Clay Powell, and others, presented the prototype for the forges that will be built for the new space. The forge will be used, and six others exactly like it will be completed soon. Clay Powell committed to build the second of the seven tables in honor of his father, and announced that if anyone who wanted to supply the \$180 or so needed to buy materials, that he would do the fabrication for them. Thank you Clay Powell.

Wayne Coe brought the world largest nail with him to show and invited anyone to stamp their initials in it. It is a least eight feet long, hand forged with a head that must be 8-9" across. It will go to the ABANA conference and hopefully (Wayne says) into the Metals Museum in Memphis.

We all missed Jimmy Alexander at the meeting. He is recovering from complications from a back operation. We circulated a couple of huge makeshift get well cards for all to sign. Get well soon Jimmy.

The Blacksmith's Auction was a success thanks to all the donations from so many generous people, and to the hard work of the staff and volunteers at the School. Thanks all. I was only able to see a part of it due to duties down at the shop, but enjoyed it.

Keep in mind the combination event for next year, and mark your calendars for the first Saturday of November, 2010. We will hopefully expand the meeting and have talked about some possibilities that might include activities on Friday night to make it more worthwhile for those traveling to make it an overnight event. I'll keep you informed as to what will take place and look forward to seeing you all again.

A bit of information about the new Forge Building, the board of directors at the school has agreed to release enough funds to keep working on the building while the remainder of the money is raised to reach the goal of opening by April. Siding is going up right now and it looks like work is beginning in the new bathroom that will occupy one the old silos. As for the other silo, Bob Alexander from Missouri led a small team of volunteers late this summer to make and install the spiral stairs that will lead to the second floor classroom and library. They look great. Bob and company drove 9 hours to get here and did all the work as volunteers, even stopping in St. Louis to pick up pre-bent stair treads from Lou Mueller's shop there. Thanks Bob. And speaking about the library, donations of metal smithing books, newsletters, videos, and DVD's are coming in here and there. If you have some blacksmithing books to donate, let us know here at the school.



**EDITOR'S NOTE:** This article was comes from the Halifax Herald published August 16, 2009. It comes to us compliments of Gail Wall

## Health and Safety

### Yoga at sea helps crew stay limber

By Jon Tattrie | The Road Warrior

SAILING A TALL SHIP is hard work. Well, it's a lot of lounging on deck, punctuated by frantic outbursts of adrenaline-pumping, body-straining effort. I discovered this shortly after the Mist of Avalon left Halifax.

Men were shouting, booms were banging and everywhere, ropes were being hauled up and down to get the sails pointing in the right direction. I had no idea what I was doing: when someone yelled at me to pull a rope, I pulled a rope. When I was yelled at to let it go, I let it go.

I also discovered a leisurely life pressing buttons on a keyboard does not well prepare you for the vicious work of crewing a tall ship. My silken writer's hands were soon red with blood.

Then, it was over. The wind picked up, puffed out the sails, and we floated along the ocean. So, given the beating your body takes, I guess tall ship yoga makes perfect sense.

"Heathens to the back, yogis to the front," is the cry that summons the class. As the boat lifts and falls on the breathing of the ocean, the sailing yogis rise in beautiful cobra poses. Dolphins, porpoises and whales play alongside us, but the sailing yogis are not distracted.

As the mid-day sun blazes above, the sailing yogis rise to salute it, elegantly twisting and turning as the ship lurches across the Atlantic.

Sandy, a big, brawny longshoreman of a man, is the chief yogi. He tells me it started when the skipper's blacksmith recommended onboard yoga to deal with the aches and pains of a sailor's life.

"I've been doing yoga off and on for 40 years, so I knew some of the moves, so I would lead," he explains. "The balancing poses are particularly challenging on a rolling deck," he admits, "but it keeps me limber and loose and ready for duty."

Others have tailored the sessions to the needs of the sea. It's also spreading the other way: the skipper, George Mainguy, invented a yoga move to help the crew haul on the ropes.

"When we're heaving on the halyards, we use our knees and our body weight and we breath at the same time. We're incorporating it into our sailing routine," Sandy says.

I'm in the mood to explore. I ask him if he's ever been up the rigging.

"These feet have never touched that rope," he assures me, pointing to the flimsy ladder. I've seen others do it. How scary can it be?

Twenty metres up, I find out exactly how scary it can be. My knees start shaking and my hands are trembling and I'm pretty sure it's not just the swaying ropes. I start wondering at what height falling onto water feels like falling onto deck, and decide I don't want to find out. I wobble my way back down, taking time to enjoy the spectacular view.

We're sailing around Cape Breton on this real lighthouse route. Glace Bay clings to the cliffs as though it's afraid to step in the water. A few hours ago, I spotted a familiar face zipping past: Theodore Too, also on his way to Sydney.

The captain decides it's a fine day for sailing, so we're going to sail right into Sydney Harbour. Other tall ships lower their sails and turn on the engines, but we're sticking with nature. It's an immense undertaking.

The vast ship cruises hard for the shore, looking like it's about to beach itself, but at the last minute we work furiously to reverse the sails and she turns on a very big dime, racing for the opposite coast. We wait once more for the captain's command, hands ready on the halyards, and work like men possessed to reverse course again.

It takes three hours of tacking, but as darkness falls, we slide majestically up to the giant fiddle and fire our cannon in greeting. The shore is deep with cheering people and fireworks fill the sky.

At the start of the trip, bushy-bearded Tom told me about this: "Now I know what it feels like to be a pretty girl," he said of crewing an attention-grabbing tall ship.

As the Mist of Avalon gently docks, I know exactly what he means.

Jon Tattrie is a journalist and the author of *Black Snow*, a novel of the Halifax Explosion. Read his behind-the-scenes blog via [Jontattrie.ca](http://Jontattrie.ca).

---

---

**EDITOR'S NOTE:** Clay Spencer recommended this article, and I agree that it is a must read for all shop workers. The article was written by Brew Dude (wonder if that is his real name). It appeared in the August issue of *American Iron Magazine*.

## Common Cleaners Can Turn Into Poison Gas

Yep, I thought I was a goner this time! How simple it was to get in trouble. After seeing and reading so many warning labels, we tend to no longer pay them any heed. We buy chemicals and sprays at a local parts house and think 'How can this be so bad, health-wise, if I'm buying it over the counter?' Here's how a small whiff of smoke, almost dropped me where I stood.

I had a rush job to do welding four diesel tanks. I had to patch where they were pitted by road salt corrosion. Normally I spray a little carb cleaner on the spot I'm going to weld, wipe it off, and then preheat the area with an acetylene torch to get rid of any solvents. Where I normally get carb cleaner was sold out, so I got a can of brake cleaner and went through my regular routine. To be on the safe side, I even had the shop door open and the exhaust fan on.

I started TIG-welding on Thursday afternoon and had no problem at first. But, when I started welding across a really pitted area I found a couple of drops cleaner that were lurking in a deep dimple. As I came close to the cleaner, a small puff of white smoke popped up, and I almost passed out. I made it outside and sat for awhile in the fresh air. After about 10 minutes, I went to the office and sat at the computer to check the warnings on the brake cleaner can I used. That's when my whole left side started shaking for about 10 to 15 minutes. (I found out later I was having a seizure.)

When I was able to control myself again, I read the can's warning: "Vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene." After reading about hydrogen chloride. I started researching phosgene. The active chemical in the brake cleaner is tetrachloroethylene. When this chemical is exposed to excessive heat and the gas argon, which is used in MIG and TIG welding, it produces phosgene. Phosgene gas can be fatal with a dose as little as four parts per million: basically a single small puff of smoke. Symptoms can be delayed from six to 48 hours after exposure. There is no antidote for phosgene poisoning. If you do survive, the long-term effects can be chronic bronchitis and emphysema.

My breathing still was hard a few hours later, but I felt a little better, so I didn't go to a hospital. The chlorine taste and smell in my nose and mouth were still strong. About midnight, I started coughing and my chest started hurting, but I thought that this would pass after a nights sleep. The next day (Friday), the symptoms got worse and my kidneys started hurting, so I drank a bunch of liquids and cranberry juice. For the next four days. I was constipated and only urinated a lot of clear fluid with no smell. Though sometimes I felt okay I was really in a lot of pain on and off for the next several days, as well as weak and tired. Then my urine became very dark and smelt terrible.

By the next Monday, nine days after the poisoning, I lost all balance. I was confused and could hardly talk, so I finally went to the emergency room. My Symptoms were low O<sub>2</sub> level, sugar levels out of control, vertigo, and I was hurting badly in my entire chest. I was admitted and put into ICU. My kidneys had probably shut down for those first four days. My lungs were damaged, so I had to be on O<sub>2</sub>. I had to be on insulin to keep my sugar in check. Since there is no antidote for phosgene, all I could do was try to rest and hope I got better. After CT, MRI, EKG, and EEG tests, as well as several blood tests it looked like, at least for now, there is no permanent damage. However, the MRI showed fluid in my sinuses and a buildup of fluids near my brain. The phosgene scarred my sinuses, which then became infected The three doctors I saw said I was really lucky to make it.

After four weeks, it appears that I may have emphysema and chronic bronchitis. I'm on nasal medicine and an inhaler. My sinuses are severely scarred, and my smell nerves are damaged. I still have that awful chlorine taste and smell. I may also have pancreas damage. The insulin that I was taking had little effect on my sugar levels, so I'm now on some stronger medicines.

So why am I telling you all this? I hope to save someone from an easily avoidable severe illness or even death. The cleaning sprays commonly found in thousands of bike shops across the country can be just as dangerous if improperly used. Read the labels and warnings? Lookup the chemicals you use. Just because you got away with it before, doesn't mean you won't get in trouble the next time.

---

---

## 2010 ABANA Conference

**Agricenter International  
Memphis, Tennessee**

**June 2 – 5, 2010**

### Demonstrators for the 2010 Conference

JOE ANDERSON (of NC) will do one demo on forged kitchen ware and 2 sessions on sculpture

MARK ASPERY (of CA) will do tool-making demos.

GERALD BOGGS (of VA) will do a demonstration; subject TBD.

DAN BOONE (of VA) will do 2 demo sessions on dragon's heads and his other products

DAN AND JUDY BOONE will do a round table talk and question session on how they market their wares (other panelists TBD).

PHIL COX (of MO) will do a session power hammers on getting the most out of them including both mechanical and air hammers, he will also cover tips on checking used hammers and rebuilding them.

DAN NAUMAN (of WI) will demonstrate repoussé

**Continued On Page 26**



# Scholarship Report – by Robert Timberlake

## Mastering the Hamon

About twenty five years ago the W. Dean Taylor scholarship was instituted as part of the purpose of NC ABANA and so far has been a rounding success. For that period of time I had always hoped to be in a position to be able to take advantage of this program and this past May that desire became a reality. The kids being grown and on their own and a change in my professional position allowed time and resources to be allocated in this direction.

A smoldering interest in bladesmithing had already resurfaced when I had started attending some of the more local activities of the American Bladesmith Society. Rubbing elbows with this group of enthusiasts and looking at the work being produced today made a strong impression on me to pursue this art and craft and expand and improve my knowledge and skills. A look through the Campbell Folk School class schedule showed only one bladesmithing course for the 2009 classes and it had filled the previous summer within a few weeks of being announced. The continued search led me to Don Fogg's web site and a posting of his teaching schedule. Mastering the Hamon was the class that interested me the most and I signed up.

The hamon, or temper line, is the visible line along the length of a Japanese sword which is created by the differential heat treatment typical of these weapons. This line and the slight difference in shade of the cutting edge and back is due to the difference of the crystalline structure of the steel after heat treatment.

This class had nothing to do with the actual forging of blades. We were to arrive with forged and filed/ground to shape ready for heat treatment blades of plain carbon steel. Alloy steels will not show a temper line due to the affect of alloying elements. Following a very busy couple of months I had four blades ready for the class, one of W1, two of 5160 and one of SYS (Scrap Yard Special) steel that has made excellent blades in the past.

The first day of class started in the classroom for several hours discussing heat treatment of steel and the how and why of hamon. It isn't just heat treatment. To get distinctive results also requires a somewhat peculiar polishing method. Buffing is a no-no as it has a tendency to burnish the surface dulling the visual difference. All the polishing we did was abrasion by hand, no power equipment.

To get the hamon effect a coating of a refractory material is applied thick on the part that is to remain unhardened, the back, and very thin on the part to be hardened, the cutting edge. The refractory material used for the class was a commercial anti scale compound dry powder (available from Brownell's gunsmith supply) we mixed with water and applied with a paint brush or rubber spatula. This coating can be manipulated to achieve a desired result which Don demonstrated in the shop after classroom session. He first painted a very thin coating of sloppy wet refractory over the entire blade and about half of the tang and allowed this to dry. A thicker coat, about 1/16-1/8 inch thick, of pasty refractory was then daubed along the back and over most of the blade except the edge leaving a somewhat wavy border where thick and thin meet and defines the boundary of the hamon. He then explained and applied ashi lines, thin lines of refractory applied with the edge of a spatula. Angling the ashi toward the back is supposed to leave a narrow but very visible hamon and angling them toward the point is supposed to produce a wider, wispy in spots, line that looks somewhat like a thin trickle of smoke. The how and why of this is a mystery. This coating was allowed to dry thoroughly and then into the hot furnace. At critical heat the blade was quenched point first in oil, then the remains of the refractory was scraped off. A quick inspection for cracks and then into the tempering oven for a one hour soak.

Then it was our turn. We did all of our heat treating the remainder of the day and the next morning. The remainder of our time was at the bench polishing. Starting with 180 grit wet or dry sand paper and going to 2000 grit. The paper was cut into strips and adhered to a length of cold rolled steel bar with spray on adhesive. Other abrasives such as pumice and rouge were used with cotton swabs. Of the four blades I brought, both the



5160 blades were destroyed, one cracked during heat treat and the other when I was a bit too extreme when trying to straighten it. The W1 blade had a barely visible hamon toward the back and the SYS blade came out quite nice. The W1 blade will be heat treated again for a second go at it.

Fast forward to the required demo I did at Jason Crafts shop in October. By then I had another SYS blade ready for heat treat. For the refractory I used some furnace mortar (Heat Stop 50) I have on hand from another project. If it is refractory and will stay on the blade through the rigors of heat treat it should work. Jason has a nice electric heat treat furnace which I am sure helped with the successful first step of hardening the blade. Tempering was done in a small toaster oven. Time restrictions allowed only about one fourth of the blade to be polished which did reveal a hamon. Since then the blade has been finished revealing a very nice finished product.

The New England School of Metalwork is a small school, an extension of a industrial bottle gas supplier next door. Along with the blacksmithing programs they teach welding and certify welders. The shop is well equipped with both coal and gas forges, power hammers and treadle hammers. Don Fogg is a superb craftsman and teacher. This entire experience was thoroughly enjoyable and well worth the effort and expense. My thanks to the school and staff and to all of NC ABANA for making this possible. Thanks also to my wife, Linda, for joining me on this excursion ratcheting the enjoyment factor up a few notches.



***Refractory coated blade ready for heat treatment. Note ashi lines.***



***October demo blade finished***



***New England school heat treat furnace, made from salvaged propane tank. Note refractory coated sword blade hanging vertical left of tank center***

**EDITOR'S NOTE:** Below is a copy of letter received by Robert from Ellie Kinnaird, North Carolina State Senator. The newspaper article referred to was in the Roxboro – Courier Times. That article is produced elsewhere in this issue. Great recognition Robert



North Carolina General Assembly  
Senate

SENATOR KINNAIRD  
23RD DISTRICT  
OFFICE ADDRESS: 2115 LEGISLATIVE BUILDING  
16 W. JONES STREET  
RALEIGH, NC 27601-2808  
TELEPHONE: (919) 733-5804  
(919) 754-3268 FAX  
EMAIL: elliek@ncleg.net  
DISTRICT: 207 WEST POPLAR AVENUE  
CARRBORO, NC 27510  
TELEPHONE: (919) 929-1607

October 15, 2009

COMMITTEES:  
CO-CHAIR:  
APPROPRIATIONS ON JUSTICE AND PUBLIC SAFETY  
MENTAL HEALTH AND YOUTH SERVICES  
VICE CHAIR:  
AGRICULTURE/ENVIRONMENT/NATURAL RESOURCES  
MEMBER:  
APPROPRIATIONS/BASE BUDGET  
FINANCE  
HEALTH CARE  
JUDICIARY I  
RULES AND OPERATIONS OF THE SENATE

Mr. Robert Timberlake  
607 Moonshine Ridge  
Roxboro, NC 27574-6872

Dear Mr. Timberlake:

I enjoyed reading the article in the newspaper about your unusual avocation of blacksmithing. I believe that most people think of ponderous horseshoes when they hear the term "blacksmith", rather than the gleaming, elegant knife blades that you skillfully produce. It must be fascinating learning the history as well as the practice of this ancient craft. I am also interested in silversmiths such as Paul Revere, because I admire the beauty of his work and, like yours, the difficulty required to produce the finished product.

Thank you for demonstrating your blacksmithing skills to the public. It is a wonderful opportunity for others to learn through "living history" and appreciate your excellent craftsmanship. Best wishes to you and the other members of the NC ABANA.

Sincerely,

Ellie Kinnaird

**EDITOR'S NOTE:** We wish to thank the Roxboro Courier Times for permission to reproduce Vicki Berry's article. Unfortunately I was not able to get the photographs that accompanied the article.

## Hobby, Vocation and Avocation

### Demonstrating the Art of Blacksmithing

**BY Vicki Berry – Lifestyle Editor, Roxboro Courier Times Newspaper**

The North Carolina Chapter of the Artist Blacksmith Association of North America (ABANA) is a non-profit organization run by volunteers who are dedicated to promoting and sharing the art of blacksmithing.

That is exactly what occurred in Roxboro on Saturday, Sept. 26, when Roxboro resident Robert Timberlake held a demonstration in the shop of fellow blacksmithing enthusiast Jason Craft.

Timberlake told *The Courier-Times* he planned “to show how to do a differential heat treatment of a knife blade to show the temper line, or hamon, as seen on a Japanese sword.”

The daylong demonstration involved heat treating, finishing and forging from bar stock with a knife blade being the end result. At the end of the day, according to Timberlake, “The blade I heat treated was a success as was the forging.”

NC ABANA is the North Carolina Affiliate of the Artist Blacksmith Association of North America, an organization of men and women who are practicing and preserving the skills of blacksmithing. The organization includes hobbyists, farriers (people who shoe horses), blade smiths (knife makers), architectural fabricators, sculptors, museum interpreters, furniture makers, and other artists and craftsmen, who utilize the traditional skills of the blacksmith to create useful and artistic objects.

The recent quarterly meeting of the state chapter was two-fold — a time for blacksmithing artists to get together and share their affinity for the craft as well as the opportunity for Timberlake, who is one of the few charter members remaining in the group, to fulfill a requirement of a scholarship received from the organization.

As president of the organization at the time, Timberlake said he pushed to get the scholarship started and “after 25 years I am able to take one.”

Timberlake is not a newcomer to blacksmithing. In fact, he recalled that he began the craft approximately 40 years ago when he was out of school and unemployed and took a course in horseshoeing “and I branched out from there.”

He refers to the craft as his “hobby, vocation and avocation” and in his spare time — when he has any spare time, he quipped — he is standing over hot coals or pounding away on the anvil.

These days, the majority of his time in the blacksmith shop is spent crafting knives.

As the recipient of the club's scholarship, Timberlake spent four days in a workshop in Maine to learn from a master blade smith.

To meet one of the requirements of the scholarship, Timberlake held the demonstration for fellow blacksmith enthusiasts to demonstrate his newly-learned skills.

“Metallurgy (the study of the structure and properties of metals) has come a long way in the past 100 years,” said Timberlake. “It is a fascinating subject.”

In addition to quarterly meetings, several of the blacksmiths get together for informal meetings. According to Jason Craft, who has been blacksmithing since a teen, he and several enthusiasts meet on Sunday afternoons to share their skills and ideas.

Craft said he became interested in the craft when he observed a blacksmith at work in Williamsburg and years later, Craft continues that interest in blacksmithing by spending time in his blacksmith shop whenever he is not working at his day job welding, either in his business shop or in the field, as owner of Roxboro Machine Shop on Depot Street.

Craft has established his blacksmith shop in a rural corner of the county purposefully with a distance between him and his neighbors. “I can come out here at 1 a.m. and beat and bang on an anvil and no one complains,” he said.

Craft says his ideas take the form of lamps, hangers and steel sculptures, which in turn are often given away as gifts. “I am more into knives at the present time,” he noted.

The hobby is not without risk as Craft admits he has been burned “bunches of times.” But thankfully not so bad that he has had to be admitted to the hospital — treated, but not admitted, he emphasized.

Whatever the end result, Craft is quick to point out that blacksmithing for him is a stress relief. “My mind is on what I am doing and nothing else,” adding that he does not intend to turn blacksmithing into a business.

“When it becomes a job, it takes the fun out of it. And, I wouldn’t try it as a living — too much time and not enough money. You can’t compete with a \$12 item forged in China,” he said.

Twice a year the North Carolina chapter of ABANA members converge to hold demonstrations — one at the State Fair in Raleigh and at the Dixie Classic Fair in Winston-Salem. The organization offers handcrafted items for sale at the fairs as a way to support the group and fund scholarships, plus with the help of members of the group, ongoing demonstrations are held throughout the event.

“We demo the entire time and fair folks stand around and watch us work,” said Timberlake. “The fair provides an opportunity to educate a large number of people.”

NC ABANA is a non-profit organization of approximately 100 members dedicated to promoting and sharing the art of blacksmithing, and according to Timberlake, more are welcome. (**EDITOR’S NOTE:** NC ABANA has about 200 members.)



***Robert Timberlake (Extreme Right), Instructor Don Fogg (Third From Right), and Robert’s Classmates and Their Blades the At New England School of Metalwork***

# North Carolina State Fair, 2009 Report

## By Parks Low

*NC ABANA Members: Here is a summary of the Heritage Forge sales with a list of the demonstrators for the 2009 NC State Fair.*

This year's fair ran for ten and a half days. There were three days when it rained. Otherwise the weather was good. This year, the fair had a record for attendance. The gross sales for Heritage Forge were \$16,419.00. The chapter's share was \$1,847.72. There were eleven individuals that brought items for sale this year.

Workers and demonstrators this year were: Al Andrews, Roger Barbour, Chris Bradley, Eric Campbell, Eric Carterette, David Clement, Jason Craft, Don Dillon, Garret Dunn, John Fluke, Allan Green, James Hodge, Jim Kennady, Jim Kroeger, Chris Lee, Parks Low, Camilla Low, Chris Miller, Lee Miller, Lenny Moore, Brian Nalley, Dan Ritchie, Billy Siler, Dick Snow, Ashby Spratley, Randy Stoltz, Chris Taylor, Kevin Teachey, Robert Timberlake, Paul Tooley, and Lyle Wheeler.

Gross Sales for the last ten years have been as follows:

Year	Gross Sales
2009	\$16,419.00
2008	\$19,990.50
2007	\$20,744.00
2006	\$ 15,276.50
2005	\$17,164.50
2004	\$17,356.00
2003	\$20,573.00
2002	\$15,410.20
2001	\$12,456.50
2000	\$14,557.00

As you can see from the above list, sales have been declining since 2007. There are several contributing factors here. First, is the economy. Second, is the participation of the members. Each year in the last three years we have seen fewer items brought to the shop for sale. **Chapter members should remember that you do not have to demonstrate in order to sell what you make at Heritage Forge.** Items brought to the State Fair to be sold have an impact on several levels. As each of us work, we can make just so many items before they start to pile up. The fair allows each member a retail outlet for what you have made and gives you room in your shop to make more of the same item or something new and different. Third, a larger selection of items in the sales area makes for a much better display and shows the public the wide variety work that we are capable of producing.

It costs us \$700.00 in rent to the State Fair for the building and \$350.00 for liability insurance. The State Fair requires the liability insurance. This insurance also covers the chapter at all of our meetings at Heritage Forge.

Next year we will need to purchase a new supply of coal for the forge. We have managed, for the last several years to get by on at least 1000 pounds. It is wise to purchase in bulk where possible. If anyone can help with the transportation of the coal in bulk, please give Al a call. It would be real nice if we could get this taken care of now instead of waiting until September of next year.

Since I have been at the State Fair for so many years, I was asked to make some suggestions as to what will sell at the fair, and what will not easily sell.

### **Items that sell well:**

- Door hardware, handles, latches, and hinges
- Kitchen items, such as small pot racks, forks, spoons, ladles, spatulas, knives and cleavers.
- Hooks of every description. Please note that we will not sell any hooks that are cut out of sheet steel using a CNC type machine.
- Brackets for hanging plants or hardware items for the garden.
- Candle stick holders of all types
- Wall sconces and lighting fixtures
- Jewelry made from steel.
- Leaf key rings.
- Fireplace tools have been a moderate selling item provided they are not too elaborate.
- Dinner gongs. I have made and sold a lot of these over the years although sales of this item have been falling in recent years

### **Items that do not sell well:**

- Large items do not sell well. It is a pain to get something large and heavy from the shop back to your car in the parking lot.
- Shutter catches
- Sculpture

Pricing should be from \$3 to \$5 on the low end and up to less than \$30 to \$50 on the high end. It would appear that this year that was what the market would bear. Should you choose not to demonstrate; instead of donating 10% of each item we sell, we require a donation of 20%. We really needed more of a selection of items for sale in order to keep our sales up. The only rule for sales items is that you must make the item yourself in your shop. There will be no items for resale in the shop.

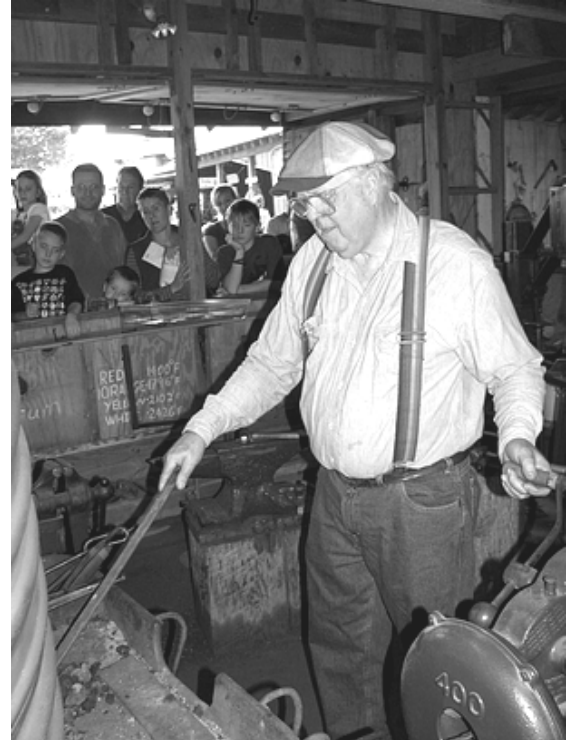
**The bottom line here** is we need more participation in the operation of Heritage Forge. This is your chapter and in order to make it work we need an active and involved membership. All of what comes out of the operation of this exhibit brings the chapter revenue and new members. We probably handed out 150 pamphlets that includes a membership application during the fair.

# Images from Heritage Forge at the 2009 NC State Fair

Photos by Randy Stoltz and Dick Snow



*Don Dillon Working the Crowd*



*Don Dillon*



*Jim Kennady*



*Corner of the Heritage Forge Selling Area*



*Lenny Moore*



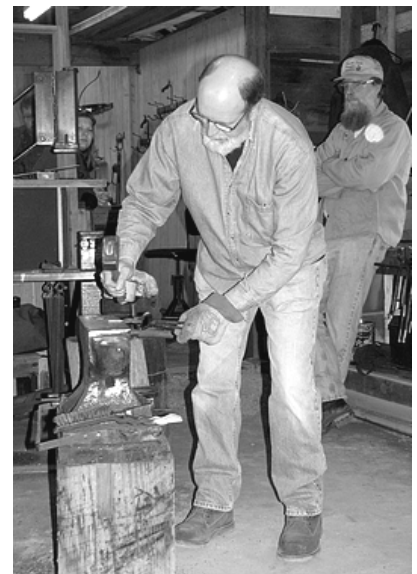
*Randy Stoltz*



*John Fluke*



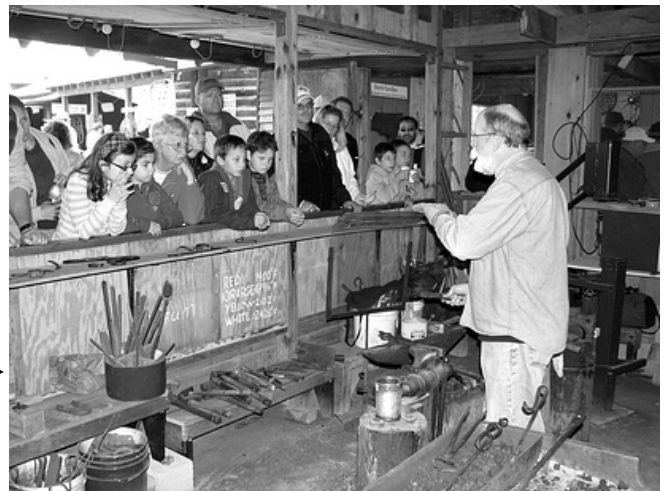
*Kevin Teachey*



*Dick Snow*



*Eric Carterette*



*Dick Snow And An Attentive Crowd*





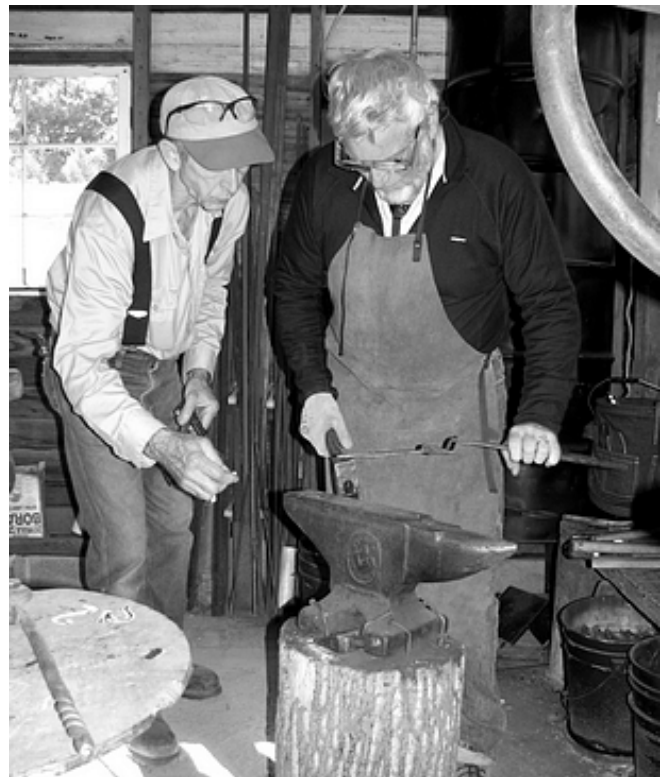
*Allan Green*



*Jason Craft*



*Garret Dunn*



*Al Andrews and Allan Green*



*Jim Hodges*



*Robert Timberlake*



*Brian Nalley*



*Paul Tooley*

## 2009 Dixie Classic Fair – Marshall Swaringen

The Dixie Classic Fair had a ten day run starting on October 2<sup>nd</sup> and the last hammer fell around 11PM on October 11<sup>th</sup>. Special thanks to Billy Phelps, George Manuel, and Richard Howard for completing the clean up and set up on October 1<sup>st</sup>. The shop and museum were ready for the start of the fair.

The Triad Area Blacksmiths were well represented. We had more than twenty four different members doing demonstrations throughout the fair. Most were there for many days. Nails and leafs were the main attraction for the younger crowd. Souvenir nails went home with lots of the youngsters. Even some real work was performed. A couple of parts were made for some of the old tractors and hinges were made for one the old buildings. Some of the viewers requested special items and our members filled the request or took orders.

Lenny Moore from the Triangle Area Blacksmiths joined us for a couple of days. We must not have abused him much; he said he would return next year. We also had a visitor, Ron Howard, one night from the Old Dominion Blacksmith. With permission from his wife Ron accepted a pair of safety glasses and keep one of the anvils busy for a couple of hours.

The Dixie Classic Fair has all of the different foods that all fairs have. But the blacksmith shop cooks meals for the members to enjoy. Billy Phelps is our head cowboy cook. Members are always bringing sweets to share. Billy prepares some great meals over the camp fire. The evening meals were deer roast with all the fixings, a fish fry, pork tender loins with sweet potatoes, and a chicken stew supplied by Larry Crews.

The camp fire is a great place to show the different items made in the blacksmith. But when the sun goes down after the first couple of nights, the picker came out. There was picking and singing by the camp fire. Watching the crowds stop and stay awhile, tells the story of how good the guys were.

We had lot of viewers that asked many questions and wanted to know how they could be part of our group. Every member was ready to give information about our club and NCABANA also. Hopefully they will join us at a meeting and become one of us.

I want to think everybody that helped to make this fair a great success for the blacksmith shop. The list of names is too long to print here. Great job by all and I do believe that we will get a few new members from the 2009 Dixie Classic Fair

---

---

## 2010 ABANA Conference – Continued From Page 13

DARRYL NELSON (of WA) will do a demonstration forging of animal heads.

STEVE PARKER (of IL) will demonstrate power hammer tools and forging; he and Phil Cox will do separate demos but they will compliment each other

TOM LATANTE (of WI) will lead the “Meticulous Metalsmiths” forging a lock during the conference.

MARK ASPERY will run the “Green Coal” teaching station, with DARRYL NELSON and GERALD BOGGS helping him.

SHELLEY THOMAS -- who regularly demonstrates at the Kew Bridge Steam Museum, London, UK, will round out the international demonstrator list for the conference.

**Early Bird Conference Registration Rate is \$199. This rate will increase after December 30, 2009**

**You can download the conference registration form at:**

**[http://www.abana.org/downloads/conference/ABANA\\_Conference\\_Reg\\_Form-92609.pdf](http://www.abana.org/downloads/conference/ABANA_Conference_Reg_Form-92609.pdf)**

**If you do not have a access to a computer, send me a self addressed, stamped, envelope and I will send you the form.**

**EDITOR'S NOTE:** This article was originally printed in the "Silk Hope Ruritan 2009 Special Events Program" We thank Gary Nunn for permission to reprint this article. Check out the Silk Hope Ruritans at [www.SilkHopeRuritans.com](http://www.SilkHopeRuritans.com)

## Working by Hand (is in your mind) - by Peter Ross

When you hear that phrase "working by hand" do you think of the quiet days on your grand-father's farm, when work was done at a slow steady pace and the noise of a diesel was years in the future? Working by hand brings up an image of peaceful, careful work - something to dream about when you're rushing from one job to the next. Anyone who has tried hand tools now and then knows that they are slower than power tools. How did anyone get things done? If they were farming by hand and washing by hand, and cooking by hand, how did they have the time to build the houses and barns that have stood in this county for 100 years? And build them without power tools.

While some hand tools may be slow, there are ways to make the job go faster. One of these ways is to use fewer numbers. Good workmen back then could add or subtract or read a rule as well as anyone alive today, but they measured without using numbers. How do you do that? Calipers or dividers or a story stick are just as accurate as a tape measure but can be read instantly with no calculations. In some instances they simply held the piece up to the space and traced right on the board where to cut.

Another way to speed up the work is to eliminate accurate measuring whenever you can. A good example in the new blacksmith shop is the strap hinge for the big double doors. Instead of drilling the mounting holes in each hinge they were punched at the anvil while the hinge was hot. Since the hinge was already hot in order to beat out the taper, punching didn't add much time. The holes are not perfectly spaced, but don't need to be. Since only an approximate spacing is needed, quick eye judgment is sufficient and the holes could be punched without measuring.



Even the size of the hole can be approximate. To make a hole you drive a punch through the hot bar. By making the punch taper towards the tip you can make the hole bigger by driving it through farther. As long as you keep a sample bolt handy to check once in a while, you can make holes that fit without having to be precise. Again, no need for numbers.

The hinges themselves vary too. At a glance they may seem like duplicates, but on closer inspection each is a different length and shape. To make them more alike would increase the time considerably, but not improve the function at all.

When you are in the habit of working this way you start thinking about which details matter in a piece and which ones don't. There are always a few things that do matter. The hinge eye should fit the hinge pin. The hinge should be flat so it mounts to the door. But it can be longer, or shorter, or the holes can shift. This is the key to working faster once you have the basic hand skills mastered. It allows you to concentrate on the details that are important without being distracted by the ones that are not. When you watch someone work this way, it can seem like the work comes out perfectly, with no measuring or figuring, as if by magic. Actually, It's just knowing what to focus on.

Most of the work in a blacksmith shop relies on this skill. A Smith's work is the repair of wagons, plows, tools -anything that wears out or breaks. Instead of ordering replacement parts, a smith has to make one from scratch or salvage the one that is broken. There's often a lot of latitude in picking the right size of iron and determining just how to make the thing. Even so, most jobs are similar to the previous ones. A clevis for a plow doesn't vary too much from one farm to the next.

There are many wonderful new power tools available today, and they have changed the way we plan and execute the work. Substituting an older hand tool for a power tool can be awkward and the tool is often blamed. This is not fair, as the hand tool was meant to work in a different environment- one of well practiced skills, quick eye judgment and selective accuracy. If the workman has these skills, the tool is a delight. This is what makes for speed.

I doubt older workmen debated alternative systems and the pros and cons very often. They just learned the ways their masters taught them, and got a lot done

---

---

**EDITOR'S NOTE:** This following was also originally printed in the "Silk Hope Ruritan 2009 Special Events Program". Again, we thank Gary Nunn for permission to reprint this article

## The latest Ruritan Project

The twenty by thirty foot blacksmith and wheelwright shop which has been carefully reconstructed on the grounds at Silk Hope Ruritan's Old Fashioned Farmers' Day hasn't looked this good in a long time. In it's original state, the structure was a long since abandoned twenty by fifty foot coal warehouse. Built next to an old rail line in Gulf, NC the structure was almost completely covered in vine and bush when Jackie Johnson, Peter Ross, and Barker Edwards came across it.



For readers not familiar with this area, Gulf is a small community in southern Chatham County situated just east of US-421.

A testament to a bygone era, the blacksmith shop was once a coal warehouse for the Deep River Coal Company. J.R. Moore of Gulf remembers the warehouse sitting next to the rail line just across the tracks from the Gulf office and depot. The coal was mined approximately two miles west of the depot and was sold locally and shipped from the warehouse. Samples of the original coal sacks can be seen in the shop. Deep River Coal closed its doors in 1936.

The original structure, built to railroad specifications, was post and beam with bat board construction. The posts are ten feet apart. Guests of Old Fashioned Farmers' Day with an appreciation for architecture will note the unusual design. The corners and joints have mortised seals. Each mortise joint has an extra strong splice. And the plates are all tied together with one and one-half inch diameter wood pegs.

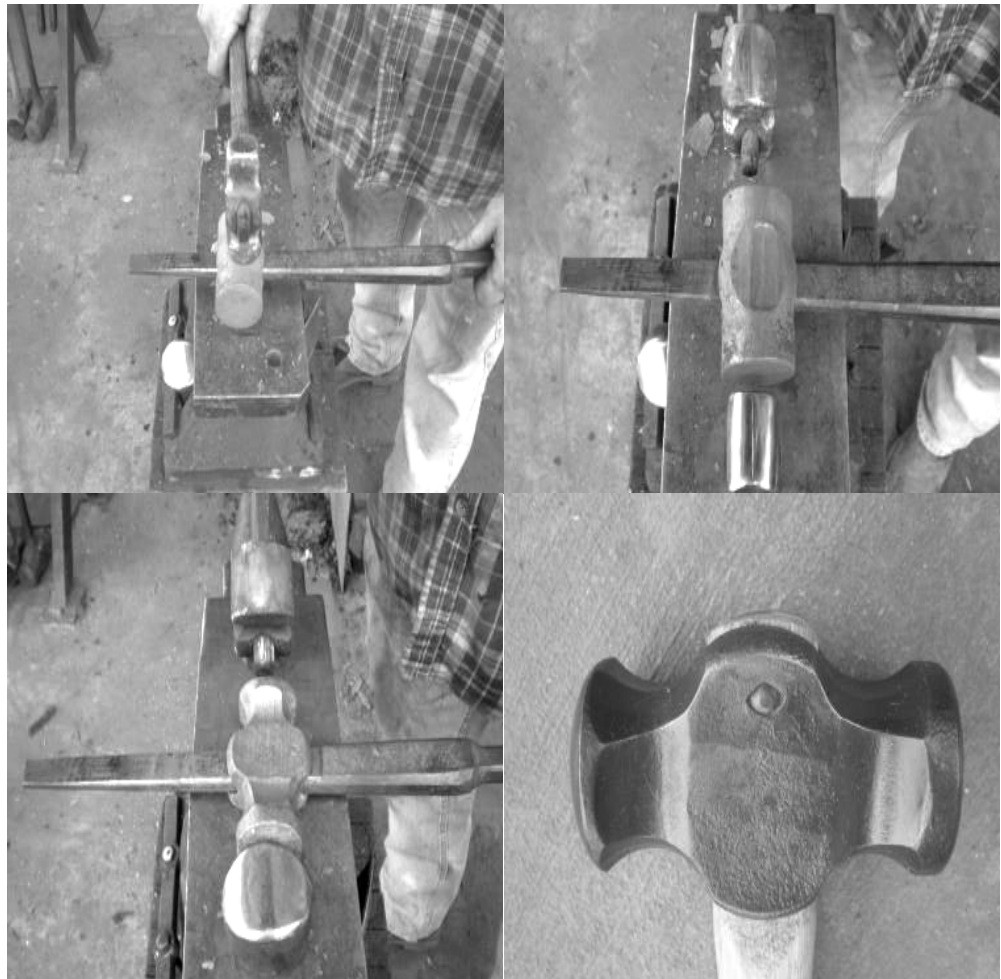
The "new" blacksmith shop typifies railroad construction methods of the 1880s. It is the last known coal warehouse in the Deep River area.

## Brian Brazeal Visits Big Blu – by Randy Calhoun

Back in September of 2009 Brian Brazeal and, soon to be wife, Karen took off on a cross country road trip to teach blacksmithing classes and celebrate their honeymoon. When I found out that they were passing through North Carolina I just had to try and get something planned for us local smiths. After talking to Karen about the price, I started talking to other people about the possibility of the workshop.

I do most of my blacksmithing at the high school where I teach, so I needed to find a shop that could accommodate (4) forges, (4) anvils and eight students. Soon after talking with Andrew Chapman, he called and told me that Dean Curfman, his boss at Big Blu, offered to host the class. I was thrilled to hear this especially when he told me that Dean only wanted enough money to pay Brian's fee. That was an extremely selfless act that enabled Brian and Karen to continue funding their travels as well give 12 local blacksmiths an affordable chance to learn something new. To cut down on confusion, I turned over the planning of the event to Josh Smith and Andrew Chapman. They put on a great event for us.

We started on Friday October 23 with a hammer making clinic. Brian demonstrated how to make a rounding hammer, with a striker, and then circulated to guide us as we gave it try. His techniques are based on the education he received from Alfred Habermann in the Czech Republic. We used the Habermann system of top and bottom fullers to spread the "cheeks" along the taper of a drift for the hammer's eye. Brian told us that Habermann called this "a house for the handle" due to the added stability gained from the larger eye. By the end of the day we all had a new hammer.



The following day we watched Brian demonstrate horse heads, a silver ring and various fullering techniques. He has a very thorough teaching style that demonstrates his decades of experience coupled with a modest, approachable demeanor. By the end of the weekend my brain hurt from all the new skills learned and the rest of my body hurt from the large amount striking. If you ever get a chance to attend a Brian Brazeal class or demonstration don't pass it up. You'll learn something new, maybe multiple things, and get to witness the forging style of a true master smith. Thanks again to Brian, Karen, Dean, Josh and Andy.



*Dean Curfman and Brian Brazel*



*Andy Chapman in the Center*



*Calhoun Brothers*

**EDITOR'S NOTE:** In the last issue of "The Hot Iron Sparkle" I published a newspaper article and photograph of the marker, NC ABANA member, Bill Tanneberg made for his wife's grave. Unfortunately, the second page of the article got stuck in the envelope and I missed it. With apologies to Bill, here is the complete article with the photograph of the marker.

## Grave Headstone Made By Bill Tanneberg

Article from the Sauk Prairie Eagle by Jeremiah Tucker

Using a massive piece of metal found for him by his friend, the famous artist Dr. Evermor, Bill Tanneberg recently finished making his wife's gravestone.

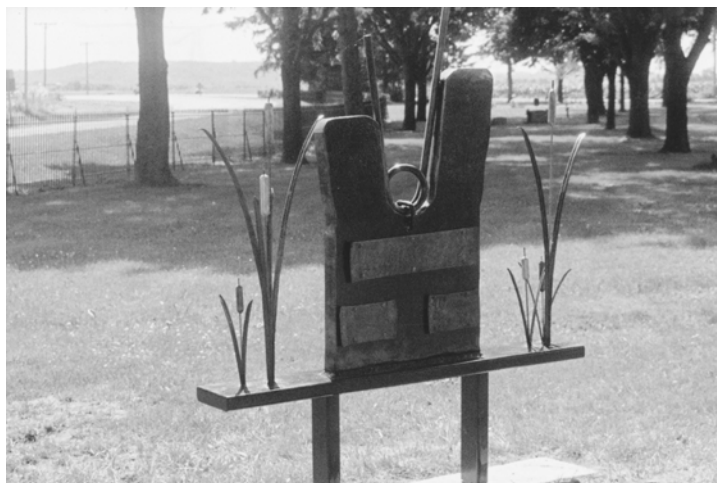
His wife, Deanna, died last year in June, but last week Tanneberg finally placed her gravestone at her burial place in the small cemetery at the corner of Highways 12 and Z.

Ten years ago Tanneberg got into metal working, and he said he wanted to make something more personal for his wife of 43 years than a "cold piece of stone".

Months before constructing the gravestone he carried a sketch of it around in his pocket, often taking it out to look at it.

The 900-pound structure dips in the middle where a piece of brass twists up from it and forms a circle - symbolizing a wedding ring.

On either side of the metal are brass cattails, a reoccurring motif in Tanneberg's creations.



**Grave Marker Stands 6 feet tall**

Last year Tanneberg explained the significance of his design.

"We're apart now, but we're still married," Tanneberg said at the time. "We're split but we're still together."

The gravestone is nearly a foot taller than Tanneberg who, approaching 70 years old, stands around 5 feet tall. He estimates it took him between 80 and 100 hours to complete.

For years he and his wife worked as clowns in local parades and church skits, Tanneberg said — she played the big clown and he the small one — and when he set her gravestone in place, 10 people showed up just to see it.

It looks nothing like any other gravestone in the cemetery. It's utterly unique.

Tanneberg, who talks little and when he does he speaks with a slight stutter, said he knows his wife loves it.

"That's how Deanna knows it's hers," said his neighbor Elizabeth Bromley. "She'll see it and say 'Bill made that one'"



**EDITOR'S NOTE:** This article was originally printed in the Fall 2005 issue of "Hammer's Blow". It is from a series of educational articles, directed towards beginning blacksmiths, made available by ABANA

## CONTROLLED HAND FORGING

# Cutting a Bar

by Dan Nauman

Illustrations by Doug Wilson

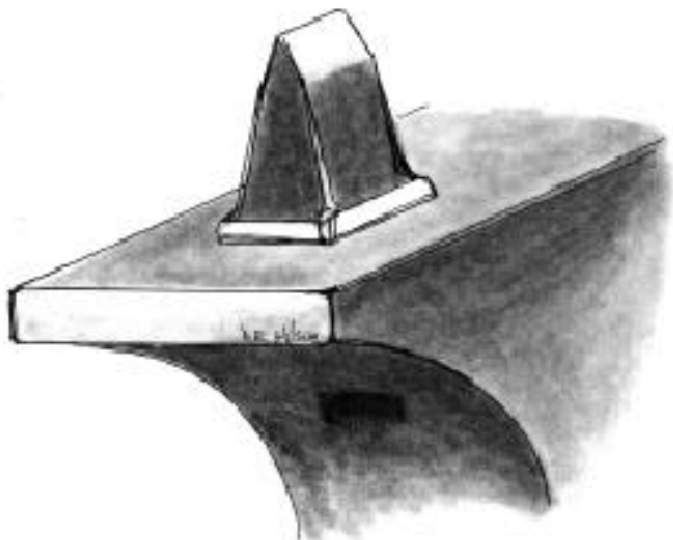
### Lesson #13

*Definition:* Cutting a hot bar using the hot cut hardy.

Note: A hot cut hardy has a cutting edge of about 25 to 30 degrees. A cold cut hardy has a cutting edge of about 60 degrees.

*Intent:* To learn to cut through a round, square, or rectangular bar using the hot cut hardy on the anvil, making a clean and even cut, with the resulting burr located in the center of the cross section of the bar. With the burr in the center of the bar, it will make life easier for following forging operations such as upsetting the end of the newly cut bar.

It must be said here that this method is not necessary for all cutting applications. A bar can be cut faster (and easier) by driving the bar down into the hardy from one side. This procedure will leave a burr on one side of the bar, and will also create an angled edge on the end. This edge may be desirable in some circumstances, i.e. starting a taper on the end of the bar, or an intentionally angled end of the bar to form a scarf.



*A hardy, with the cutting edge parallel with the anvil's edge.*

*Tools:* Anvil; hot cut hardy; hammer; soapstone or chalk.

*Material:* 1/2" square x 12" mild steel.

*Forging Dynamics:* The angle of the cutting edge of the hardy is important when cutting hot metal. With the narrower cutting edge of the hot cut hardy at 25 to 30 degrees, the material being cut will not only distort less, but the act of cutting will be more rapid. The wider 60 degree cutting edge of a cold cut hardy will tend to distort the material, i.e. creating a wide v-notch, and also potentially reducing the cross section of the bar from the additional hammer blows necessary to drive the bar through a thick wedge.

### Step One

Measure 2" from the end of the bar and mark that distance with soapstone on the bar. Place the cold bar on top of the hot cut hardy edge, with the 2" mark directly above the cutting edge. Turn the bar up onto its corner. With your hammer, strike the bar down onto the hardy, hard enough to make a good nick. This nick will be used to indicate where the bar will be cut when hot. (For alternative marking methods, see "Notes" at the end of this lesson.)

*Caution:* Nicking the corner of a bar on a hot cut hardy as in the manner of Step One could damage your hardy's cutting edge if you are using cold rolled steel. Cold rolled steel (as milled) is harder than hot rolled steel of the same type. Once heated, or normalized, the cold rolled steel's properties match that of hot rolled steel.

Also, this method is never a good idea if forging high carbon steel. Review the alternative marking methods at the end of this lesson, and use good judgement.

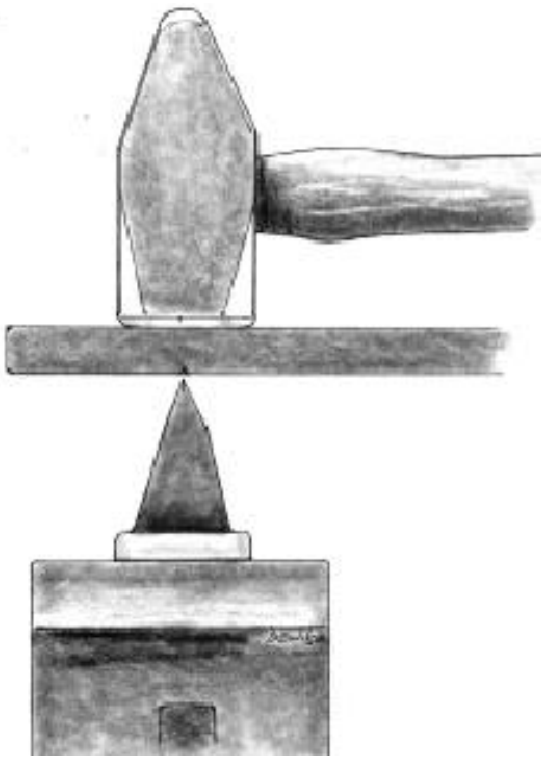
### Step Two

Heat the area to be cut to a yellow heat. Place the bar on the hardy, and move the bar back and forth to find the nick. Turn the bar onto its flat side (side "A") and hit a solid blow.

---

**CONTROLLED HAND FORGING**


---



*The hammer correctly placed over the bar and hardy .*

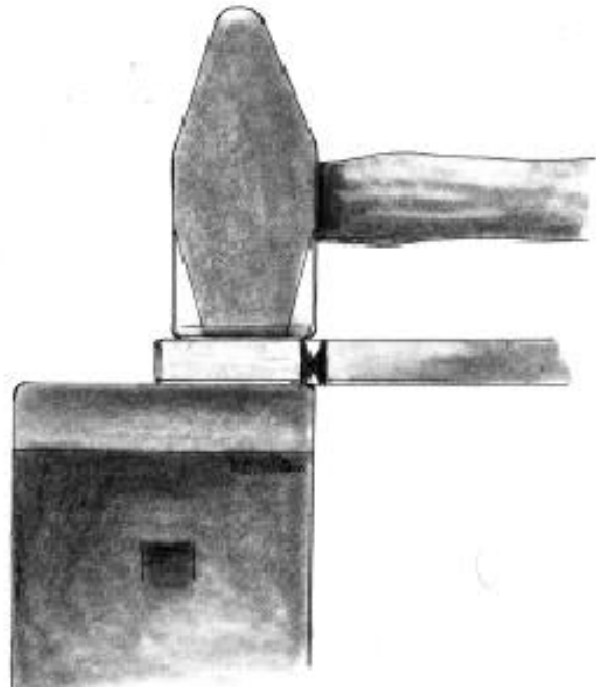
*Note:* Keep the bar parallel to the face of the anvil, and 90 degrees to the hardy, at all times during this process.

Turn the bar 45 degrees (right or left), and strike again lightly to mark the corner. Continue to turn the bar in the same direction to mark the next face with a sharp blow.

Reversing the direction you have previously turned the bar, turn the bar back to side "A", and then turn 45 degrees and lightly nick the corner. Proceed in the same direction to the next face, and mark this face with a sharp blow.

Next, turn the bar 90 degrees to the fourth face. Look down at the bar from a bird's eye view, and you should be able to line up the nicks on the bar with the cutting edge of the hardy. Once you have lined up the nicks, proceed to strike the bar solidly. Continue rotating the bar to each face, and continue cutting into the bar. Cut until the thickness of the area uncut is roughly 1/8".

*Note:* Do not cut the bar all the way through...as you may sever the bar, and you may damage both your hammer as well as the hardy. Severing the bar could also send the very hot, cut-end of the bar sailing across your shop.



*Weighting one end of the bar with the hammer to twist the bar.*

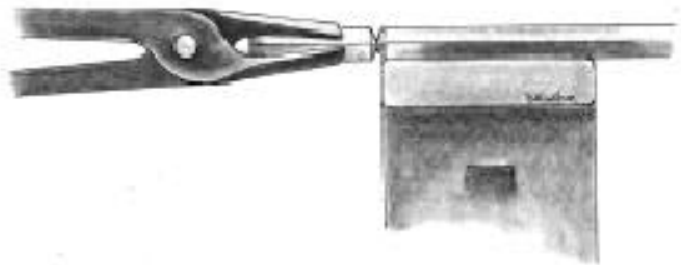
### Step 3

There are several methods to break off the end of the bar. You may:

A.) Hold the short end of the bar with tongs or hammer and bend up and down or twist until the end breaks off.

B.) Shear the end of the bar by lining the cut up with the far edge of the anvil and strike down on the protruding end with your hammer.

C.) Quench the area cut with water. This will mildly harden the bar so that the bar can be snapped off easily.



*Alternate method of holding the short end with tongs to twist the bar.*

---

**CONTROLLED HAND FORGING**

---

**Targets:**

- You should be able to cut the bar in one heat.
- The cut should be even. No "corkscrewing" or misalignment of cuts.
- The bar should remain straight.
- The burr left on the end of the bar should be centered in the cross section of the bar.

*Notes:*

Some alternatives to nicking the bar on the hardy to mark where the bar is to be cut:

A.) For shorter cuts, you can draw a line on the face of the anvil. The line should indicate the length of bar you wish to cut. Measure from the near side edge of the anvil with chalk, soapstone, or for longer lasting lines, a felt-tip pen. Place the end of the bar even with the chalk line. Use the edge of your hammer face to indicate the line to be cut by lining it up with the edge of the anvil (with the hammer on top of the bar). Now carefully bring the bar and hammer to the hardy. Line the hammer edge up with the cutting edge of the hardy. Apply some downward pressure so the bar does not slide off the mark. Strike solidly and proceed as indicated in the lesson.

B.) Some smiths prefer to use a center punch, and others a chisel to mark where bar is to be cut. If using a center punch, make sure the punch mark is deep enough so that you can see it when you bring the glowing bar out from the fire.

C.) For marking cold rolled or high carbon steels, use soapstone to mark the cut, then take an initial low heat (bright red). The soapstone mark should still be easily seen at this temperature. Nick the bar, (with a hardy, chisel, or center punch) then reheat to make the final cut as outlined in this lesson.

---

---

## **Forth Quarter, 2009, Chapter Meeting**

**Roger Barbour's Shop**

**Saturday Dec. 5, 2009 at 9:00 AM**

**7792 Cleveland Road, Clayton, NC 27520**

**Demonstrator will be Jerry Darnell**

### **Directions to The Meeting:**

1. Take I-40 to Exit 312 (Route 42).
2. Turn onto Route 42W.
3. Turn Left at the second stoplight (approximately 1/2 mile) onto Cleveland Rd (SR 1010).
4. Go approximately 4.7 miles.
5. The shop is on the left behind Roger's house. The driveway is just before the mailbox with the anvil cutout.

**EDITOR'S NOTE:** Sorry for putting this notice way back here, but this meeting was just finalized, and I was 99.9% finished with the newsletter – so it goes where I had room to put it.

## Blacksmith's Exchange

Have something for sale, or looking for something? This is just the place to look.

Send your "for sale" or "looking for" requests to Marty Lyon (at the address or email address on the back cover). Please include your name and phone number

### For Sale

125 pound bullhammer air hammer, in excellent shape and hardly used. Two dies go with it. Need to sell it soon, and would like \$5000 for it. I live in south Asheville. Phone is 828-215-6003. Bill Drake

### For Sale – Antique Forge

I have an antique forge with some tools- it appears to still work. It is from the Champion Blower and Forge Company, Lancaster, Pa. I was told it is about 100 yrs. old. I also have a few blacksmith tools to go with it. I am interested in selling it. I live in Florence, S.C. E-mail me if you are interested in it. I bought it for my brother who has done some blacksmithing, but he has become disabled from cancer and is unable to use it. Thanks Martha Smith - memarmarsc@yahoo.com

### For Sale - Looking To Sell As A Complete Set Up:

Large Hay-Budden Anvil	Sheet metal anvil	Post vise	Propane forge on stand	a lot of tongs
Gattis Williams		New Bern, NC		252-637-7348

If Interested, I will be happy to email pictures

### Ray Clontz Tire Hammer Plans by Clay Spencer

Ray Clontz Tire Hammer Plans, \$30, including postage to US and Canadian addresses. Send check or money order, e-mail me for cost to other countries

Tire Hammers for sale, 50 lb. hammer head, approx. 250 blows per minute, 1 hp motor, 6" diameter anvil, 700 lbs., 2 ft. square base, Contact me for price/availability. Reasonable delivery if I am headed to your area..

Beverly Shear blades sharpened, \$35 + postage. Blades must be removed from shear, extra cost for deep nicks or blades previously sharpened at angle.

Clay Spencer, 73 Penniston Private Drive, Somerville, AL 35670, 256-498-1498, cell 256-558-3658, clay@tirehammer.com

### For Sale

#### Blacksmithing/ Knifemaking/ Forging POWER HAMMER - 50# Little Giant

Little Giant 50#, manufactured in 1947, modern style (clutch at rear) excellent condition, Plug and pound! Has drawing dies, 2hp original motor, single phase, runs like a sewing machine can forge up to 2" solid metal. \$3800.00 919 / 444-1665

### Blacksmith Supply

Tools and Supplies For The Modern Blacksmith

John Elliott

P.O. Box 3766  
Chester, Virginia 23831

Phone: 804-530-0290

Fax: 804-530-0290

E-mail: jelliott@blacksmithsupply.com

Website: www.blacksmithsupply.com

### Wrought Iron Rods (up to 14' long) Available

Wisconsin Woodchuck LLC has iron rods ranging from 5/8" to 1 1/2" in diameter (from a 1887 grain elevator). They also have iron flat bars and millions of iron square nails. Prices start at \$2 per pound. Call to check inventory.

#### Wisconsin Woodchuck LLC

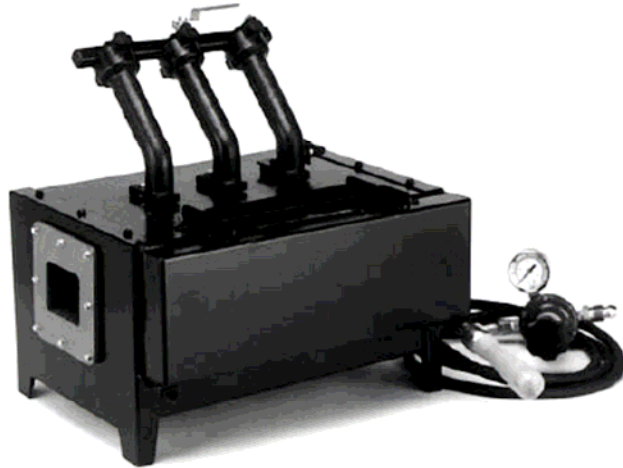
2 Banks Avenue P.O. Box 97 \* Superior, WI 54880-0097

Phone: 715.392.5110 \* Fax: 715.392.5112

Email: d.hozza@wisconsinwoodchuck.net

Web site: www.wisconsinwoodchuck.net

# NC WHISPER LOW BOY



## Low Profile

- 3 Burner, Large Fire-box
- Insulated Door
- 3" h x 12" w x 9" Front to Rear
- Ideal For Competition Shoe Making
- 3" x 2" End Ports
- Rapid Heat Recovery Time

Call your dealer today — shipping by UPS



**NC Tool Company Inc.**  
 6133 Hunt Road, Pleasant Garden, NC 27313  
 Web site: [www.nctoolco.com](http://www.nctoolco.com)

### Coal For Sale

I have roughly 15 tons of Sewell Vein pea stoker washed coal from the Green Valley Mine. 15.5 BTU, 1.25-2% ash. I sell it in 50 lb. bags for \$10.00 and no charge for the bags-you pick up. Whatever bulk load the buyer wants, my front end loader bucket holds 400 lbs. \$10.00 loading fee (or I can furnish shovels). I prefer not to make deliveries. I should have a consistent supply for several years. References available. Fred Pugh 5332 NC87N Pittsboro, N.C. 919 542 4164

### Here is an Excellent Source of Tool Steel:

The Atlantic Steel Corp  
 35-27 36th St.  
 Astoria, NY 11106

### For Sale: Small Oxygen and Acetylene Tanks with a plastic carrier.

Easily carried with place for hose. No hoses or regulators included. Originally purchased from National Welders. Current price is \$250. Selling them for \$150.

Parks Low at 919 818-3036

## Change of Address Form. Please Use This Form or E-mail Me your Changes Important – Don't Miss a Newsletter or a Notification

### Change of Address Form:

Your Name: \_\_\_\_\_

New Address: \_\_\_\_\_

New City, State, and Zip: \_\_\_\_\_

New Phone Number(s): \_\_\_\_\_

New E-Mail: \_\_\_\_\_

Comments: \_\_\_\_\_

### MEMBERSHIP APPLICATION

NORTH CAROLINA CHAPTER OF ABANA

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: (\_\_\_\_\_) \_\_\_\_\_

E-mail Address: \_\_\_\_\_

ABANA Member?: Yes No

Blacksmithing Experience: \_\_\_\_\_

DUES: \$25.00 per year (within USA)

\$35.00 per year (outside USA)

MAKE CHECK PAYABLE TO: NC ABANA

REMIT TO: Marty Lyon

220 Fearington Post

Pittsboro, NC 27312

If you are renewing your membership and your address and phone number have not changed, you do not need to use this form.

### ABANA APPLICATION

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: (\_\_\_\_\_) \_\_\_\_\_

E-mail Address: \_\_\_\_\_

DUES:  Regular (US/Canada/Mexico) \$55.00

Senior 65+ (US/Canada/Mexico) \$50.00

Student (US/Canada/Mexico) \$45.00

Foreign \$65.00

Library (US) \$45.00

Contributory \$100.00

Make check payable to: ABANA

Credit Card:  American Express  MC

Discover  VISA

Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_

REMIT TO: ABANA  
15754 Widewater Dr.  
Dumfries, VA 22025-1212

### NC ABANA LIBRARY BOOK ORDER FORM

Date of Request: \_\_\_\_\_

Requested by: (Please Print)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: (\_\_\_\_\_) \_\_\_\_\_

Library Code of Item: (if known) \_\_\_\_\_

Title of Item: \_\_\_\_\_

Mail this request form to:

Dick Snow, NC ABANA

4222 E.L.G. Road

Efland, NC 27243

If you are a member in good standing of the NC Chapter of ABANA, the book you select will be mailed to you as soon as it is available. You may keep it for up to 30 days and then you must mail it back to the librarian. A return address label will be included when the book is mailed to you. All books must be returned in the condition they were received in or you may be charged for the damages. You may have ONE book (Code BK) or up to THREE Hot Iron Sparkles (Code HIS) or THREE magazines (Code MAG) at any one time. A new copy of this form will be sent with each book.

## Chapter Calendar 2009

<b>January</b>	☞ <u>Regional Meetings</u>
<b>February</b>	☞ <u>Regional Meetings</u>
<b>March</b>	☞ <u>Regional Meetings</u> ☞ <b><u>1<sup>st</sup> QUARTER CHAPTER MEETING</u></b> <b>March 21</b> AT 9:30 A.M. DEAN CURFMAN'S, OAK HILL IRON WORKS MORGANTON, NC
<b>April</b>	☞ <u>Regional Meetings</u>
<b>May</b>	☞ <u>Regional Meetings</u> ☞ <b><u>2<sup>nd</sup> QUARTER CHAPTER MEETING</u></b> - <b>June 6</b> , AT 9:00 A.M. DIXIE FAIRGROUNDS, WINSTON SALEM, NC
<b>June</b>	☞ <u>Regional Meetings</u>
<b>July</b>	☞ <u>Regional Meetings</u>
<b>August</b>	☞ <u>Regional Meetings</u>
<b>September</b>	☞ <u>Regional Meetings</u> ☞ <b><u>3<sup>rd</sup> QUARTER CHAPTER MEETING</u></b> <b>September 26</b> , AT 9:30 A.M. JASON CRAFT'S SHOP, ROXBORO, NC
<b>October</b>	☞ <u>Regional Meetings</u> ☞ <u>Dixie Classic FAIR</u> OCTOBER 2 – OCTOBER 11 ☞ <u>NORTH CAROLINA STATE FAIR</u> OCTOBER 15 - 25
<b>November</b>	☞ <u>Regional Meetings</u> ☞ <b><u>BONUS MEETING</u></b> <b>November 7, 2009</b> , AT 9:30 A.M. J.C. Campbell Folk School, Brasstown, NC
<b>December</b>	☞ <u>Regional Meetings</u> ☞ <b><u>4<sup>th</sup> QUARTER CHAPTER MEETING</u></b> <b>December 5, 2009</b> , AT 9:30 A.M. ROGER BARBOUR'S SHOP, CLAYTON, NC

## Regions

See map on bottom of the page for approximate locations of each region within North Carolina

(1)  
**Western North Carolina Blacksmiths**  
Steve Kayne                      Candler, NC  
(828) 667-8868  
2<sup>nd</sup> Wednesday evening, each month  
(2)

**Triad Area Blacksmiths**  
Marshall Swaringen   Advance, NC  
(336) 998-7827  
1<sup>st</sup> Tuesday 6:30PM for demos  
3<sup>rd</sup> Saturday, 9AM for business  
and all day forging  
Dixie Fairgrounds, Winston Salem, NC  
(3)

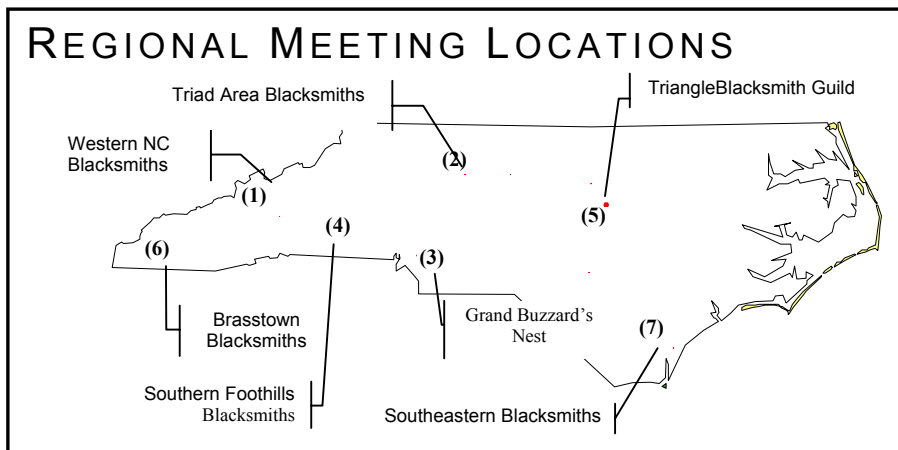
**Grand Buzzard's Nest**  
Tal Harris                      Waxhaw, NC  
(704) 843-5586  
Last Saturday, even # months  
(4)

**Southern Foothills Blacksmiths**  
Steve Barringer                      Mooresville, NC  
(704) 660-1560  
2<sup>nd</sup> Sunday, each month  
(5)

**Triangle Blacksmith Guild**  
Randy Stoltz                      Cary, NC  
(919) 481-9263  
1<sup>st</sup> Saturday, even # months  
(6)

**Brasstown Blacksmiths**  
Paul Garrett                      Brasstown, NC  
(828) 835-8441  
3<sup>rd</sup> Saturday, even # months  
Noon to 4PM  
*Note Changes*

(7)  
**Southeastern Blacksmiths**  
Richard Coley                      Wilmington, NC  
(910) 547-3131  
Quarterly Meetings



Note: Any member is welcome at each of the Regional meetings. Call host to confirm date, time and location.

President

**Jimmy Alexander**  
922 Lakeside Drive  
Durham, NC 27712  
919 / 684-7820  
jima136040@aol.com

Vice-President

**Steve Barringer**  
1154 Bevan Drive  
 Mooresville, NC 28115  
704 / 660-1560  
steve@powerhammerschool.com

Secretary

**Marty Lyon**  
220 Fearington Post  
Pittsboro, NC 27312  
919 / 642-0098  
NCABANAML@EARTHLINK.NET

Treasurer

**Parks Low**  
8108 Deermeadow Drive  
Apex, NC 27539  
919 / 818-3036  
P.Lowjr@att.net

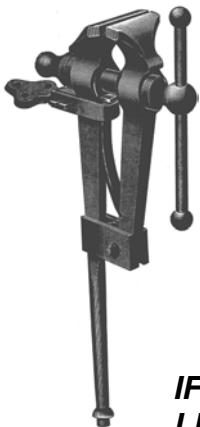
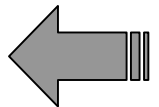
PLEASE WELCOME THESE NEW MEMBERS

Sebastine Bradley	Roxboro	NC
Jason Craft	Roxboro	NC
Greg Davis	Vass	NC
Ricky P. Knight	Madison	NC
Lee Miller	Roxboro	NC
Ashton Naylor	Fayetteville	NC
Robert Sanders	Selma	NC
Keith Shearon	Youngsville	NC
Steve Thornburg	Ashboro	NC
Joseph Wood	Fayetteville	NC

**Don't Forget**  
**2009, 4th Quarter Chapter Meeting**

December 5, 2009

Roger Barbour's Shop, Clayton, NC



**North Carolina Chapter Artist Blacksmith  
Association of North America**

**THE HOT IRON SPARKLE**

Marty Lyon, Editor  
220 Fearington Post  
Pittsboro, NC 27312  
919 / 642-0098

**IF YOU ARE MOVING PLEASE  
LET ME KNOW SO YOU DON'T  
MISS YOUR NEWSLETTERS!!!**

Non-profit  
Organization  
US Postage Paid  
Durham, NC  
27705  
Permit No. 344

**DATED MATERIAL**  
Return Service Requested

**MEMBERSHIP  
EXPIRES**



**TO:**